

The Praeger Handbook of Education and Psychology, Volumes 1–4

*Edited by
Joe L. Kincheloe
Raymond A. Horn, Jr.*

PRAEGER

The Praeger Handbook of Education and Psychology

Volume 1

Edited by JOE L. KINCHELOE AND
RAYMOND A. HORN Jr.

Shirley R. Steinberg, *Associate Editor*

PRAEGER

Westport, Connecticut
London

Library of Congress Cataloging-in-Publication Data

The Praeger handbook of education and psychology / edited by Joe L. Kincheloe and Raymond A. Horn Jr.

v. cm.

Includes bibliographical references and index.

ISBN 0-313-33122-7 (set : alk. paper)—ISBN 0-313-33123-5 (vol 1 : alk. paper)—

ISBN 0-313-33124-3 (vol 2 : alk. paper)—ISBN 0-313-34056-0 (vol 3 : alk. paper)—

ISBN 0-313-34057-9 (vol 4 : alk. paper) 1. Educational psychology—Handbooks, manuals, etc.

I. Kincheloe, Joe L. II. Horn, R. A. (Raymond A.)

LB1051.P635 2007

371.4-dc22 2006031061

British Library Cataloguing in Publication Data is available.

Copyright © 2007 by Joe L. Kincheloe and Raymond A. Horn Jr.

All rights reserved. No portion of this book may be reproduced, by any process or technique, without the express written consent of the publisher.

Library of Congress Catalog Card Number: 2006031061

ISBN: 0-313-33122-7 (set)

0-313-33123-5 (vol. 1)

0-313-33124-3 (vol. 2)

0-313-34056-0 (vol. 3)

0-313-34057-9 (vol. 4)

First published in 2007

Praeger Publishers, 88 Post Road West, Westport, CT 06881

An imprint of Greenwood Publishing Group, Inc.

www.praeger.com

Printed in the United States of America



The paper used in this book complies with the Permanent Paper Standard issued by the National Information Standards Organization (Z39.48-1984).

10 9 8 7 6 5 4 3 2 1

Contents

VOLUME 1

PART I INTRODUCTION

1. Introduction: Educational Psychology—Limitations and Possibilities <i>Joe L. Kincheloe</i>	3
2. Educational Psychology Timeline <i>Ed Welch, Doris Paez, and P. L. Thomas</i>	41

PART II INTRODUCING THEORISTS IMPORTANT TO EDUCATION AND PSYCHOLOGY

3. Albert Bandura <i>Sabrina N. Ross</i>	49
4. Jerome Bruner <i>Thomas R. Conway</i>	57
5. Judith Butler <i>Ruthann Mayes-Elma</i>	62
6. John Dewey <i>Donal E. Mulcahy</i>	67
7. Erik Erikson <i>James Mooney</i>	75
8. Howard Gardner <i>Joe L. Kincheloe and Todd Feltman</i>	81

9. Carol Gilligan <i>Kathryn Pegler</i>	88
10. Emma Goldman <i>Daniel Rhodes</i>	94
11. Jurgen Habermas <i>Ian Steinberg</i>	103
12. Granville Stanley Hall <i>Lynda Kennedy</i>	108
13. Sandra Harding <i>Frances Helyar</i>	113
14. bell hooks <i>Danny Walsh</i>	119
15. William James <i>Frances Helyar</i>	124
16. Lawrence Kohlberg <i>Eric D. Torres</i>	130
17. Jacques Lacan <i>Donyell L. Roseboro</i>	136
18. Gloria Ladson-Billings <i>Romy M. Allen</i>	143
19. Jean Lave <i>Valerie Hill-Jackson</i>	148
20. Alexander R. Luria <i>Warren Scheideman</i>	154
21. Herbert Marcuse <i>Rich Tapper</i>	159
22. Abraham Harold Maslow <i>Ruthann Crawford-Fisher</i>	167
23. Maria Montessori <i>Kerry Fine</i>	173
24. Nel Noddings <i>Patricia A. Rigby</i>	179
25. Ivan Petrovich Pavlov <i>Daniel E. Chapman</i>	184

	Contents	vii
26. Jean Piaget <i>Rupam Saran</i>		190
27. Carl Rogers <i>Angelina Volpe Schalk</i>		197
28. B. F. Skinner <i>Kevin Clapano</i>		201
29. Robert J. Sternberg <i>Kecia Hayes</i>		206
30. Beverly Daniel Tatum <i>Pam Joyce</i>		211
31. Lewis Madison Terman <i>Benjamin Enoma</i>		220
32. Edward L. Thorndike <i>Raymond A. Horn Jr.</i>		225
33. Rudolph von Laban <i>Adrienne Sansom</i>		231
34. Lev Vygotsky <i>Kate E. O'Hara</i>		240
35. Valerie Walkerdine <i>Rachel Bailey Jones</i>		246
36. John Watson <i>Chris Emdin</i>		252

VOLUME 2

PART III ISSUES IN EDUCATION AND PSYCHOLOGY

Constructivism

37. Constructivism and Educational Psychology <i>Montserrat Castelló and Luis Botella</i>		263
38. Reconsidering Teacher Professional Development Through Constructivist Principles <i>Kathryn Kinnucan-Welsch</i>		271
39. Constructivist/Engaged Learning Approaches to Teaching and Learning <i>Cynthia Chew Nations</i>		283

Creativity

40. Creative Problem Solving 295
Julia Ellis
41. Creativity 310
Jane Piirto

Criticality

42. Reclaiming Critical Thinking as Ideology Critique 321
Stephen Brookfield
43. Ideological Formation and Oppositional Possibilities of Self-Directed Learning 331
Stephen Brookfield
44. Literacy for Wellness, Oppression, and Liberation 341
Scot D. Evans and Isaac Prilleltensky
45. Transformative Learning: Developing a Critical Worldview 354
Edward Taylor

Culture/Cultural Studies

46. The Impact of Apartheid on Educational Psychology in South Africa: Present Challenges and Future Possibilities 364
J. E. Akhurst
47. Implications of Cultural Psychology for Guiding Educational Practice: Teaching and Learning as Cultural Practices 374
Patrick M. Jenlink and Karen E. Jenlink
48. The Culture/Learning Connection: A Cultural Historical Approach to Understanding Learning and Development 385
Yatta Kanu
49. Endorsing an Angel: Peggy Claude-Pierre, the Media and Psychology 400
Michelle Stack
50. The Buddha View: ReVIEWing Educational Psychology's Practices and Perspectives 410
Patricia A. Whang
51. Without Using the "S" Word: The Role of Spirituality in Culturally Responsive Teaching and Educational Psychology 418
Elizabeth J. Tisdell

Developmentalism

52. Beyond Readiness: New Questions about Cultural Understandings and Developmental Appropriateness 428
Lise Bird Claiborne

Educational Purpose

53. Foundations of Reconceptualized Teaching and Learning <i>Raymond A. Horn Jr.</i>	439
54. The Diverse Purposes of Teaching and Learning <i>Raymond A. Horn Jr.</i>	449
55. Postmodern Pedagogy <i>Lois Shawver</i>	454

VOLUME 3

Enactivism

56. Complexity Science, Ecology, and Enactivism <i>Brent Davis and Dennis Sumara</i>	463
57. Providing a Warrant for Constructivist Practice: The Contribution of Francisco Varela <i>Jeanette Bopry</i>	474

Knowledge Work

58. Action Research and Educational Psychology <i>Deborah S. Brown</i>	485
59. Beyond the “Qualitative/Quantitative” Dichotomy: Pragmatics, Genre Studies and Other Linguistic Methodologies in Education Research <i>Susan Gerofsky</i>	497
60. Knowledge in a Reconceptualized Educational Environment <i>Raymond A. Horn Jr.</i>	504
61. Critical Epistemology: An Alternative Lens on Education and Intelligence <i>Anne Brownstein</i>	510
62. Dialogism: The Dialogic Turn in the Social Sciences <i>Adriana Aubert and Marta Soler</i>	521

Learning

63. Experiential Learning <i>Tara Fenwick</i>	530
64. Workplace Learning, Work-Based Education, and the Challenges to Educational Psychology <i>Hugh Munby, Nancy L. Hutchinson, and Peter Chin</i>	540

65. Dialogic Learning: A Communicative Approach to Teaching and Learning 548
Sandra Racionero and Rosa Valls
66. John Dewey's Theory of Learning: A Holistic Perspective 558
Douglas J. Simpson and Xiaoming Liu
67. Crash or Crash Through: Part 1—Learning from Enacted Curricula 565
Kenneth Tobin
68. Crash or Crash Through: Part 2—Structures That Inhibit Learning 575
Kenneth Tobin

Memory

69. Memory: Counter-memory and Re-memory-ing for Social Action 584
Kathleen S. Berry
70. Memory and Educational Psychology 592
Leila E. Villaverde

Mind

71. Where Is the Mind Supposed to Be? 601
Richard S. Prawat
72. Neuropolitics: Neuroscience and the Struggles over the Brain 612
John Weaver
73. Desperately Seeking Psyche I: The Lost Soul of Psychology and Mental Disorder of Education 618
Molly Quinn
74. Desperately Seeking Psyche II: Re-Minding Ourselves, Our Societies, Our Psychologies, to Educate with Soul 625
Molly Quinn

Psychoanalysis

75. What Educational Psychology Can Learn from Psychoanalysis 632
Marla Morris

Race, Class, and Gender

76. Using Critical Thinking to Understand a Black Woman's Identity: Expanding Consciousness in an Urban Education Classroom 636
Rochelle Brock
77. Pedagogies and Politics: Shifting Agendas within the Gendering of Childhood 642
Erica Burman
78. Knowledge or Multiple Knowings: Challenges and Possibilities of Indigenous Knowledges 651
George J. Sefa Dei and Stanley Doyle-Wood

79. Making the “Familiar” Strange: Exploring Social Meaning in Context <i>Delia D. Douglas</i>	665
80. Gender and Education <i>Ellen Essick</i>	677
81. TEAM: Parent/Student Support at the High School Level <i>Pam Joyce</i>	686
82. Becoming Whole Again through Critical Thought: A Recipe <i>Rochelle Brock</i>	703

VOLUME 4

Situated Cognition

83. Situated Cognition and Beyond: Martin Heidegger on Transformations in Being and Identity <i>David Hung, Jeanette Bopry, Chee-Kit Looi, and Thiam Seng Koh</i>	709
84. Situating Situated Cognition <i>Wolff-Michael Roth</i>	717
85. Stakeholder-Driven Educational Systems Design: At the Intersection of Educational Psychology and Systems <i>Diana Ryan and Jeanette Bopry</i>	729

Teaching

86. Teacher Thinking for Democratic Learning <i>Brenda Cherednichenko</i>	736
87. Recognizing Students among Educational Authorities <i>Alison Cook-Sather</i>	744
88. Critical Consciousness and Pedagogy: Reconceptualizing Student-Centered Dialogue as Educational Practice <i>Cathy B. Glenn</i>	755
89. Homeschooling: Challenging Traditional Views of Public Education <i>Nicole Green</i>	768
90. Activity Theory as a Framework for Designing Educational Systems <i>Patrick M. Jenlink</i>	780
91. Reconnecting the Disconnect in Teacher–Student Communication in Education <i>B. Lara Lee</i>	794

Testing/Assessment

92. The Rise of Scientific Literacy Testing: Implications for Citizenship and Critical Literacy Skills
Mary Frances Agnello 805
93. What Are We Measuring? A Reexamination of Psychometric Practice and the Problem of Assessment in Education
Mark J. Garrison 814
94. Curriculum, Instruction, and Assessment in a Reconceptualized Educational Environment
Raymond A. Horn Jr. 824

PART IV: NEW VISIONS—POSTFORMALISM: EDUCATION AND PSYCHOLOGY**Curriculum**

95. Race in America: An Analysis of Postformal Curriculum Design
Joelle Tutela 837

Epistemology

96. Upside Down and Backwards: The State of the Soul in Educational Psychology
Lee Gabay 847
97. Critical Constructivism and Postformalism: New Ways of Thinking and Being
Joe L. Kincheloe 855

Intelligence

98. Intelligence Is Not a Thing: Characterizing the Key Features of Postformal Educational Psychology
Erik L. Malewski 864
99. Unpackaging the Skinner Box: Revisiting B.F. Skinner through a Postformal Lens
Dana Salter 872

Multilogicality

100. Postformalism and Critical Multiculturalism: Educational Psychology and the Power of Multilogicality
Joe L. Kincheloe 876

Ontology

101. Postformalism and Critical Ontology—Part 1: Difference, Indigenous Knowledge, and Cognition
Joe L. Kincheloe 884

102. Postformalism and Critical Ontology—Part 2: The Relational Self and Enacted Cognition <i>Joe L. Kincheloe</i>	892
Paradigmatic Change	
103. Educational Psychology in a New Paradigm: Learning a Democratic Way of Teaching <i>Rochelle Brock and Joe L. Kincheloe</i>	899
104. Alternative Realities in Educational Psychology: Postformalism as a Compelling Force in Opposition to Developmental Theories <i>Erik L. Malewski</i>	907
105. Educational Psychology on the Move: Visual Representations of the Old and New Paradigms <i>Frances Helyar</i>	916
Pedagogy	
106. Toward a Postformal Model of History Education <i>Frances Helyar</i>	923
Power	
107. Postformalism and a Literacy of Power: Elitism and Ideology of the Gifted <i>Joe L. Kincheloe</i>	932
Research	
108. Research in Educational Psychology: Incorporating the Bricolage in Educational Psychology—Part 1 <i>Joe L. Kincheloe</i>	943
109. Research in Educational Psychology: The Bricolage and Educational Psychological Research Methods—Part 2 <i>Joe L. Kincheloe</i>	950
Spirituality	
110. The Spiritual Nature of Postformal Thought: Reading as Praxis <i>Sharon G. Solloway and Nancy J. Brooks</i>	960
Index	969
About the Contributors	1003

PART I

Introduction

CHAPTER 1

Introduction: Educational Psychology—Limitations and Possibilities

JOE L. KINCHELOE

The great Russian psychologist Lev Vygotsky writing in the 1930s maintained that scholars in the discipline of psychology were drifting into the polar camps of behaviorism and phenomenology. There was no doubt that Vygotsky clearly saw into the future of psychology in general as well as its associated discipline, educational psychology. Indeed, the field of educational psychology would reflect these polar camps but the mainstream of the field was undoubtedly positioned within the behavioristic (or as time passed, the mechanistic) camp. Even after the decline of behaviorism as a school of psychological thought in the 1960s and 1970s, mainstream educational psychology would hang on to numerous behavioristic trappings while embracing the most mechanistic and rationalistic aspects of emerging schools of psychological thought (see Kozulin's [1997] Introduction in Vygotsky's *Thought and Language*).

THE EMERGENCE OF EDUCATIONAL PSYCHOLOGY: DIVERGENT TRADITIONS

This handbook begins with this insight, as the editors and authors explore the nature of educational psychology at the beginning of the twenty-first century. In this process they seek to examine and formulate new approaches to the subject that are practical, just, critical, and scholarly rigorous enough to address the complexity of the domain of study. The mechanistic tradition of educational psychology from behaviorism to cognitivism has emphasized the quantifiable behavior of groups of individuals—focusing in particular on producing generalizable empirical data about these aggregates of people. The contributors and editors of this handbook have not found this dominant mechanistic tradition to be very helpful in contributing to the improvement of teaching and learning. Indeed, we have often found the social, political, pedagogical, economic, and philosophical influences of this dominant impulse to be profoundly harmful to those—especially those marginalized because of race, class, gender, national origin, ethnicity, geographic place, etc.—who are vulnerable to its power.

Thus, the contributors to this volume find the roots of their disciplinary orientation more within the traditions of cultural and interpretive psychology where the focus is less on producing generalizable empirical data and more on the process of meaning making. In these alternative

traditions the effort to understand phenomena in relation to the processes and contexts of which they are a part takes precedence over identifying causal relations between discrete variables (see Smith [1998]). Thus, in this introduction I will explore the different traditions of educational psychology, focusing on the root belief structures that shape them. Following this effort I will analyze the contributions of the interpretivist tradition, in the process describing a *critical* interpretivist approach. Such analysis will emphasize the explanatory benefits of interpretivism while embracing the critical concerns with the role of power in human affairs and the ways it operates in relation to issues of oppression and social justice.

We see the results of the dominance of the mechanistic tradition, as Mary Frances Agnello points out in her chapter on scientific literacy testing, in the emergence and influence of IQ and other forms of testing and measurement as well as the demand that research in educational psychology be conducted only as a verifiable and statistics-based human science. Agnello goes on to assert that in this mechanistic tradition the focus on the measurement of “human responses to various stimuli” led to a split between those mechanists who would not study consciousness and those interpretivists who would. Picking up on this theme, Kathleen Berry in her chapter on memory traces the mechanistic perspective back to the science of Rene Descartes who positioned the study of cognition in biology as an analysis of the physiology of the brain. Memory, thus, was viewed as an object existing materially within the container of the brain. Memory and mind were viewed as fundamentally separate from body and spirit. (In this context see Richard Prawat’s chapter on diverse historical understandings of the nature and location of mind.) In the Cartesian context the biologically grounded, cause and effect tradition of mechanism exercised its power over the interpretive tradition, positioning human beings more as objects than as subjects.

The debate between the two traditions of educational psychology, as Patricia Whang points out in her chapter on Buddhism and educational psychology, may be best exemplified historically in the early twentieth-century debate between mechanist Edward Thorndike and interpretivist John Dewey. In the eyes of the educational psychologists Thorndike won the argument, tying educational psychology to quantification and laboratory studies of teaching and learning. Thorndike’s victory, Mark Garrison maintains in his chapter on psychometrics, meant that the knowledge produced by the testing technologies of educational psychology could be used to justify forms of oppression based on particular individuals being designated as less than human. Obviously, this is one of the negative social effects of the mechanistic tradition previously referenced.

Psychology is a child of the Age of Reason, the Western European Enlightenment of the seventeenth and eighteenth centuries. What scholars refer to as modernity arose out of this Scientific Revolution. Traditional sources of meaning were swept aside in the modernist tsunami and psychology emerged as a discourse designed in part to restore meaning in new social and intellectual conditions. The hope was that by placing our faith in the scientific method and its objectively produced knowledge that human beings could move beyond arbitrary authority. They would have the knowledge to make rational and moral decisions about their lives and the world around them. In later centuries we can see this same impulse at work as educational psychology would be used as a scientific means of determining educational purpose.

In the mindset of mechanistic educational psychology, educators do not determine their purposes based on larger understandings of justice and meaning as they interact with the demands of particular social, political, and cultural contexts. Instead, such educators derive purpose from the empirical studies of educational psychology. Objective knowledge in this context is used to guide what teachers and students should be doing in terms of efficiency and smooth functioning of bureaucratic organizations. In this context the work of those who study the political, social, cultural, and economic contexts of education in relation to larger philosophical and theoretical systems of meaning is irrelevant to the work of schools. The modes of knowledge constructed in these contexts are not viewed as legitimate in the mechanistic educational psychological cosmos.

PSYCHOLOGY/EDUCATIONAL PSYCHOLOGY AS THE MOST MODERN AND MECHANISTIC OF ALL THE SCIENCES

In the mechanistic articulation of educational psychology that emerged from Cartesian science, the life of the mind is constituted mainly by the cognitive process of formulating representations of the world that exists “out there” apart from human perception. A key dimension of the emerging educational psychological tradition here involves viewing cognitive activity as the act of the mind reflecting external reality. As many of the authors writing in this handbook contend, such a viewpoint rests on many problematic and unsupported assumptions. In an ontological context—ontology is the branch of philosophy that deals with being in the world—such a psychological perspective assumes that an objective reality exists apart from human agents. In an epistemological context—epistemology is the branch of philosophy that deals with the nature of knowledge and truth—it assumes that if we use the correct methods of knowledge production, we will assure that we “reflect” this objective reality correctly.

To be viewed by the high-status physical sciences as truly scientific, psychologists believed that they had to adopt such mechanistic, computational views of the mind. It is ironic that in the twenty-first century after many physical and social scientists are questioning the radical empiricism of mechanistic and computational modes of science, it is the field of psychology—educational psychology—in particular that is holding down the fort of mechanistic reductionism. What I mean by the term mechanistic reductionism involves the view that the mind can best be studied in contextual isolation in lab settings and that mathematical symbols and logic provide the best vehicles for researching and expressing the nature of cognitive activity. Such mechanistic reductionism views human psychology as an individual experience that can best be appreciated by uncovering the general laws of cognition that shape all human psychological activity now and forever (see Pickering [1999]).

Thus, psychology/educational psychology is the most “modern-ist” science—reflecting the original principles of the Scientific Revolution of the seventeenth and eighteenth centuries. Understanding this dimension to the psychological sciences, those coming from the interpretivist tradition in psychology and other fields of study try to convince the mechanists that so-called scientific views of cognition are not objective but are shaped by the social context, the historical era in which scientists operate. Often the assumptions embedded within our lived worlds are not visible until hundreds of years have passed. At that point what seemed simple and straightforward can be understood as riddled with problematic assumptions about human beings, selfhood, intelligence behavior, progress, and social values. With this established, interpretivists insist that psychology is produced by culture and concurrently culture is produced by psychology. This coconstructive process is always operating, making it difficult for individuals operating in a place and time shaped by psychology’s belief structures to separate such *beliefs* from objective reality.

Thus, educational psychology’s beliefs in the centrality of the individual as the primary locus of behavior, on the superiority of Western forms of rationality, on intelligence as what one scores on an IQ test, etc. may look very silly and even primitive in only a few decades. The discomfort mechanistic psychology has exhibited in considering other cultural ways of operating in and constructing the world as legitimate, and even intelligent, may soon be viewed as manifestations of callous and narcissistic forms of ethnocentrism. With these possibilities in mind, advocates of the alternative interpretivist tradition contend, it is important for educational psychologists to engage in philosophical and social theoretical analysis of their discipline.

Philosophical research, as I define it in my work on the *bricolage* (see Kincheloe and Berry [2004]), involves inquiring into the numerous assumptions that shape a field or a body of knowledge. In the professional education of educational psychologists such important activities are not to be found in the mechanistic curriculum. Such philosophical research is long overdue in

this domain. To function effectively in an informed and ethical way, educational psychologists must come to understand the ways the knowledge they are taught to accept as true are shaped by dominant power interests and ideologies. Such forces move educational psychologists to produce knowledge and engage in activities that often reward the socially, politically, and economically privileged and punish the marginalized (see Richardson and Woolfolk [1994]). In this context Ray Horn and myself and the authors included in this book emphasize the need for educational psychologists to carefully examine what passes as reason and validated research in the mechanistic tradition, in the process asking in a *critical* sense whose interests this most modernist of sciences serves.

In this context a central question of psychology/educational psychology emerges. How we answer it shapes the way in which we approach the field. How do humans represent and make meaning of the events that take place around them? Mechanistic psychologists maintain that the world is represented by symbols that are material (have substance) in some neuron-based or biochemical manner. In a more interpretive psychology the symbol processing that takes place is more conceptual and less biochemical. These symbols in interpretive psychology are very complex and cannot be separated from sociocultural and political contexts or situation-specific intentions, moods, and meaning constructions. In this context symbolic representation of the world and its events always connect the mind to micro (individualistic) and macro (social) contexts. Thus, as we will emphasize throughout the handbook, educational psychology cannot be studied as simply an individualistic phenomenon.

Making these distinctions in relation to the question about representation and meaning making, it is important to note that a central task of educational psychology involves developing a theory of learning. It is necessary but not sufficient for educational psychologists to possess a theory of representation and meaning making. The field has a more difficult task—to find out not how individuals learn but how they learn in particular sociocultural settings, e.g., school, work, leisure, etc. Such a task, interpretivists posit, cannot be accomplished by only studying quantitatively measured behavior of groups of individuals that can then be generalized universally. Instead, individuals must be studied in their natural settings (not labs) using a bricolage of research methods including ethnography, phenomenology, history, life history, semiotics, and many others. Unfortunately, the most modern of sciences in its mechanistic articulation has not been comfortable using such research orientations. As a result, our understanding of how individuals represent and make meaning of the world and how they use these processes to learn about the world, themselves, and others has been profoundly compromised.

BORN IN THE USA: MODERNITY, MECHANISM, AND REGULATION

Thus, modern psychology and its educational psychological *nephew* were born in a Eurocentric, patriarchal, individuated, and decontextualized academic domain. The founding *fathers* within this mechanistic cosmos had faith that studying the abstracted, self-contained individual would lead them to an understanding of human life in general. Patricia Whang in her chapter in this volume extends this assertion contending that it is important to question “how the contributions made by educational psychologists have been constrained by the largely male and Euro-American perspectives, values, and traditions held by influential members of the field.”

Since psychology emerged in movement from Western traditional to modern social orders, it was caught in the change of emphasis from the community and the household to the separate individual. In the premodern West, individuals were inseparable from the sociocultural context in which they were born and raised. Premodern westerners were simply not able to remove themselves from their social location and role(s) in order to try on new ways of being or new behaviors. To exist outside the local community was to “not be,” to cease to exist. One’s meaning

was to be found in the life of the community—not in one’s individual longings. As modernity slowly unfolded in Western Europe in the fifteenth, sixteenth, and seventeenth centuries, individualism emerged as the construct around which society was grounded. Psychology could not escape this defining dimension of modernity, and without conscious notice embraced it in its own self-construction.

When the ed psych nephew was emerging in the United States, in the early twentieth century, this individualistic dynamic played an important role in focusing the discipline’s attention on young people in particular who were struggling to deal with drastic social changes such as industrialization, urbanization, and immigration. In this context, disciplinary experts determined that one of central functions of the field had to involve providing social order in this period of change. Such ordering could be brought about via the use of educational psychology as an instrument of normalization and regulation. The poor, the non-white, and the immigrant were the individuals who were in most need of regulation because of what was perceived as the danger they presented to the larger society. Thus, educational psychology was there to “prove” that these individuals did not possess the intellectual ability to succeed in school and therefore needed to be socially regulated so they would not stain the social fabric.

In this multicultural, industrialized context the notion of education for an educated citizenry took a back seat to the goal of education as protecting the social order. With its emerging intelligence testing and professed ability to rank order people’s worth, mechanistic educational psychology became a central technology of social regulation. As Patricia Whang points out in her chapter here, ed psych’s regulatory function became an important dimension of the United States’ educational efficiency movement of the first couple of decades of the twentieth century in which individuals were socialized to work in the boring factory work of mass production. In this mechanistic social context behavioral psychology with its emphasis on the regulation of human behavior emerged. In many ways behaviorism was the highest expression of the mechanistic psychological orientation as it viewed humans as passive beings who could be shaped by a system of rewards and punishments to meet the demands of dominant forms of social, political, and scholarly behaviors.

TECHNOLOGIES OF SOCIAL REGULATION: THE POWER OF THE MECHANISTIC PARADIGM

We cannot understand the social role of psychology and educational psychology outside of a context dominated by measuring, evaluating, sorting, training, resocializing, and regulating. The discipline gained tremendous power as it came to “educate” political leaders, educators, and business leaders about what constituted the most important social problems of the day. In the process psychology/educational psychology began to take over social functions once reserved for the church. Instead of employing divine authority to claim the truth of its knowledge and its works, psychology claims scientific validation. There is simply no clear boundary line separating the inner world of psychology from the outer world of cultural politics—both domains often serve power interests that are not working for the best interests of individuals falling outside various dominant groups. As a form of regulatory power educational psychology operates to discover universal “truths” about individuals that can be used to determine their worth to the social order. Those who score low on the standardized tests, for example, cannot enter into the land of sociopolitical decision makers.

Even many of the most important reform movements in psychology have failed to challenge this regulatory feature. Humanistic psychology is in the end a regulatory technology as its concern with oppression avoids questioning the existing sociopolitical order. The psychology of Carl Rogers—as appealing as it may have looked to many—never understood this blurred boundary between

the social and the individual. Rogers never appreciated the ways that social power helped produce subjectivity/consciousness. A central point in educational psychology, thus, involves the power of the interaction between the individual and society, between macroregulatory practices and microregulatory practices. Thus, no matter what types of reforms are proposed in the discipline, if they don't eventually address these power dynamics then they will leave the regulatory status quo intact. In this context simply being learner-centered and focusing on the needs of the learner does not create an emancipatory educational psychology. Outside of these power concerns educational psychology consistently operates to support the regulation and control of various individuals.

In this context it is important to note that power doesn't only operate by denying individuals the "right" to engage in empowering activities. Power is often productive in that it produces particular forms of both things and people. For example, mechanistic educational psychology attempts to produce individuals who seek particular forms of regulation and control. Educational psychology's management of behavior in schools becomes more and more a technology of the self. As in *hegemony* operating at the macrolevel, students via psychological techniques are induced to regulate themselves, to grant their consent to the status quo. Of course, just like hegemony such regulatory strategies can be unsuccessful with particular individuals and groups. On the other hand, it can be (and has been) wildly successful.

Since educational psychology has been the dominant disciplinary discourse shaping schooling over the last century, education has been profoundly shaped by the regulatory power described above. Such power has promoted the dominance of patriarchy, whiteness, and class elitism and the ways of seeing and being they promote. One encounters these power inscriptions in the educational psychology validated teaching methods, classroom management procedures, content standards, official lesson plans, and testing procedures found in contemporary schools. Mary Frances Agnello extends this theme in her chapter here as she traces the impact of educational psychology on the control of teachers' work. Indeed, such control has never been stronger than in the middle of the first decade of the twenty-first century. As Mark Garrison points out in his chapter, the words *measure*, *measures*, or *measurement* can be found at least 135 times in the No Child Left Behind legislation. Every dimension of life in schools has been subjected to the testing technologies of educational psychology in the twenty-first century, in the process leaving nothing to chance. Mechanistic regulation has become more powerful than ever.

The authors of this handbook are deeply concerned with these power-driven regulatory dimensions of educational psychology. Sandra Racionero and Rosa Valls, for example, argue in their chapter that the social decontextualization of the mechanist paradigm assures that existing power relations are maintained and dominant culture continues to be viewed as superior to all others. In his compelling chapter on educational psychology in South Africa, J. E. Akhurst writes that during apartheid mechanistic educational psychology helped produce a theory of "deviance" where the "culturally different" learner was viewed as a dangerous person who was capable of challenging the dominant (white) culture. Teachers were induced to identify and "reorient" such young people. Not unlike their contemporary U.S. counterparts, South African educators under apartheid were given preconstructed syllabi to follow that were tied to carefully inspected textbooks. Administrators would not tolerate teacher divergence from this official curriculum and monitored teacher behavior via the administration of a system of standardized tests.

Only a multidisciplinary psychology with social, economic, cultural, political, and philosophical dimensions will help educational psychology come to understand its oppressive dimensions. In this context educational psychologists will come to understand that the content of the curriculum holds dramatic consequences and is not simply background noise to the brain activity under study. Analyzing the political implications of particular ways of thinking about educational psychology is not an outsider interruption to the "real work" of the discipline. Such analysis is central to the very purpose of studying cognition, selfhood, learning, and teaching in the first place. In particular,

teachers, students, and the public need to understand these broader dimensions of the work of educational psychology so they can evaluate how democratic and just the discipline's influence on teaching and learning actually is. The power of decontextualized, allegedly nonpolitical ed psych has dominated those around it for far too long.

MECHANISTIC VICTORIES: HARD SCIENCE GRANTS US THE "TRUTH" ABOUT THE HUMAN MIND

Thus, mechanistic psychology won victory after victory over more interpretive varieties, in the process securing the right to shape both educational psychology and school practice. Deploying the metaphor as human as machine, educational psychology promoted mind as a mechanism of mystery that operated in its own particular manner. Finding its philosophical roots as far back as Plato, mechanistic educational psychology organizes the world according to similarities and differences among phenomena as well as cause and effect relationships. This mechanism or philosophical realism runs through behaviorism and contemporary cognitive science. In contemporary mainstream ed psych, the mechanistic metaphor of choice is the mind as computer.

What began in the mid-twentieth century as an effort to employ computers as a means of mimicking the workings of the mind ended up describing the human mind as a computer. In effect, a method for making sense of the mind transmogrified into the end product, manifesting in the process both a flawed form of reasoning and a reductionistic understanding of humanness and the cognitive process. As Leila Villaverde puts it in her chapter on memory and educational psychology, "The world and human beings were believed to mimic machines and the object was to focus on the discreet parts of the larger operating system." The parts of the system worthy of note in this context involved the ways the brain encodes, stores, and retrieves data. Learning in such a context, she concludes, became characterized by rote and recall.

With its focus on obtaining scientific legitimacy, mechanistic educational psychology forged ahead with its lab studies and explorations of animal learning. Hard science—as in biology, chemistry, and physics—was viewed as sitting at the head of the scientific table. We are the *men* of science and our way of seeing the human mind is the only valid and worthwhile one, the mechanists proclaimed. Mary Frances Agnello captures this spirit well in her chapter in this volume when she contends that mechanists believed that mental activities were ordered by the same system of laws as those Sir Isaac Newton attributed to the physical universe. These ways of seeing dominated the field for decades, dispelling most challenges with a wave of the wand of hard science.

Since Thorndike convinced the field that Dewey's interpretivist concerns were irrelevant in the second and third decades of the twentieth century, it was only in the 1970s and 1980s that situated cognition began to make inroads into the mechanistic playground. Deborah Brown tells us in her chapter in this volume on action research that significant progress was made in questioning mainstream assumptions at the Institute for Research on Teaching at Michigan State University during the last three decades of the twentieth century. When this work was combined with a variety of expressions of sociocognition, critical pedagogy, reconceptualized curriculum theory, cultural psychology, feminist critiques of developmentalism, and critical educational psychology, the foundation for a new conversation in educational psychology was constructed.

This is not to say that a new paradigm emerged or that the victories of the mechanistic perspective were reversed. In the middle of the twenty-first century mechanism still rules the ed psych roost and with the help of governmental initiatives such as No Child Left Behind is gaining renewed power in many venues. Operating as if mechanistic and reductionistic scientific practices have never been challenged, many proponents of contemporary mechanistic educational psychology assume that there is only one way of viewing phenomena such as cognition or

intelligence. Of course, this holds profound consequences when students—often from the social, cultural, and economic margins—are judged to be deficient or incapable of productive thinking or activity. Far too often such deficiency is nothing more than a way of operating that falls outside the purview of the mechanistic imagination. An *epistemological* pluralism, a diversity of paradigmatic perspectives, is direly needed in mainstream educational psychology for both catalyzing the advance of the discipline as well as saving “different students” from the label of “failure” and the justification of their marginalization. The editors and authors of this handbook believe that it is more important than ever to challenge the victories of mechanism.

MECHANISTIC PSYCHOLOGY AND NAÏVE REALISM

The great cognitive psychologist Jerome Bruner uses the phrase “empty mechanism” to describe the decontextualizing, individuating educational psychology that has resulted in universal pronouncements about the nature and development of the human mind. (See Lise Bird’s powerful chapter on developmental appropriateness in this context.) The naïve realist epistemological stance of the mechanistic position unquestioningly believes that its findings are

- transhistorical and transcultural truths
- descriptions of the mind that correspond to a natural reality
- political neutral pronouncements about the psychological world (see Kenneth Gergen [1997]).

Even when particular scholars such as Jean Piaget operated outside the mechanistic context, the naïve realism of field induced educational psychologists to discount such transgressions and emphasize the most reductionistic dimensions of such work (see Burman [1994]). The reasoning of the mechanistic paradigm is universalistic, unhampered by those pesky differences of culture. Thus, the unquestioned epistemological assumptions of mechanism tacitly shaped what aspects of the mind psychologists could or could not see. And this is one of the key points of this handbook: structures, unseen and ignored by mainstream psychology, have profoundly shaped what passes as our knowledge of the subject matter of educational psychology.

In his own brilliant way John Dewey in *How We Think* in 1933 exposed the deficiencies of an epistemology of naïve realism. Such a form of empiricism, he contended, leads to “mental inertia, laziness, [and] unjustifiable conservatism.” In psychology such a lack of rigor, albeit in the name of hard science, induces scholars to invent “fantastic and mythological explanations” for cognitive processes. Thus, inventions such as Spearman’s “g”—the internal force that propels mental ability—or IQ or multiple intelligences are assumed to be “real.” In this process belief in such scientific phantasms becomes disciplinary dogma and the rigor of subsequent research and theorizing is actually subverted. In the end we are not nearly as smart as we think we are as scientific and rational beings. With the help of this naïve realism the heart of psychology was extracted and consumed in the ritual of modernist science.

Thus, we come to the more fallible and tentative psychology of interpretivism. We begin to see that all psychological assertions are interpretations of a complex reality and that those who articulate a view of the mind with the claim of truth are victims of the sirens of realism and *positivism*. Such truth mongers fail to discern the social, cultural, discursive, epistemological, and ideological construction of our sense of reality. Naïve realism/positivism in this context fails to account for the fact that all entities are parts of larger processes that change over time. Mechanistic psychologists caught in the trap of these epistemological webs do not understand that when we view particular psychological phenomena in light of different contexts, we may see them in entirely new ways. Indeed, the supply of such contexts is infinite.

In the practice of mechanistic educational psychology the belief that experts have developed the proper way to view psychological phenomena, the proper space from which to observe them becomes quite problematic when considered in relation to the infinite supply of observational contexts (see Bredo [1994]). Let's think of intelligence from a 487th contextual perspective. Using research techniques such as factor analysis to reduce the complexity of a wide array of variables to a few ostensibly related ones, mechanistic educational psychologists find "the answer," or at least "correlations." As with Richard Herrnstein and Charles Murray (1994) in their best-selling *The Bell Curve*, fancy methodological footwork turns correlations between African-Americans and low IQ scores into attributions of causality and truth. Statistical correlations between African-Americans and low IQ scores are magically transformed into genetic inferiority and is the cause of African-Americans' low intelligence. If it didn't serve to hurt so many people, such an assertion would be humorous. This is where we begin to discern the tragedy of the naïve realism of mechanistic educational psychology.

With these naïve ways of seeing so firmly implanted in educational psychology, numerous practitioners in the field find administering tests, determining academic grade levels, and assessing the developmental progress to be their main activities. Depending upon their scores and levels, students will be directed to particular vocations and life paths—I was told I should be a piano tuner because I was not "academic material" but had an interest in music. If such practitioners of ed psych come to question the validity and effects of their tests and measurements, they often do so on their own initiatives—few who taught them ask social and political questions of the process. Without such hard questions and without monkey wrenches thrown into the gears of such mechanisms, the poor and marginalized will continue to be relegated to unchallenging and unrewarding life paths while the socioeconomically privileged will assume the good jobs and interesting pursuits. These privileged students will continue to succeed in education and will learn the predigested knowledges of schooling because they have been assured that there is a future benefit to learning such material. Such students are not "smarter" than their less privileged peers; they simply have a different social relationship to school and its role in their lives.

Certainly one of the most important dimensions of mechanistic educational psychology involves the dismissal of the importance of studying psychological phenomena in social, cultural, political, economic, and philosophical context. We see the results of such dismissal in the examples previously provided. Buoyed by this contextualization, thinking can no longer be viewed as a mere individual computational process. As Dewey argued, such a mechanistic perspective demeans the complex nature of thought. Thought is not simply a procedure that follows rules and instructions. Even the most controlled bureaucrats can become brilliant rule benders and creative exploiters of the regulations they are given. They will learn to negotiate the demands of their bosses with the needs of their clients. Thus, their thinking is shaped by numerous forces that must be encountered and dealt with in their immediacy.

These ideas about contextualization and the complexity of everyday cognitive activity are profoundly important as we consider the history of educational psychology. As psychology moved from behaviorism to cognitivism in the middle of the twentieth century, it worked to present a less passive view of the human. Yet, despite the effort, learning continued to be viewed as a mechanistic act with an end product of neat solutions to well-defined problems. In cognitivist-based educational psychology classes in teacher education, students were taught that learning was a technical, linear, and rationalistic process. Such students were induced to believe that teaching involved primarily the act of inputting data into the students' "processing mechanisms." Here it is translated into symbols, inserted into memory banks, and made ready for future usage. Though it was a reform movement, cognitivism adeptly retained the mechanism in mechanistic educational psychology. The mainstream scholarship and teaching of the discipline retains this mechanism in the twenty-first century.

THE ORIGINS AND PURPOSES OF INTERPRETIVIST PSYCHOLOGY

What I am calling interpretivist psychology is concerned with research into the meanings of human action and expressions as well as developing insight into beliefs about the self and the “other” in particular historical and cultural settings. In interpretivism’s more critical guise it is also concerned with the social construction of the self and the ways discourses, ideologies, and other power structures help construct the meanings humans give to the world in ways that hurt particular groups and individuals. Over the last three centuries the roots of this interpretivist tradition can be traced to such thinkers as Vico, Lazarus, Wundt, the Russian school shaped by Leontiev, Luria, and Vygotsky, and the American pragmatists Peirce, James, and Dewey. John Dewey captured the spirit of interpretivism with his analysis of the two dimensions of learning theory. As Douglas Simpson and Xinoming Liu describe in their chapter on Dewey’s contribution to educational psychology in this volume, the great pragmatist viewed learning theory from two angles—the micro and the macro.

In Dewey’s formulation the micro perspective focused primarily on the student, while the macro focused on the teacher, other students and the more general environment that surrounds the student. In the micro-context Dewey connected the student’s native appetites, instincts, and impulses to the general impulse to activity, thus constructing learning as a natural addendum to being a human being. This dimension of learning was then connected to places, subjects, ideas, emotions, and any other social dynamic that exerts an influence on the student. In this context Dewey maintained that learning always involved the student’s interaction with the environment. The role of the teacher was to make sure that such interactions could develop in ways that would eventuate in personal, social, and moral growth. Like Dewey scholars such as Lev Vygotsky and many others would focus on the continual interactions between biology and culture. In the case of Dewey and Vygotsky the message was clear: for educational psychology to become a rigorous, practical, socially responsible discipline, it would have to broaden its modes of analysis. As Patricia Whang maintains in her chapter in this volume, the field would have to broaden its “sources of influence.”

In the 1970s and 1980s such broadening began to take place with the emergence of *situated cognition* and *complexity theory*. With these perspectives were combined critical pedagogy, multiculturalism, *postcolonialism*, and interdisciplinary approaches to research—an alternative knowledge base for educational psychology was taking shape (see Beth Blue Swadener and Kagendo Mutua’s important chapter on decolonizing research in educational psychology). As Montserrat Castello and Luis Botella argue in their chapter, “Constructivism and Educational Psychology,” the new paradigm of the discipline draws upon this knowledge base always focusing on the integration of the social and the cognitive. Such integration, they posit, allows educational psychologists to consider both individual representations and the social situations where education and cognitive activity occur. The editors and authors of this handbook believe that these perspectives can help make contemporary educational psychology a more emancipatory domain that helps teachers make education a more democratic form of social practice.

As Lois Shawver maintains in this volume, the old universal meta-narratives of educational psychology cannot survive the electronic hyperreality of fingertip knowledge. Faith in a Cartesian–Newtonian explanation of cognition cannot be maintained in the contemporary era. Indeed, informed by a bricolage of diverse, multidisciplinary knowledges, interpretivist educational psychologists of the twenty-first century know too much to perpetuate the status quo of the discipline. Drawing upon feminism and the post-discourses, interpretivists reject mechanism because they understand

- the connection of the knower to what is known—thus, there is no privileged vantage point to gain objective truth about human cognition.

- the necessity of side-stepping the mechanist tendency to decontextualize the subjects of research and the researcher from their sociohistorical context—thus, no individual activity exists in simple isolation.
- the impact of the psychologist's values on how he or she sees the world—the frames we bring shapes the knowledge we produce.
- the inseparable nature of language and data in the field—no psychological data is pure and objective.
- the elitist nature of the relationship between educational psychologists and the consumers of the knowledges they produce—psychological knowledge production must always involve a democratic dialogue between producer and consumers of information.

Such insights allow interpretivists the empowerment to free ed psych from its status as a “nonsocial social science.” Operating on the multilogical, multidisciplinary terrain of interpretivism, scholars represented by the authors operating in this volume work to bring the psyche and consciousness back to center stage in the discipline. Always positioning this move in a variety of larger contexts, the editors and the authors work to view subjectivity in more complex frames than the automatic processes and quantitative constructs of the mechanists. It is Ray Horn's and my interpretation that mechanistic psychology has failed to construct a compelling description of what it means to be human. To describe cognitive processes without an understanding of the construction of identity and selfhood or devoid of insight into the nature of consciousness provides little help in the larger effort to make sense of human beings and their relationship to the processes of teaching and learning.

Mechanists, interpretivist educational psychologists maintain, have provided a cornucopia of fragmented information about the brain. In this process they have failed to carefully examine the larger theoretical dimensions of their mission. Such a failure has moved them to discern their goal as producing a final, fixed, universal notion of *the mind*—one that works as well today as it will in the year 2525 and in every sociocultural context. Psychological theorizing, interpretivists contend, should not involve such decontextualized, monological pronouncements nor should it be considered objective knowledge that can simply be transferred directly to practice. Knowledge production and usage are far more complex activities. Thus, interpretivists argue that educational psychologists have to start at the beginning and actually rethink what it is that we are trying to do in the first place.

THE INTERPRETIVIST RETHINKING OF EDUCATIONAL PSYCHOLOGY

Such a rethinking involves the difficult and long neglected task of asking what shapes our view of what a science such as educational psychology should be trying to accomplish. The goal is not, interpretivists argue, the attempt to gather pieces of the larger jigsaw puzzle of the mind so that one day we will know all there is about it. Instead, interpretivist educational psychology posits that we must expose the often-occluded background assumptions on which psychologists draw to help them shape their professional activities. The science of psychology found its roots in the common cultural, social, political, and philosophical assumptions of the historical epoch in which it developed. In this context there were unquestioned ways of seeing men and women, white people and those not considered white, the rich and the poor, the sexually “normal” and the sexually “deviant,” the intelligent and the stupid, etc. Many find such insights very disturbing because of their exposure of the ways hard sciences reflect the biases and prejudices of their *Zeitgeists*. Indeed, they are disturbed by the disrespect for scientific authority such expose might foster.

Without this interpretivist expose, living human beings—in particular, students—will continue to be reduced to transhistorical and transcultural central processing mechanisms. In the

mechanistic context culture and psychology were separated like roosters at a Balinese cockfight. With uncritical modes of sociological and anthropological analysis focused at the institutional level and mechanistic psychology focused at the technical level, there was no place for the interpretivists concerned with the interaction of the macro-meso-micro levels to go. Bricolage, offering a way out with its emphasis on interrelationship and multilogicality, displays a quest for different ways of knowing and inquiring. In the bricolage educational psychologists come to know diverse ways of being human—especially the subjugated ones—and employ them in their understandings of the divergent construction of humanness. In this way they will be more sensitive to multiple ways of being humane and intelligent. Such insights will subvert mechanistic psychological tendencies to certify one's own ways of thinking and being as the superior ones around which all others should be evaluated (see Elizabeth Tisdell's chapter on spirituality and interconnectedness in this volume).

Employing multicultural ways of seeing from subjugated and indigenous traditions and multiple methodological insights from a variety of schools of thought is central to the critical interpretivist rethinking of educational psychology. In the spirit of the bricolage a methodology such as phenomenology—long abandoned after the victory of behaviorism and technicist cognitivism—provides a way to bring the value of subjective human experience to the ed psych table. At the same time, hermeneutics—in Gestalt psychology a central analytical tool—can be resuscitated for great value in a critical interpretivist reconceptualization of educational psychology. Few analytical discourses could do more than phenomenology and hermeneutics to catalyze educational psychology's search for answers to questions about meaning, self-awareness, and the influence of social context. Such tools will help interpretivists focus their attention on issues of human dignity, freedom, power, authority, regulation, and social responsibility.

In their struggle to recast ed psych the interpretivists seek old and new ways to enhance their ability to contextualize humanness—as hermeneutics puts it, to see the discipline in light of numerous horizons. In this *modus operandi* history, cultural studies, linguistics, sociology, and communications to name just a few become requisite disciplines in the psychological bricolage—educational psychological studies. In this configuration educational psychology becomes a multilogical, interactive, ever-evolving, always in process pursuit where individuals and their relationships to each other and the world around them become central foci of professional attention. Human meaning making is seen here as inseparable from lived experiences and multiple contexts and can take place in the body as well as the head. Thus, the study of any psychological phenomenon cannot be removed from contexts in which they take place. The effort to study memory in a lab using human recall of nonsense syllables is misguided (see Villaverde and Berry in this volume). When framed outside issues of context, purpose, disposition, meaning, etc., the study of memory is a waste of time (see Smith [1998] for an expansion of these ideas).

EPISTEMOLOGY AND EDUCATIONAL PSYCHOLOGY

Let us pause to clarify the epistemological dynamics that are central to our paradigmatic concerns in this handbook. Epistemology is the branch of philosophy that studies the nature and production of knowledge. In the effort to understand why we view the world and ourselves in the ways we do, few disciplines contribute more than epistemology. Our epistemological assumptions, though we don't know they are there, are always working to shape our construction of the world and subsequently our actions in it. Naming and exposing epistemological assumptions is a central dimension of the critical interpretivist psychology explored in this volume. In this context we can better understand the importance of what Montserrat Castello and Luis Botella are telling us in their chapter on constructivism in this volume. Epistemological perspectives, they contend, provide psychologists with criteria to choose among competing theoretical perspectives. In a

mechanistic paradigm epistemological questions are deemed irrelevant because knowledge is simply a representation of the world “out there,” and as such is judged on the basis of its truth value. This is the end of the epistemological story in mechanism—there is no need to bother with further epistemological deliberations.

Interpretivists, however, are not so lucky. They struggle with the relationship between knowledge and the world around us. They understand that the arguments we make cannot be separated from the epistemological positions we accept both consciously and unconsciously. Simply put, mechanistic educational psychology has tacitly accepted a correspondence epistemology—a naïve realism as we labeled it above—that asserts that there is a single reality that can be discovered via the Cartesian–Newtonian scientific method. Viewing epistemological issues as much more complex, interpretivist educational psychologists see this correspondence perspective as dangerous and misleading. With this in mind interpretivists seek to expose the ways ideology shapes our view of the world, language tacitly constructs it, and sociohistorical context renders certain views natural and others unnatural. (See Stephen Brookfield’s important chapter, “The Ideological Formation and the Oppositional Possibilities of Self-Directed Learning,” for insight into the effect of ideology in this domain.)

Thus, mechanism’s correspondence and interpretivism’s constructivism move the differing paradigms to adopt divergent metaphors to ground their psychological labors. Because of this they ask different questions about the mind and selfhood and construct varying interpretations of cognitive activities. Knowing this, John Shotter (1993) argues that mechanistic psychology promotes the idea that

Everything intelligent we do involves a “cognitive process” working in terms of “inner” mental representations of the “external” world, and that the way to study such processes is by modeling them in computational terms. (73–74)

Shotter believes that the miscalculations of correspondence epistemology will lead to the destruction of the dominance of mechanism. More and more scholars will come to see the ways mainstream mechanistic psychologists have misled themselves. What they have labeled as intelligence and set out to measure with great pomp and precision is less a “real” entity that corresponds to the external world than a human construction that resonates with the cultural beliefs and social needs of people operating at a particular time and in a specific place.

From the mechanist perspective the constructivist epistemology of interpretivism is relativistic. If we do not establish a strict correspondence between truth and external reality, mechanists argue, interpretivists will be unable to discern between truth and falsity (see Thayer-Bacon [2000]). Interpretivists deny this charge, maintaining that psychologists can develop criteria for developing interpretations of the psychological world that fall neither into relativism or some form of correspondence absolutism. If educational psychologists accept a correspondence epistemology, knowledge becomes a warehouse of representations. Cognition becomes an act of ordering these representations. Teaching in this epistemological context becomes a process of efficiently transferring true knowledge into students’ brains. When the representations in minds of students match those of the teacher, learning has taken place.

Thus, knowledge for mechanists consists of elements and factors (things-in-themselves)—knowledge for interpretivists involves complexes and contexts and their relationships. Such epistemological distinctions hold profound implications for pedagogy. As Cynthia Chew Nations argues in her chapter in this handbook, in the mechanistic framework the teacher becomes the source of students’ knowledge of elements and factors. In a more constructivist interpretivist model, she continues, teachers create active learning environments where students learn to think critically. In a critical constructivist context thinking critically involves coming to understand the

complexes, contexts, and relationships that shape the lives of diverse individuals. Knowledge in a critical interpretivist epistemology no longer simply resides in textbooks and students' brains. Instead, critical interpretivist knowledge is always being constructed, always being produced in the interaction of perspectives generated in diverse contexts. As learners examine these diverse knowledge constructions and their relationships to one another, they begin to aspire to a higher domain of cognitive thought. The process of moving to these higher levels of thinking is a powerful and exciting activity. Its promise of new insights about self and world motivate me to engage in this work on educational psychology.

MOVING TO A NEW EPISTEMOLOGICAL TERRAIN

Many scholars have argued over the last three or four decades that a correspondence epistemology promotes a misleading portrait of the process of recognition. Recognition does not consist of simply comparing two pictures with one another. The process is much more complex, as illustrated in human beings' recognition of emotional feelings, justice, and genius. One does not hold a picture of genius up to what he or she is observing in the lived world—other types of thinking are operating in this context. The individual here is producing situated and implicit knowledges that help him or her interpret the nature and meaning of the phenomenon he or she is encountering. Thus, a simple correspondence-based test cannot be used in such situations to determine if the observer has accurately represented reality.

Jeanette Bopry in her chapter on Francisco Varela extends this epistemological point. This correspondence dynamic, she asserts, does not help us understand the way dogs perceive the world. Dogs' ways of constructing the world is very different from humans but is not "wrong." Such a reality implies that there are numerous ways of making sense of the world that work for the individual or animal that constructs them. Perceptions emerge when cognitive systems interact with the environmental context surrounding them. Bopry adeptly articulates this point: "My description of a sunset is not a description of an external phenomenon as much as it is a description of my own visual field." Thus, knower and known are eternally joined together, as no constructions of reality can be made without the presence of both mind and environment.

In this context we can clearly understand the epistemological foundations on which interpretivism rests. The interaction/connection between the individual and culture and the knower and the known is central to an understanding of the learning process. Indeed, the cultural system of which one is a part profoundly shapes the ways one thinks, the ways one constructs the world around oneself. Because of the diversity of such contexts and the infinite ways they shape cognitive behavior, mechanistic efforts to generate universal general laws are futile. Guided by a constructivist epistemology, interpretivists view cognition as a contextually specific, interactive, ever-evolving process in which the person both constructs and is constructed by the various contexts enveloping him or her.

Operating on this new epistemological terrain, interpretivists understand they must be better scholars than those who preceded them in educational psychology. They must gain an interdisciplinary understanding of the cognitive process. (See Lara Lee's chapter, "Reconnecting the Disconnect in Teacher–Student Communication in Education," on the role of communications in an interdisciplinary educational psychology.) In this context they enter the bricolage, making use of diverse disciplinary tools and perspectives to gain a deeper and thicker view of these complex social, cultural, economic, political, philosophical, and psychological dynamics. Such insights dramatically reorient our pedagogical understandings, as we are empowered as scholar-teachers to discern the ways particular students in specific circumstances construct their own meanings of academic experiences (see Alison Cook-Sather's chapter "Recognizing Students among Educational Authorities"). Contrary to the pronouncements of many, such epistemological/cognitive

understandings do not simply *dictate* our pedagogical strategies—instead, they *inform* them. One can still use a wide variety of teaching methodologies in light of such knowledge. Teachers by no means are condemned to teach the same way.

If we understand that learning takes place in context and in process, then we begin to appreciate the impact of the prior knowledge students bring to a classroom on the learning process. Many boys coming from working-class backgrounds, for example, may carry with them to school an understanding of academic work as an effeminate pursuit. Such prior knowledge plays a dramatic role in shaping their disposition toward learning. An educational psychologist or a teacher who does not know this operates at a severe disadvantage. Sandra Racionero and Rosa Valls in their chapter on dialogic learning are well aware of such dynamics and maintain that teachers who understand them focus more attention on the nature and needs of the learner. This moves pedagogy away from the mechanistic focus on the teacher as the “unique agent in the teaching–learning process.” Again, such insight does not dictate pedagogical method. To focus on the nature and needs of the learner does not mean that teachers do not ever confront students with bodies of knowledge. There is still much analysis to do on just what it means to be more attentive to the nature and needs of the learner.

To be attentive to the nature and needs of the learner in a critical interpretivist sense does not mean that we focus our attention on natural and ready-made students. It also does not mean that we attend to the learner so we can “normalize” him or her—fit him or her to the needs of dominant institutions. Here is where critical interpretivists have to be very careful. We can develop the most child-centered pedagogies possible that not only focus our attention on the nature and needs of the learner but allow the learner to produce his or her own knowledge about the world. If such knowledge is not problematized, subjected to ideological, discursive, and cultural analysis, then we may empower students to become hegemonized by the needs of the dominant culture. While critical interpretivists most definitely want students who actively participate in the world, we also want students with the ability to ask hard questions of the knowledges they encounter and even the knowledges they produce. Such a goal requires even more of the teacher who must understand the nature and needs of the student in a larger sociocultural and political context. Such a teacher must always be aware of the political consequences of particular epistemologies, psychologies, and pedagogies.

MECHANISM AND THE CENTRAL PROCESSING MECHANISM

With these epistemological understandings in mind one is better equipped to understand how mechanistic educational psychology has come to “believe in” a central processing mechanism (CPM). Indeed, the primary task of such a paradigm is to delineate the nature of this hidden mechanism and how it operates. To study it mechanists must remove it from everything else and then in its isolation delineate exactly how it represents the real world, categorizes the different aspects of the world, draws on stored memories, learns, etc. This mechanism stands apart from everything on which it operates and must be described in this way—the focus is on its universal properties. The capacity or efficiency of this CPM is what mechanists claim to be measuring when they administer psychological tests. Of course, the problem is that since we don’t have any clear understanding of what the CPM is and little understanding of what exactly constitutes its high-level and efficient operation, then we’re not exactly sure what such tests are measuring. When we bring our epistemological insights to bear in this situation, we can uncover further confusion about the relation of the CPM to social, cultural, political, economic, and philosophical context.

Mark Garrison in his chapter on psychometrics extends these observations, maintaining that there is an irrational dimension to the measurement work of mechanistic psychology. Garrison

contends that the psychometric project can be better understood as a political theory that attempts to assign worth to human beings. A key aspect of its operation as a political theory is that it constantly argues that there is nothing political about its operations. In this context it can be understood as a conservative political theory that attempts to assert the just nature of the status quo. Mechanistic psychology in the work of psychometrics claims that it facilitates the efficiency of the democratic sociopolitical process that allows people of superior intellect to attain power. Psychological tests become more important in the mechanistic context than an individual's real-life performance. If I illustrate great intellectual achievement, for example, but my IQ is low, my worth as an intelligent, high-functioning person can be diminished by the label "overachiever."

The results of psychometric tests speak with the voice of scientific authority. They move through psychometrics to education where they are accepted as the final truth about psychological issues and the worth of individuals. "This student who scored low on the aptitude tests," mechanists tell us, "is not college material." Using this narrow, brain-centered, test-driven view of the quality one's CPM, mechanistic educational psychology assures us that individuals who don't receive their blessing in the form of high-test scores simply are incapable of learning. They must be relegated to the dustbin of society. It is a powerful political theory that can make such decisions with the imprimatur of scientific authority. Yet, it is grounded on a house of epistemological cards, for it applies numerical values to objects that Mark Garrison maintains do not even have a referent in a constructed real world. Even if we assume the truth of a correspondence epistemology, we still don't know the nature of the CPM.

Jerome Bruner, one of the most important interpretivist educational psychologists of the last third of the twentieth century and the first decade of the twenty-first century, rejects the notion of a CPM, asserting that the field should look instead for "cultural amplifiers" of cognition. Bruner wants to know what situations and contexts help us think better and more clearly and how do we bring them into the educational process. In the psychometric approach the focus of measurement of the CPM is pursued to the exclusion of other dimensions of intelligence. In many ways it might be described as a psychology of nihilism, as it assumes that nothing that can be done to improve the intelligence of those with low IQ. Even such elusive constructs as creativity, Jane Piirto argues in her chapter in this volume, have been addressed by psychometrics. In such a process our understanding of creativity—like intelligence—has been undermined. In this conceptual context Julia Ellis's chapter, "Creative Problem Solving," provides educational psychologists and teachers with both a powerful theoretical insight into creativity as well as a masterful microanalysis of practical ways of integrating such understandings into classroom practice.

HURT: MECHANISTIC PSYCHOLOGY AND THE DEFICIT MODEL

In its roles as the purveyor of truth about the workings of the brain and the great social regulator, mechanistic educational psychology has often unleashed great harm on children. George Dei and Stanley Doyle-Wood in their chapter in this volume make this point dramatically when they illustrate the ways mechanistic ed psych helps create a "deep curriculum" of Eurocentrism that many times forces minority students into a "disembodied silence." Indeed, students whose abilities and selfhood are dismissed by the mechanists are hurt badly. This is one way that student subjectivity is produced, as countless students learn from the deep curriculum that they are "stupid." Over the last thirty years I have interviewed numerous students who have clearly learned the most important lesson of mechanistically driven schools: they are not capable of doing academic work.

In the mechanistic context many psychologists teach teachers that not all students can learn. This is the deficit model of psychology and pedagogy that undermines so many young lives. The academic and social failure that results from such oppressive assumptions, Kathryn Herr

writes in her chapter on problem teens, is viewed as a personal failing. Mechanistic psychology's personalization of failure is viewed outside of any larger social or cultural context and then is used to construct a crisis of youth. In this context Herr describes the growth industry of "kid fixing" with its emphasis on different types of intervention for different categories of young people. For middle-class children/youth with health insurance, therapy is offered; for poor and minority young people prison is the solution of choice.

Picking up on Herr's insights, Scot Evans and Isaac Prilleltensky insist in their chapter, "Literacy for Wellness, Oppression, and Liberation," that educational psychologists in this context should avoid "psychologizing problems and victim-blaming approaches." Such approaches illustrate yet again the decontextualizing tendencies of mechanistic psychology, as they substitute individual remedies for larger social problems. Evans and Prilleltensky maintain that psychologists must learn how social violence is manifested in the lives of individual young people. Such a task is difficult, however, in a field that is obsessed with labeling and categorizing children and young people. Recognizing such troubling disciplinary tendencies, Beth Blue Swadener and Kagendo Mutua in their chapter, "Beyond Schools as Data Plantations: Decolonizing Education Research," maintain that an interdisciplinary field of educational psychology must not be used to pathologize young people and their families. In the contemporary neoliberal culture of labeling and assessment, Swadener and Mutua insist, many educational psychologists and school leaders simply ignore the way in which categories of child and youth pathology and "risk" are socially constructed.

In the pathologizing and victim-blaming deficit model of contemporary educational psychology, the hurtful practices of the mechanistic approach to the discipline can be seen in crystal clarity. Indeed, the reasons young people fail rest as more in the social, philosophical/epistemological, cultural, economic, and political configurations of the society than in his or her individual deficiencies. How is failure defined? How is aptitude constructed? What is the process by which success gains its meaning in diverse cultures? As interpretivist educational psychologists operating in the multidisciplinary bricolage attempt to answer these questions, we begin to understand the complex ways in which such meanings gain widespread acceptance. I would maintain that the effort to understand the origins of a deficit psychology and its influence in the twenty-first century cannot be understood outside of a larger historical understanding of race and class politics in macro- and micro-contexts.

MACRO-HISTORICIZATION: THE IMPORTANT "RECOVERY" ROLE OF MECHANISTIC PSYCHOLOGY

The mechanistic victim bashing of the late twentieth and early twenty-first century can be better understood as a part of a larger reactionary sociopolitical impulse of the era. Though it seems far away and detached from contemporary psychological practice, the context constructed by the last 500 years of European colonialism in the world is central to our understanding of present practices. After centuries of exploitation the early twentieth century began to witness a growing impatience of colonized peoples with their sociopolitical, economic, and educational status. A half millennium of colonial violence had convinced Africans, Asians, Latin Americans, and indigenous peoples around the world that enough was enough. Picking up steam after World War II, colonized peoples around the world threw off colonial governmental strictures and set out on a troubled journey to independence. The European colonial powers, however, were not about to give up such lucrative socioeconomic relationships so easily. With the United States leading the way, Western societies developed a wide array of neocolonial strategies for maintaining many of the benefits of colonialism. This neocolonial effort continues unabated and in many ways with

a new intensity in an era of transnational corporations and the “war on terror” in the twenty-first century.

Though most Americans are not aware of it, the anticolonial rebellion initiated the liberation movements of the 1960s and 1970s that shook the United States and other Western societies. Indeed, the civil rights movement, the women’s movement, the anti-Vietnam War movement, the Native American rights movement, and the gay rights movement all took their cue from the anticolonial struggles of individuals around the world. For example, Martin Luther King wrote his dissertation on the anticolonial rebellion against the British led by Mohandas Gandhi in India. King focused his scholarly attention on Gandhi’s nonviolent resistance tactics, later drawing upon such strategies in the civil rights movement.

By the mid-1970s a conservative counterreaction—especially in the United States—to these liberation movements was taking shape with the goals of “recovering” what was perceived to be lost in these movements (see Gresson [1995]). Thus, the politics, cultural wars, and educational and psychological debates, policies, and practices of the last three decades cannot be understood outside of these efforts to “recover” white supremacy, patriarchy, class privilege, heterosexual “normality,” Christian dominance, and the European intellectual canon. They are the defining macro-concerns of our time, as every topic is refracted through their lenses. Any view of educational psychology, curriculum development, or professional education conceived outside of this framework ends up becoming a form of ideological mystification.

Mechanistic educational psychology is enjoying contemporary success in its testing and labeling functions in part because it plays such an important role in “recovering” what was perceived to have been lost in the anticolonial liberation movements. One of the psychological dimensions of what was perceived to be lost was the notion of Western or white intellectual supremacy. No social mechanism works better than intelligence/achievement testing to “prove” Western supremacy over the peoples of the world. Psychometricians operating in their ethnocentric domains routinely proclaim the intellectual superiority of Western white people. Richard Herrnstein and Charles Murray, for example, in their best-selling book, *The Bell Curve*, write unabashedly that the average IQ of African peoples is about 75. The fact that the concept of an intelligence test is a Western construct with embedded Western ways of understanding the world is never mentioned in this brash assertion. Thus, the contemporary psychological obsession with labeling, measuring, and victim blaming is concurrently a macro-historical, meso-disciplinary, and a micro-individual matter. Critical interpretivist educational psychologists cannot allow mechanistic reductionism to continue to subvert our understanding of the complexity of these issues.

FAILURE AND DIFFERENCE

The social dimension of the psychological process by which individuals are labeled failures is obvious. A political economy of aptitude exists that has to do with an individual’s access to the psychological resources of the larger society—to Bruner’s cultural amplifiers of cognition. How can we measure intellectual ability without taking into account an individual’s or a group’s access to such cultural tools? In light of the Eurocentrism and reductionism embedded in mechanistic ways of viewing the psychological realm, we begin to understand that those individuals labeled as failures are often social and cultural outsiders. Their difference from the white, male, upper middle/upper class, conformist mainstream is viewed as deficiency, irremediable incompetence. Without an educational psychology and a pedagogy that find insights in diverse traditions, epistemologies, worldviews, and macro-histories, these attributions of the failure of those different from the Eurocentric center will continue to rule the day.

As George Dei and Stanley Doyle-Wood contend in their chapter in this handbook, “we must all develop an anticolonial awareness of how colonial relations are sustained and reproduced in

schooling practices.” Since the macro always intersects with and shapes the micro, the power of colonialism and the neocolonialism of the twenty-first century is always embedded in the individual mind. Taking a cue from Dei and Doyle-Wood, critical interpretivists employ anticolonial knowledges and epistemologies in the effort to reconstruct educational psychology. Brenda Cherednichenko’s insights in her chapter, “Teacher Thinking for Democratic Learning,” extend these ideas into the everyday life of the classroom. In this context she writes that many teachers hold a cultural and socioeconomic class affinity with many of their successful students. As a result these are the chosen ones who are provided a “more complex, challenging, and intellectual curriculum.” Because marginalized students lack access to the intellectual tools of high culture—Bruner’s cultural amplifiers—they are deemed unworthy of help.

In the present era of standardized curricula and top-down content standards the pronouncements of Dei, Doyle-Wood, and Cherednichenko too often fall on deaf ears. In this conceptual context Sandra Racionero and Rosa Valls remind readers that when educational psychologists and teachers fail to consider difference, school culture takes on hegemonic purposes. In this hegemony of whiteness boys and girls from minority contexts realize that academic success demands that they give up their ethnic and cultural identities. Indeed, they must work to become as much like individuals from dominant cultures as possible. What is sad is that even such an effort doesn’t assure them of acceptance and attributions of success in the scholarly domain. Delia Douglas expands these racial dynamics in her chapter on the everyday educational practices of white superiority.

Even after they jump through all the scholarly and advanced degree-mandated hoops, they often find that such certification is not enough. They must prove themselves again and again to those from the elite halls of racial, class, gendered, and ethnic privilege. Educational psychologists in a reconceptualized discipline can play a key role in researching the ways these hurtful dynamics manifest themselves in school setting. Scot Evans and Isaac Prilleltensky maintain in their chapter here. To accomplish such a goal, Evans and Prilleltensky conclude, educational psychologists must develop a sensitivity to power and structures of inequality. It is in this way that educational psychologists can help alleviate the suffering caused by equating difference with deficiency. In the context of these structures of inequality Rochelle Brock’s two highly creative chapters on race and critical thinking expand our understanding of these dynamics.

CONSTRUCTING, SITUATING, AND ENACTING

Getting beyond the hurtful dimensions of mechanistic educational psychology demands much work and an engagement with the complexity of the discipline’s domain of inquiry. The authors and editors of this handbook fervently believe such a move is possible. Numerous important breakthroughs in the last few decades have empowered critical interpretivists to move to a new terrain of educational psychology. In the next few sections of this introduction I will lay out one path to such a terrain. Via the understandings of constructivism, situated cognition, and enactivism, I believe that the field of educational psychology can be transformed. Drawing upon the insights generated from these discourses and interpreting them in the bricolage of multidisciplinary understandings, critical interpretivists can move to a domain that Ray Horn and I have described as postformalism. In no way do we proclaim that postformalism is the end of psychological history—of course not. We do suggest, however, it might suggest an important stop on our journey to a more just, power-sensitive, and scholarly rigorous articulation of educational psychology.

Our earlier epistemological analysis of constructivism lays the foundation for our critical interpretivist trek. Constructivist epistemology leads us to a vantage point where we begin to understand the interaction of individual and context as the construction of more a *process* than a

thing-in-itself. As a process this individual-context interaction results more in an ever-changing mutual modification than an act of producing a “finalized something.” Thus, individual and context are coconstructed, as they enter into a dynamic interactive process—the human being changes as does the environment in which he or she operates. Jeanette Bopry in her chapter here clarifies our understanding of this coconstructivism as she describes perceptions as emerging from the interaction of a cognitive system with its environment. This interaction in the language of complexity theory is labeled “structural coupling.” Such a process, Bopry maintains, is recursive “in that changes in A triggered by B will trigger changes in B which will trigger changes in A.” Tara Fenwick in her chapter draws upon her own important work in complexity theory to highlight these insights. The systems shaped by the structural coupling, she maintains, are inseparable as they create “a new transcendent unity of action and identities.” Such insights hold profound implications for the future of educational psychology and pedagogy.

For example, the field of neuroscience, John Weaver writes in his chapter on “Neuropolitics,” illustrates the biological and cognitive importance of structural coupling of the individual and the environment. Every neuron in the brain is constructed to engage in a particular activity. Yet, at birth, Weaver contends, all neurons can be employed to perform any task regardless of their predisposition. Thus, human beings are capable of creating new neural networks to facilitate their insight into the surrounding cosmos. Educational psychologists can make good use of this neuroscientific understanding to help teachers and students create new neural matrixes by exposing them to new and diverse ways of seeing the world. In many ways this is an amazing scientific insight in that it subverts mechanistic forms of cognitive essentialism that insist humans cannot “learn intelligence,” that they cannot teach themselves to become smarter. Thus, structural couplings connecting students with diverse contexts and sociocultural processes produce neurological, cognitive, political, and ethical benefits. Critical interpretivists use this knowledge in their larger effort to reconceptualize educational psychology, in the process creating a psychology and subsequently a pedagogy of optimism and hope.

Thus, this educational psychology of optimism and hope focuses on the importance of these insights into the interaction of individual and context, the macro and the micro. As David Hung, Jeanette Bopry, Chee Kit Looi, and Thiam Seng Koh maintain in their chapter, “Situated Cognition and Beyond: Martin Heidegger on Transformations in Being and Identity,” the whole is not made up of discrete things-in-themselves but is an interaction of intimately connected dynamics. The relationship connecting these entities, Hung, Bopry, Looi, and Koh posit, shapes the meanings they assume. No meaning exists outside of these interrelationships. Indeed, the mind is shaped by these structural couplings and cognitive activity comes to be understood in terms of this individual-contextual relationship and the coconstructive process that modifies both. Knowing in this configuration is always a social process seeking to interpret the meaning of diverse relationships. Teachers and learners in this complex process always know that there is no final interpretation. Epistemologically savvy, they realize that they must be humble for all of their interpretations are incomplete and flawed in ways not discernible in the present sociohistorical context.

In this interpretivist context, learning, Tara Fenwick in her chapter reminds us, is viewed as a “continuous invention and exploration, produced through the relations among consciousness, identity, action and interaction, objects, and structural dynamics of complex systems.” Relationship in this domain takes on an importance previously unimagined in the psychological sciences. A quick return to some previously addressed concepts is appropriate in this context. Our previous discussion of epistemology and positivism’s unquestioned acceptance of a naïve realism becomes very important in this context. Intimately connected to the positivist epistemology is a positivist *ontology* that views the world as a simplistic domain composed of things-in-themselves that lend themselves to precise empirical measurement. Such an epistemology and ontology allow

psychologists and teachers to evade a confrontation with complexity and operate in the shadow of reductionism. Such naivete undermines the scholarly rigor of educational psychology, rendering acts of penetrating insight, contextual analysis, and interpretive genius irrelevant. Knowledge is produced by following positivist procedure not by analyzing phenomena in new contexts and as parts of unseen processes.

Psychologists who embrace these positivist epistemologies and ontologies study an objective world and its contents as isolated phenomena. In this naïve realist framework things-in-themselves wait around like belles at the ball for a knower to arrive and “discover” them via use of the correct research method. Such a system shapes not only the production of knowledge but the reception of knowledge as well. Naïve realism fosters the faith that knowledge discovery is the end of the research and learning process. After researchers, teachers, and students “know” one of these things-in-themselves, they have nothing more to learn. Thus, in this epistemological and ontological context the purpose of learning is to obtain the “truths” already certified and commit them to memory.

In the world of mechanistic psychology’s naïve realism all of our work on the interaction of whole and parts, process, structural coupling, complexity, interrelationship, power, and justice is irrelevant to the real work of the discipline. Returning to Tara Fenwick’s important contributions to these ideas, the interpretivist concerns laid out here set up the possibility of inspired human action. The more teachers and learners understand about the interactions of complex systems, the more empowered they are to participate in creative shared action. What I have referred to elsewhere as a “critical ontology” holds particular importance in this context. If we better understand the constructed, situated, and enacted nature of humans “being-in-the-world,” then we appreciate that—in the words of Hung, Bopry, Looi, and Koh—we construct “the world by living in it.”

Being-in-the-world demands that we constantly learn and interpret. Critical interpretivist educational psychologists take these ideas seriously as they attempt to better understand both the knowledge production and learning processes. These tasks cannot be performed rigorously and justly without engaging diverse and multiple levels of analysis. Scot Evans and Isaac Prilleltensky are helpful in their delineation of what these levels involve: “personal, interpersonal, organizational, community, and social.” For teachers and students to learn, to develop a sense of democratic sensitivity and social justice, and to develop a satisfactory balance of a wide variety of needs, they must engage with all of these levels. It is disconcerting to note that mechanistic psychology, operating in its positivistic framework, excludes such interaction as an act of degradation to the sanctity of scientific work.

INTERPRETIVISTS DRAWING ON THE POWER OF SITUATED COGNITION

Critical interpretivists carefully study and learn numerous lessons from situated cognition which emerged in the 1980s as a challenge to mechanistic cognitivism. Led by psychologists such as Jean Lave and Etienne Wenger, situated cognition insisted that we would learn far more about the cognitive process if we focused more attention on practical forms of thinking found among everyday people in everyday pursuits. Such research is important on many levels, not the least of which it would help move such psychologists away from their obsession with the computer model of the human mind. In this context situated cognitivists examined on the cognitive processes of workers engaged in vocational pursuits around the world. In these imminently practical contexts situated cognitivists came to understand in great clarity the way that mechanistic educational psychologists had become obsessed with producing a model of the vehicle in which cognitive activity takes place, in the process missing the activity itself.

Central to the situated cognitivist position is the understanding that the cognitive activity always takes place in a community of practice. As Diana Ryan and Jeanette Bopry contend in their chapter, “Stakeholder-Driven Educational Systems Design: At the Intersection of Educational Psychology and Systems,” community members develop ways of doing things that are mutually valued and in so doing, they learn from each other.” Picking up on these situated cognitivist concerns, Hugh Munby, Nancy Hutchinson, and Peter Chin in their chapter on workplace learning and education posit that the concern with practical learning forces educational psychologists to rethink our notions of teaching, learning, and knowledge. After an encounter with situated cognition and its interest in how individuals learn in the workplace, we can never think about cognition in the same way again. Indeed, cognitive studies in the situated cognitivist configuration, Munby, Hutchinson, and Chin tell us, would be better off to focus its attention on practical forms of reasoning that eventuate in action (knowing how) rather than on theoretical reasoning that leads to the development of declarative knowledge (knowing that).

While this is a complex issue, after the work of the proponents of situated cognition one would think that only dyed-in-the-wool mechanists would unproblematically privilege the value of knowing that over knowing how. Yet, as Munby, Hutchinson, and Chin assert, there is a political economic dimension to these knowledges that exerts a profound impact on how they are represented and valued. The declarative knowledge of knowing that possesses a higher status in Western societies as it is associated with professions such as law and medicine. The professional curriculum for law and medicine, of course, is filled with data banks of declarative knowledge.

This is not to say that law and medicine don’t require knowing in action—of course they do. Entry into the field, however, is patrolled by tests demanding particular forms of declarative knowledge. Thus, Munby, Hutchinson, and Chin insist that the question posed by situated cognition to students of educational psychology and pedagogy is profound: Is the schools’ emphasis on declarative/decontextualized knowledge misguided? These are central questions for the field of educational psychology. Again, while there are no simple answers, the effort to address them leads us all to new insights into the nature of cognition and its relationship to teaching and learning. Critical interpretivists take these inquiries very seriously. Situated cognition obviously avoids privileging monological forms of declarative knowledge as the most important form of knowledge and its commitment to memory as the ultimate objective of the educational process.

As Hung, Bopry, Looi, and Koh describe it in their chapter here, situated cognition views knowing as a social process where learners seek to understand interrelated phenomena. Concurrently, these same learners, argue the proponents of situated cognition, have to understand their own historicity—their construction in a particular historical context—and the ways it shapes their multiple relationships to the learning process and what is being learned. Here the individual-context relationship is reconceptualized. The learner is no longer merely seen as operating in an environment; the person and environment join together as portions of coconstructed wholes. To separate them is to destroy them. Learning is embedded in these coconstructed wholes and emerges in the actions that occur in these contexts. The knowledge learned is not transmitted in some simple sense from teacher to learner. Again, critical interpretivists see no easy and obvious lesson about the nature of teaching to be derived from situated cognition. They do, however, find it to be essential knowledge for those attempting to design revolutionary new forms of educational psychology and pedagogy.

INTERPRETIVISTS DRAWING ON THE POWER OF ENACTIVISM

Picking up on the work of the Santiago school of cognitive theory, we now examine enactivism as an important contribution to the cognitive theoretical bricolage engaged by critical interpretivist educational psychologists. Embracing constructivism as their intellectual ancestor, Humberto

Maturana and Francisco Varela argue that the world we know is not pre-given but enacted. Thus, in the spirit of constructivism, they maintain that the act of cognition does not primarily involve the Cartesian effort to commit to memory “*mental reflections*” of the real world. Instead of attempting to reconstruct “true” mental reflections of the “real world,” learners should focus on our actions *in relation* to the world. Observing the mind from biological and psychology perspectives, enactivists undertake the struggle to repair the damage unleashed by mechanism’s reduction and fragmentation of the psychological world.

When we add enactivist insights to critical interpretivism’s theoretical bricolage of critical theory/critical pedagogy, feminism, constructivism, and complexity theory, we gain a powerful theoretical recipe for a new educational psychology. As Erica Burman, Issac Prilleltensky, Valerie Walkerdine, Jerome Bruner, Jean Lave, Etienne Wenger, John Pickering, Ken Gergen, James Wertsch, Roy Pea, and many others have argued over the last few years in the spirit of Lev Vygotsky, cognition is a socially situated dynamic that always takes place in specific historical contexts. Enactivism profoundly contributes to the work of these scholars, contending that it is in this specific sociohistorical context that humans realize who they are and what they can become. A central contribution of enactivism involves its assertion that humans realize their highest cognitive abilities in specific everyday circumstances—in the enaction of cognitive activity in the lived world.

Francisco Varela argues that individuals engage in a higher order of thinking when they learn to utilize knowledge and feelings from a circumstance where particular ways of thinking and acting are deemed intelligent and transfer them to more complex situations where intelligent action is deemed ambiguous. Thus, intelligent behavior in an enactivist context does not involve a form of reasoning where universal rules are followed—divergent contexts will demand diverse modes of intelligence. In this context intelligent and even ethical action may seem logically contradictory to those operating at Piaget’s *formal level of cognition*. Varela (1999) uses the Vajrayana Buddhist tradition’s notion of “crazy wisdom” to denote someone who has learned to operate at the level of ambiguity and complexity. At another point in his work he refers to such abilities as “intelligent awareness.” Teachers, educators, and educational psychologists who operate in the critical interpretivist framework perform their teaching and research with an appreciation of crazy wisdom and intelligent awareness.

In the enactivist frame we crawl outside the conceptual window and move into the postmechanistic psychological cosmos. In a biological context we come to understand that throughout the world of animals all beings possess knowledge that is constituted in the concrete situation. In this context we grasp Varela’s (1999) point in *Ethical Know-How*: “What we call general and abstract are aggregates of readiness-for-action” (p. 18). This means that students don’t manifest their intelligence simply by developing efficient mental file cabinets for storing data; it tells us that various knowledges are important as we discern their meanings and relationships and become empowered to use them in the improvisation demanded by particular circumstances. In an academic setting the particular circumstance might involve making an argument, defending a position, figuring out how to use knowledge of oppression to help an individual who is suffering, or a teacher struggling to deal with a student who is having difficulty in a math class.

Appreciating these enactivist insights educational psychologists and teachers are ready for another cognitive theoretical step forward. As we come to understand these enactivist concepts concerning the realization of our cognitive abilities in concrete circumstances, we return to the complex dynamics of self-production. In critical interpretivism the understanding of how the self is produced and how this process shapes how we construct the world becomes profoundly important. In modes of teaching and researching where this feature is omitted, nothing can be done to make up for the exclusion. Enactivism refuses to ignore the disjunction between what cognitive psychology has traditionally confirmed vis-à-vis our immediate experience, consciousness, or

awareness of selfhood. At times in the recent history of cognitive psychology—for example, in behaviorism—scientists insisted that consciousness did not exist because it did not lend itself to empirical measurement. Other cognitive perspectives, while not denying its existence three times before the cock crowed, simply ignored it. Obviously, such approaches to consciousness, immediate experience, and awareness of selfhood left an unfillable theoretical hole in its wake. Why, Varela asks, do humans experience the self so profoundly? Just ignoring the hole will not make it go away.

Informed by enactivism we ask what is the nature of the disjunction between scientifically validated cognitive theory and our experience of consciousness. Operating on the grounding of our understanding of consciousness construction, we follow Varela's description of the emergent and self-organizing dimensions of selfhood, his notion of the virtual self. The emergent, virtual self arises out of a maze of relationships—in much the same way hermeneutics describes the emergence of meaning in the relationships produced by the hermeneutic circle. It has no definable CPM, no "brain command" where control is coordinated. Consider this cognitive dynamic in light of our understanding of the cultural politics of the construction of the self. Such a process operates to create new social, cultural, political, and economic relationships to produce new and more market-compliant, consumer selves. In this context we begin to understand the pedagogical implications of the emergent self. The self is infinitely more malleable, more open to change than we had previously imagined. Given one's motivation, of course, this dimension of selfhood can be mobilized for great benefit or manipulated for great harm.

Buoyed by these insights, we enter the arena with a new insight into what can be. We know that despite the power of generations of cognitive determinists operating under the flag of IQ, human beings can learn to become more intelligent. Individuals can *construct* their own intelligence in a supportive context. And in this context such people understand that selfhood is even more of a miraculous phenomenon than many had imagined. In the emergent context we gain a perspective; indeed, to live is to have a point of view. A critical teacher or researcher, however, gains numerous levels of understanding on the origins of his or her perspective.

Varela writes of a moment-to-moment monitoring of the nature of our selfhood. Such monitoring involves gaining meta-awareness of the various connections we make to diverse dimensions of the sociophysical world around us. It involves isolating and letting go of an egocentrism that blinds us to the virtual and relational nature of our selfhood. In a critical interpretivist educational psychological context it means avoiding those definitions of higher-order thinking that view it as an egocentric manifestation of the combative proponent of rationality. In the process we also elude the cultural and gender inscriptions such perspectives drag along with them. With these knowledges we are prepared for the struggle to reconceptualize educational psychology.

So critical interpretivists begin to play more focused attention to the ways complex systems display emergent properties by way of the interaction of simple elements. The structural couplings that develop in this interaction make possible such emergence. Thus, as Jeanette Bopry posits in her chapter on Varela, the human nervous system does not pick up information from the environment. Instead, it makes meaning, it interprets its interaction with its context. This is why enactivists assert that they don't see the external environment but their own visual field. To figure out the significance of what they see in their fields, human beings—according to the enactivists—must reach out to others for help. How do my perceptions mesh with the perceptions of others? As Bopry puts it, "we share a reality because we have cospecified it through the coordination of our actions with the actions of others." The development of a view of reality takes place in social interaction—such a view emerges from individuals talking to one another about what they see in their visual fields.

In Western societies our language constructs a view of worldviews and knowledge about the world as a "thing" that one deposits in the container of the mind. Thus, knowledge is viewed as

something contained in vocabulary, written documents, databases, etc. Drawing on Varela and Bopry, critical interpretivists understand knowledge is too complex to be simply contained. Bopry puts it succinctly: “Within the enactive framework knowledge is effective action within a domain.” Indeed, knowledge is always constructed (enacted) within a context. Thus, this enacted view of knowledge reshapes our view of intelligence. Intelligence is no longer equated simply with the ability to solve pre-given and well-structured problems. In an enactivist context it involves one’s capacity to construct frameworks of understanding that resonate with and extend the insights of others. Bopry is quick to point out in this context that the networks created in this context do not have to be the same as everyone else’s. There is room for disagreement and diversity of the worlds of understanding that human beings create. The key point is that the frameworks of insight different individuals create resonate, that is, it engenders thought and positive interchange among groups of interpreters.

Given our epistemological insights critical interpretivists understand that this enactivist understanding of intelligence with its frameworks of insight does not mean that intelligent people recover a pre-given, objective reality. Thus, as Varela insists, cognition is constructed not by representations of true reality but by embodied action in lived contexts. This means that the world is enacted, made in the everyday activities of human beings interacting with their environments. The everyday world of humans is a cosmos of situated individuals, perpetually having to devise their next steps in light of the contingency of the next moment.

Contrary to mechanistic psychological precepts, this ongoing configuration of what to do is not a rationalistic selection process among a pre-given smorgasbord of possible courses of action. It can more accurately be described as a never-ending improvisational performance in an ever-changing environment. Definitions of intelligence and even ethical action do not amount to much if they are merely abstract principles that are separated from the necessity of figuring out what to do in immediate situations. Outside of these immediate contexts definitions of intelligence, precepts for professional performance, and rules for ethical action become stale utterances and banal homilies of the cloistered scholastic. Such pronouncements like the seed of Onan fall on barren ground.

MOVING TO THE CRITICAL: POSTFORMALISM

Drawing upon the innovations delineated by the long tradition of interpretivism, the psychological work of John Dewey and Lev Vygotsky, cultural psychology, the paradigmatic analyses of Ken Gergen, constructivism, situated cognition, and enactivism, Shirley Steinberg and I have worked over the last fifteen years to develop a critically grounded foundation for educational psychology. Incorporating insights from feminist theory, African-American ways of seeing, *subjugated knowledges*, the ethical concerns of liberation theology, and a variety of critical theories from the Frankfurt School, Paulo Friere, and critical pedagogy to particular *post-discourses*, we have sought to provide a contemporary critical interpretivist educational psychology grounded on a multilogical version of scholarly rigor and a concern for social justice.

This postformalism also draws on the work of Jean Piaget, although parting company with him around the importance of the social and questions of the universality of Western science. Piaget’s formal thinking implies an acceptance of a mechanistic worldview that is caught in a linear, reductionistic, cause–effect form of reasoning. Unconcerned with questions of power relations and the way they structure our consciousness, Piaget’s “higher-order formal operational thinkers” accept an objectified, unpoliticized way of knowing that breaks a social, educational, or psychological system down into its component parts in order to understand how it works. Aggrandizing certainty and prediction, formal thinking organized certified facts into universal theories. The facts that do not fit into the theory are jettisoned, and the theory developed is

the one best suited to limit contradictions in the knowledge produced. Thus, formal thinking operates on the assumption that resolution must be found for all contradictions. Schools and standardized testmakers, assuming that formal operational thought represents the highest level of human cognition, focus their efforts on its cultivation and measurement. Students and teachers who move beyond such cognitive formalism are often unrewarded and sometimes even punished in educational contexts.

Humble in their debt to the above-mentioned sociopsychological discourses, postformalists attempt to politicize cognition. In this context they attempt to remove themselves from the alleged universalism of particular sociopersonal norms and ideological expectations. The postformal concern with questions of meaning, emancipation via ideological disembedding, and attention to the process of self-production moves beyond the formal operational level of thought with its devotion to proper procedure. Postformalism grapples with purpose, focusing attention to issues of human dignity, freedom, authority, scholarly rigor, and social responsibility. Many have argued that postformalism with its bricoleur's emphasis on multiple perspectives will necessitate an ethical relativism that paralyzes social action. A critical postformalism grounded on an *evolving criticality* refuses to cave in to relativistic inaction. In this context postformalism promotes a conversation between critical theory and a wide range of social, psychological, and philosophical insights. This interaction is focused on expanding and constructing self-awareness, new forms of critical consciousness, and more effective modes of social action.

Thus, in the spirit of John Dewey and Lev Vygotsky postformalism is about learning to think and act in ways that hold pragmatic consequence—the promise of new insights and new modes of engaging the world. In this context students in postformal schools encounter bodies of knowledge, not for the simple purpose of committing them to memory but to engage, grapple with, and interpret them in light of other data. At the same time such students are confronting such knowledges they are researching and interacting with diverse contexts. They are focused on the process of making meaning and then acting on that meaning in practical and ethically just ways (see Sharon Solloway and Nancy Brooks' important chapter on postformalism and spirituality in this volume).

Postformal Thinking: Toward a Complex Cognition

Indeed, such students are becoming students of complexity and processes. Postformal students move beyond encounters with “formal” properties of subject matter. Cartesian logic and the mechanistic education it supported focused attention on the formal dynamics of defining subject matter, subdividing it, and classifying it. As Dewey put it in the 1930s in *How We Think*: in formal thinking and teaching “the mind becomes logical only by learning to conform to an external subject matter” (p. 82). The student in this context is told to meticulously reproduce material derived from arithmetic, geography, grammar, or whatever. The concepts of meaning making or use in context are irrelevant in the formal context. Thus, as complexity theory would posit decades after Dewey's work on cognition: objects in the rearview mirror are more complex than they may appear.

In the spirit of complexity postformalists understand that since what we call reality is not external to consciousness, cognition operates to construct the world. It is more important than we ever imagined (see Horn [2004]). Like cream in a cup of dark roast Columbian coffee, complexity theory blends well with Dewey's critique of formalism. Cognitive activity, knowledge production, and the construction of reality are simply too complex to be accomplished by following prescribed formulae. The reductionistic, obvious, and safe answers produced by formalist ways of thinking and researching are unacceptable to postformalists. What are the epistemological and ideological processes, postformalists ask, that operate to confirm such knowledge claims while disconfirming

others? Understanding the pluralistic nature of epistemology, postformalists see beyond the one-truth reductionism of formalism. Understanding, for example, that there are many ways to define and measure intelligence moves postformalists to engage in a more rigorous analysis of such a phenomenon.

The procedure-based, decontextualized, epistemologically naïve formalist way of approaching educational psychology is the method of beginners not of seasoned, rigorous scholars. Just as physics and biology have retreated from formalist efforts to search for subatomic particles and genes as the ultimate organizational components of matter and life, psychologists of a postformal stripe see the mind less as a compilation of neurons and more of a complex set of processes operating in diverse contexts. Such reductionistic formalist obsessions emerge when research topics are dehistoricized and decontextualized. This is why postformalists are dedicated to the study of context. Without such contextualization Abraham Maslow's hierarchy of needs is put forth as a universal truth, just as relevant for a nineteenth-century woman in an isolated tribe in an Amazon rainforest as it is for Prime Minister John Howard in twenty-first-century Australia. Without postformalism's contextual intervention, Piaget's formal operational thinking becomes the standard for measuring the highest order of intelligence for African tribespeople in rural Namibia as well as for affluent students from the Upper East Side in New York City. Needs and concepts of higher-order thinking, once historicized and culturally contextualized, emerge as social constructions. It is hard to discern the footprints of social construction in the formalist haze.

Picking up on Tara Fenwick's delineation of experiential learning, postformalists deepen their appreciation of the importance of experience in the intersection of constructivism, situated cognition, and enactivism. Carefully examining the interaction of experiential learning in everyday contexts with particular critical theoretical insights, postformalism traverses a terrain of complexity leading to new insights about cognition and the forces that shape it. Respecting Fenwick's admonitions, postformalists refuse deterministic and elitist orientations that view individuals as "blind dupes" of social structures. Instead postformalists learn from people's everyday lived experiences, always appreciating the need to question anyone's experience—their own included—for the role power plays in refracting it. No experience—no matter the context in which it is embedded, no matter how "theoretically sophisticated" it is deemed to be—is free from the influence of power. Drawing on insight from experience in postformalism is always accompanied by the hermeneutic act of interpreting the meanings of such experience in light of particular contexts and processes. There is nothing simple about experiential learning in postformalism.

The postformal effort to deal with the complexity of experience is intimately connected to the previously discussed multilogicality of the bricolage. One of the central dimensions of this multilogicality involves the effort to overcome the monological limits of formalistic science and its companion, hyperreason. In this context postformalists point out the ways that mechanistic notions of intelligence and ability have dismissed the insights and contributions of the socially and economically marginalized and alternative ways of developing found in differing cultural contexts. Formalism's lack of respect for those who fall outside its boundaries is unacceptable in the contemporary world; in this context postformalism constantly pushes the boundaries of cognition and knowledge production with its emphasis on subjugated knowledges and indigenous ontologies. In postformalism complexity theory breaks bread with a literacy of power. In the process a powerful synergy is constructed that shines a new light on the field of educational psychology.

In postformalism critical social theory works in the trenches with diverse discourses in the process expanding our understanding of complexity and challenging critical theory itself. In this context critical theory sees itself in terms of an evolving criticality that is perpetually concerned with keeping the critical tradition alive and fresh. Such theoretical moves challenge educational

psychology to ask how it is shaped by its own culture. Postformalism is the uninvited guest in the summer house of cognitive studies that keeps pressuring the discipline's elite to understand that mechanistic psychology is an ideology with devastating effects on those not in the country club of modernity. Pointing out that mechanism operates in the low-affect social world of naïve realism, postformalists chart its values of neutrality and amoral technicism. We keep politics out of psychology, psychometricians insist, and we just objectively measure human intelligence and that has nothing to do with the cultural realm. In a neosocial Darwinist era where survival-of-the-fittest perspectives find wide acceptance, these formalist educational psychologies once again provide justification for the failure of the socially, economically, culturally, and politically marginalized. Postformalism will not allow such reductionism to stand.

Postformalism, Complexity, and Multiple Perspectives

In this context postformalists turn their critical lenses on the complexity of the interrelationship between consciousness and culture. Culture makes personhood possible with the preexisting world it has constructed. Such a cosmos is made up of ideas, various constructions of the physical world, interpretations, linguistic structures, and emotional registers. Such dynamics are embedded in various social institutions, discursive practices, social relationships, aesthetic forms, and technologies. Individuals construct their lives with the assistance of these cultural inheritances—the concept of identity itself is meaningless without them. Thus, again the point needs to be made: the domain of psychology is more complex than it seems in the mechanistic portrayal. Any psychology, postformalists maintain, that claims predictive ability in the complexity of everyday life does not appreciate the complications of mind, consciousness, culture, and power.

For example, a mechanistic psychology that assumes IQ can predict the future academic performance of students and uses it in this way misses numerous important points of great relevance to postformalists. On one simplistic level there is a predictive element to IQ and academic performance, as long as particular conditions are held constant. As long as students do not learn about the social, cultural, political, and economic structures of both IQ testing and schools and schools continue to emphasize IQ test type skills, there is a correlation between test scores and academic performance. The assumption here is that students be kept in the dark about the panoply of forces that help shape their relation to the test. Thus, in order for this predictive dimension to work we must keep test takers as ignorant as possible about what exactly the test reflects about the relationship between the student and dominant culture.

When students are informed about these complex dynamics, they can begin to reshape that relationship. Also, the predictive dimension rests on the assumption that no curricular innovation will take place that will focus students' attention more on meta-understandings of curriculum and the construction of knowledge. As long as these dynamics are ignored and the curriculum is viewed as a body of previously produced truths to be committed to memory, then the logic behind both IQ and curriculum are similar. Students tend to act and react similarly to situations grounded on this formalist logic. When such formalist logic is challenged and more interpretive, complex, and activity-based cognition is demanded, the predictive dimension of IQ testing evaporates into the mechanistic mist.

Thus, questions concerning the predictive capacity of IQ and other forms of standardized testing are much more complex than mechanistic educational psychology has claimed. Thus, postformalists call for a far more complex understanding of the cognitive act as well as its measurement and evaluation. In the spirit of complexity postformalists promote the ability to both appreciate and deal with uncertainty and ambiguity. In this context they are aware of the underside of the mechanistic quest for certainty and the social and personal damage such a trek produces. Given the vast array of abilities human beings can possess and the infinite diversity

of contexts in which to develop and apply them, the mechanistic tendency to label individuals as simply “intelligent” or “not intelligent” is an insult both to the field of psychology and the individuals affected by such crass labels.

Intelligence in the postformal articulation is *not* a description of the hereditary dimensions of the CPM and the efficiency of its operation. Understanding complexity, postformalists maintain that intelligence is more a local than a universal phenomenon. As such, postformalist intelligence involves diverse individuals responses to challenges that face them in light of particular contexts, access to cultural amplifiers, cultural capital, and particular tools and artifacts, specific values, social goals and needs, patterns of construction, linguistic dynamics, and traditions of meaning making. Thus, the postformal mind is shaped by specific contexts and is constructed by particular interrelationships in certain domains. It is enacted into existence—that is, it emerges as it acts in relation to these contexts and domains. Understanding the functioning of this mind is never certain and easy and measuring it in some quantitative manner is even harder. But that’s okay, postformalists are comfortable with such complications in the zone of complexity.

Central to this postformalist appreciation of complexity is the general task of understanding both the situatedness of mind in general and our selves in particular. (See Wolff-Michael Roth’s powerful chapter, “Situating Situated Cognition,” on the nature of this situatedness of mind.) In this context we embrace our postformal humility because we come to appreciate just how limited by time and space, by history and culture our perspectives are. A scholar of any discipline would always be humbled if she had access to a time machine that allowed her to view scholars from the twenty-fifth century reading and commenting on her work. And hers was work that was deemed of sufficient quality to merit comment in 2477! This is one of many reasons that postformalists value the effort to seek multiple perspectives on everything they do. As I have argued previously in this introduction, the more diverse the experiences and the *positionalities* of those issuing the multiple perspectives the better. In the spirit of subjugated knowledges it is important to gain the views of individuals from groups that have been marginalized and dismissed from the mainstream scholarly process.

Thus, complexity demands that postformalists pursue multiple perspectives and multilogical insights into scholarly production. One dimension of such multilogicality involves tracing the developmental history of ideas. How was it shaped by tacit assumptions and contextual factors such as ideology, discourse, linguistics, and particular values? These dynamics are central tasks in postformal scholarship and pedagogy. Indeed, students’ ability to understand the ways that ideas and concepts are constructed by a variety of forces and how power is complicit with which interpretations are certified and which ones are rejected is central to being a rigorous educated person. Of course, a central contention of postformalism is that hegemonic educational structures operate to undermine the presence of multiple perspectives in the school. Indeed, one of the most important goals of many of the educational reforms championed by right-wing groups in Western societies over the last few decades has been the elimination of such “dangerous” perspectives from the school. With the victory of these forces in the United States embodied in the appointment of George W. Bush to the presidency in 2000, policies based on these exclusionary practices have been institutionalized.

Thus, the multilogical goals of postformalism have suffered a setback. As George Dei and Stanley Doyle-Wood and Montserrat Castello and Luis Botella maintain in their chapters in this volume, educational psychology must realize the limitations and monologicality of traditional sources within the discipline. In this context Susan Gerofsky in her chapter on research in educational psychology writes of the need for interdisciplinarity to broaden the field’s access to diverse perspectives. The point in all of these chapters fit into the postformalist critical interpretivist notion of the future of educational psychology. To move forward the field must see the psychological domain from outside of a white, Eurocentric, patriarchal, class elitist position. Some of

the most important positions may be the ones with which mainstream educational psychology is the most unfamiliar. Employing these knowledges postformalism provides a way out, an escape from the ideological blinders of the mechanistic worldview.

Postformalism and the Basis for a Political Educational Psychology

In a hegemonized and colonized educational system the role of educational psychology becomes even more important than it has been—and it has historically played a central role in shaping educational policy and practice. Postformalism is deeply concerned with exposing the importance of mechanistic educational psychology and its real life consequences. As Ellen Essick points out in her chapter, “Gender and Educational Psychology,” women are regulated via the “performance of femininity.” Essick’s powerful argument helps readers understand the way these politics of gender shape and are shaped by educational psychology. Taking a cue from Essick, postformalists call for a political educational psychology that studies not only the performance of femininity but also power-shaped performances in the domains of race, class, ethnicity, sexuality, etc.

Erica Burman’s powerful chapter on the gendering of childhood extends these power and gender themes, as it traces the way they inform even the way we theorize the development of children. (In this context take a look at Nicole Green’s fascinating account of the problems of mechanistic developmentalism in “Homeschooling: Challenging Traditional Views of Public Education.”) In Burman’s analysis of developmentalism, the child manifests cognitive development by embracing a masculine rationalistic gender model. In this same manner mechanistic descriptions of higher order thinking have privileged a cultural masculinity. Power operates not only in these ways in ed psych but is connected to all dimensions of the domain. Every theory, every research method, every interpretive construct in the field is a contested concept that is intimately connected to issues of power. How psychologists and their discipline is historically and socially situated is a dynamic of power—moreover, the way we interpret this situatedness is affected by power. (See Rochelle Brock and Joe Kincheloe’s chapter on the politics of educational psychology, “Educational Psychology in a New Paradigm: Learning a Democratic Way of Teaching.”)

In his chapter, “Reclaiming Critical Thinking as Ideology Critique,” Stephen Brookfield argues in the spirit of critical theorist Herbert Marcuse that “the struggle to think conceptually is always a political struggle.” He follows this notion with the assertion—central to postformalism’s notion of a political educational psychology—that “political action and cognitive movement are partners . . . in the development of a revolutionary consciousness.” In this spirit postformalists reassert the inseparability of the political and the psychological. How we teach individuals to think in a rigorous manner is highly political. What we teach them to think about is infused with politics. There is no way to escape this power dynamic, no matter how hard many mechanists say they have tried.

When we construct a curriculum, power is involved. When we evaluate student performance, power is involved. When we embrace certain educational goals and reject others, power is involved. Some educational psychologists suggest that intelligence involves knowing your way around. Postformalists ask: where is it that we want to know our way around and what is it we want to do after we know our way around. Both of these questions are both constructed by and answered in relation to issues of power. As critical interpretivists have taught us, cognition does not take place in a vacuum. Do we work to get to know our way around the country club so we can cultivate business contacts and improve our personal socioeconomic status? Or do we get to know our way around the political structures of the city so we can work to help individuals struggling to survive the poverty they face daily?

A political educational psychology asks and answers these types of questions. Francisco Varela asks in this political psychological context: how can compassionate concern be fostered in an

egocentric culture that is taught to avoid such an orientation. Taking Varela's question seriously, postformalists merge their critical orientation with enactivism. Combining their power literacy with an enactivist effort to enact compassion in the specificity and immediacy of everyday life, postformalists struggle to transcend egocentrism and move psychological scholarship to a new domain of political understanding and informed action. At this point Varela's insights dovetail synergistically with the cognitive theory of John Dewey.

Dewey was always concerned with connecting the ability to think critically with issues of ethical sensibility and social reform. Indeed, he was impatient with scholars who sought to develop grandiose theories and abstract truths outside of any connection to the real life problems of human beings. Cognitive studies in this critical context can never retreat to the privileged position of mere contemplation—there must always be an active, operative grounding to such scholarship. Had they been contemporaries Dewey and Varela could have engaged in a fascinating conversation around the issue of enacting reflective, contextualized, and critical forms of thinking. Montserrat Castelló and Luis Botella in this volume challenge educational psychologists to take up these political challenges, maintaining that any form of ethical practice demands that they engage in the social debates of their time and place.

One might ask why do relatively few professionals operating in the field of educational psychology connect their work to such social debates. Obviously, the epistemological and paradigmatic dynamics discussed throughout this introduction contribute to such inactivity. The political tasks of postformalism are often hidden from overt view by the power wielders of the contemporary electronic social condition. In the information saturation of *hyperreality* power shapes information and access to dangerous information that challenges the status quo in a covert manner. Michelle Stack writes in her chapter in this volume about the power of television to represent the world in particular but in hidden ideological ways. As Stephen Brookfield writes in "Reclaiming Critical Thinking as Ideology Critique," we often operate in the midst of ideology without ever knowing it. Indeed, educational psychologists and many teachers unfamiliar with critical power theory will often deny the political nature of their professional work. I'm just measuring student academic performance, psychometricians will tell us. It is the role of postformalists to help such professionals understand the discursive, ideological, and regulatory dimensions of their work.

Such an effort to bring individuals to a literacy of power is delicate and complex. It must be undertaken with great respect for the many talents the learner possesses and the unique knowledges he or she brings to the table. Just as one learns mathematical literacy or technological literacy, the individual engaged in developing a literacy of power enters into particular power relationships with the critical teacher. The critical teacher must always be sensitive to the ways this relationship can be abused and be represented as a simplistic hierarchy as one "in the know" and one who is ignorant. Postformalists are radical in their pursuit of humility in their efforts to engage various individuals in a literacy of power in general and in the psychological domain in particular. It must sensitively and carefully lay out the way that particular ways of conceptualizing cognition and the role of educational psychology produce a power illiteracy.

As Scot Evans and Isaac Prilleltensky maintain in their chapter here, such an illiteracy renders individuals unable to "challenge dominant ideas about what society should be like." Indeed, they posit, psychological counselors, for example, who lack a power literacy often engage unconsciously in psychologizing problems in ways that socially and politically decontextualize their interventions. Such psychologizing leads to strategies that blame the victim for his or her oppression. Understanding these political dynamics, counselors can operate with an understanding of connecting the macro and the micro, the social and the individual. Beckoning the spirit of Dewey, Patricia Whang extends Evans and Prilleltensky's insights by reminding readers in her chapter in this volume that education always performs for better or worse particular social functions. A literacy of power moves us to see beyond the blinders of mechanism's abstract individualism.

Postformalists thus develop new purposes for educational psychology. They ponder questions of “what could be” in addition to questions of “what is.” They ask what difference my work can make at both the social and the individual levels. The development of a critical consciousness becomes central to the educational psychological enterprise, as professionals carefully analyze what it means to see behind the curtain of everyday life. As they see behind the curtain they begin to understand the tacit forces invisible to mechanistic eyes. Defining critical consciousness as the process of individuals working together to gain awareness of repressive political conditions, Cathy Glenn in her chapter in this volume discusses the process of respectfully engaging students in a negotiation of what it might mean to gain and act on a critical consciousness.

In Glenn’s pedagogical process students and teachers work together to interrupt the operations of dominant power in ways that expose their respective complicity in supporting such frameworks. While Glenn’s understanding of this delicate process does not necessitate a particular form of pedagogy, it does demand that students not be treated as passive receptacles of expert produced truths concerning the nature and effects of power. This theme of the multiplicity of pedagogies available to accomplish such a delicate educational psychological task is a theme that runs throughout this handbook. These are complex and ambiguous issues that demand rigorous study, experiential insights, and profound interpretive labors in our effort to develop effective strategies. Glenn’s nuanced discussion of the complex pedagogical implications of teaching for the purpose of developing a critical consciousness constitutes one of the high points of this handbook.

Smartin’ Up: Postformalism and the Quest for New Orders of Cognition

Postformalism understands that intelligence, justice, emotion, activity, disposition, context, access, power, justice, tools, process, and ethics ad infinitum cannot be separated in the study of educational psychology. With these connections in mind postformalists warn scholars about the complexity of the scholarly process they’re about to get into when they seek to engage in postformal educational psychology. Much is asked of those who enter into this realm. In their chapter on situated cognition David Hung, Jeanette Bopry, Chee Kit Looi, and Thiam Seng Koh provide great insight into the complexity of this scholarly process. Indeed, postformalists urge adherents at every level of theory and practice to enter into research groups, to develop lifelong learning relationships with those interested in the multiple dimensions of postformal psychology.

As I write about the process of becoming a bricoleur in my work on social, educational, and psychological research, the multidisciplinary and multiperspectival demands of the bricolage cannot be learned in an undergraduate, master’s or PhD. program. Becoming a scholar of postformalism—like becoming a scholar of the bricolage—is a lifelong learning process. Everytime I enter a new dimension of postformalism, I feel as if I need to put myself through another self-taught doctoral program. Lifelong interactive learning relations with other individuals make the process much easier. My motivation to engage myself and others in this process never wanes, for we are dealing with one of the central processes of humanness—making ourselves smarter, more ethical, more sensitive to the needs of others, more active in helping alleviate those needs, and more aware of the nature of our connections and interrelationships with various dimensions of the world around us. I want “smartin’ up” in all the complexity that our study of these multiple and interrelated domains informs us.

In this postformal context as we transcend the “rational irrationality” of formalism and mechanism, we help students get in touch with what John Dewey called their own “vital logical movement.” In the history of mechanistic educational psychology it was these forms of analysis that were denigrated and replaced by formalist logical procedures. In the memorization of these cut-and-dried logical steps millions of children and young people lost their passion for learning and growing. Indeed, they dedicated their lives to getting out of learning situations, in the process

relinquishing their disposition to explore themselves and the world around them. Do not mistake this rejection of dry formalistic procedure as a call for a “return to nature” and the hereditary natural developmental process of the child. (See Lise Bird Claiborne’s compelling chapter on developmentalism and developmental appropriateness to gain a textured understanding of the complexity of the developmental process.)

The vital logical movement of individuals can be facilitated by good teachers and by entry into Vygotsky’s zone of proximal development (ZPD) where students learn by association with skilled others. Thus, as is generally the case with postformalism, we seek to expand cognitive abilities in ways that are informed by multiple insights while avoiding dogmatic blueprints for how to do it. Formal reasoning is profoundly different from everyday thinking. Formal thinking embraces a subject matter that is impersonal as algebraic formulae and consciously operates to remove itself from the subjectivity, the dispositions, and intentions of the thinker. Postformalism categorically rejects this type of cognition and seeks to connect with and understand all that formal reasoning seeks to exclude.

In the postformal context we get smarter by creating our own multilogical ZPDs. In these contexts we construct our own community of experts—whether virtually by reading their work or by interacting with them personally. In our self-constructed ZPDs we build new intellectual and action-based relationships and structurally couple with multiple minds. Schools, postformalists argue, should be grounded on these types of cognitive principles—not on the psychometric, abstract individual, decontextualized, and personally disconnected models of the no-child-left-behind ilk. We can teach students to be lifelong learners who understand that intelligence is not a fixed, hereditarian concept but a fluid, socially constructed construct that can be learned when individuals are exposed to dynamic and challenging new contexts—for example, teacher and/or self-constructed ZPDs. Viewed in this context postformalism is a psychology of hope than transcends the nihilism of mechanism. Postformalists refuse to believe that human beings are condemned to academic hell because of the infallibility and intractability of test scores.

Thus, as a critical discourse, postformalism seeks an empowering notion of learning. Directly challenging mechanistic psychology’s passive view of the learner, postformalism is dedicated to a respect for human dignity and the diverse range of talents and abilities that individuals operating in diverse social, cultural, geographic, and economic context develop. Indeed, postformalists look behind IQ and other standardized test scores to uncover the infinite talents that people with low-test scores develop in the idiosyncratic contexts of their lives. When mechanistic influenced pedagogies refuse to consider these amazing talents and pronounce individuals with low-test scores incapable of learning, they commit a psychological and educational crime against such students.

Postformalists in this context believe in the ingenuity of human beings, the power of individuals to learn, to create their own ZPDs. One of the most important impediments to such human agency is the ideology of mechanistic psychology. This regressive ideology works to convince individuals from marginalized backgrounds that they are incapable of learning like “normal” students. Unfortunately, mechanists do a good job of convincing such boys and girls, men and women of their “lack of ability.” Over the last few decades I have interviewed scores of brilliant people who told me that they were not good at “school learning” or “book learning.” Often they told me of their lack of intelligence as they were in the middle of performing difficult and complex forms of mental labor. They may not have done well in school but they had learned the most important mechanistic psychological lesson—they were not academic material.

In my conversations with those students mislabeled and abandoned by mechanistic educational psychology, I observe powerful intellectual abilities in their interactions with the world. They often illustrate a compelling ability to see things previously not discerned in domains dominated by conventional perspectives. They many times break through the tyranny of “the obvious”

with insights gained by viewing a phenomenon from an angle different from the “experts.” Postformalists are proud to have “friends in low places” who see schools, for example, from the perspective of those who have “failed.” As a postformalist I treasure these perspectives. Indeed, they have played a central role in how I have come to understand educational institutions. Over the last couple of decades I have written extensively about what such brilliant people have taught me as I work to be a better educator, psychologist, sociologist, historian, philosopher, and student of cultural studies—in my struggle to become a bricoleur.

Postformalism and the Relational Self: Constructing a Critical Ontology

Postformalists connect these political insights to the enactivist contention that learning takes place when a self-maintaining system develops a more effective relationship with the external features of the system. In this theoretical intersection emerges the postformalist notion of a critical ontology. As previously discussed ontology is the branch of philosophy that studies the nature of what it means to be in the world. In a postformalist critical ontology we are concerned with understanding the sociopolitical construction of the self in order to conceptualize and enact new ways of being human. These new ways of being human always have to do with the critical interpretivist psychological insight that selfhood is more a relational than an individual dynamic. In this context enactivists is highlighting the profound importance of *relationship* writ large as well as the centrality of the nature and quality of the relationships an organism makes with its environment.

In a cognitive context this is an extension of Vygotsky’s ZPD to the ontological realm. In the development of a critical ontology we learn from these ideas that political empowerment vis-à-vis the cultivation of the intellect demand an understanding of the system of relationships that construct our selfhood. In a postformal education these relationships always involve students’ connections to cultural systems, language, economic concerns, religious beliefs, social status, and the power dynamics that constitute them. With the benefit of understanding the self-in-relationship teachers and students gain a new insight into what is happening in any learning situation. Living on the borderline between self and external system and self and other, learning never takes place outside of these relationships (see Pickering, 1999). Such knowledge changes our orientation to the goals and methods of educational psychology and pedagogy.

Thus, a critical ontology is intimately connected to a relational self. Humans are ultimately the constructs of relationships, not fragmented monads or abstract individuals. From Varela’s perspective this notion of humans as constructs of relationships corresponds precisely to what he is labeling the virtual self. A larger pattern—in the case of humans, consciousness—arises from the interaction of local elements. This larger pattern seems to be driven by a central controlling mechanism that can never be located. Thus, we discern the origin of mechanistic psychology’s dismissal of consciousness as irrelevant. This not only constituted throwing out the baby with the bath water but discarding the tub, the bathroom fixtures, and the plumbing as well. In this positivistic/mechanistic articulation the process of life and the basis of the cognitive act were deemed unimportant. A critical ontology is always interested in these processes because they open us to a previously occluded insight into the nature of selfhood, of human being. The *autopoiesis*, the self-making allows humans to perpetually reshape themselves in their new relationships and resulting new patterns of perception and behavior.

Postformalists understand that there is no way to predict the relationships individuals will make and the nature of the self-(re)construction that will ensue. Such uncertainty adds yet another element of complexity to the study of sociology, pedagogy, and psychology, as it simultaneously catalyzes the possibilities of human agency. It moves those critical interpretivists who enamored with postformalism yet another reason to study the inadequacies of Cartesian science to account

for the intricacies of the human domain. Physical objects *don't necessarily* change their structures via their interaction with other objects. Postformalism's critical ontology understands that human beings *do* change their structures as a result of their interactions. As a result the human mind moves light years beyond the lifeless mechanist computer model of mind.

Kathryn Herr picks up on these critical ontological concepts in her chapter in this volume. Such a relational model, she writes, allows students to move from mechanistic developmental models based on separation to relational concepts that value human beings' ability to enter into positive, growth-producing relationships. With these issues in mind, Herr maintains that this relational competency catalyzes the development of creativity, autonomy, and assertion. Indeed, she posits, one comes to learn more about himself or herself via modes of affiliation and connection to other people. Such a psychology of self holds profound political dynamics, Herr concludes. The linear, autonomy-focused developmental models of Erik Erikson, for example, are designed to serve the needs of a free market economy and a "stacked deck" faux-competitive society. A critical ontology understands that affiliation is not a threat to autonomy. Instead relationship enhances our effort to build a empowering life where concern and care for others is central to everyone's best interests. Learning, of course, takes place in these relational ZPDs—not as a separate, decontextualized, competitive activity.

Enactivist concepts of structural coupling and coemergence reenter the postformalist cosmos in this relational ontological context. We are empowered to see beyond individual learners, Tara Fenwick writes in her chapter, abstracted from the processes and environmental contexts of which they are a part. "They focus on *relations*," she asserts, "not the components, of systems, for learning is produced within the evolving relationships among particularities that are dynamic and unpredictable." Our very identities are shaped by these interactions. Thus, drawing upon these relational ontological dimensions, postformalists profoundly reshape what it is that educational psychologists study. David Hung, Jeanette Bopry, Chee Kit Looi, and Thiam Seng Koh in their chapter in this handbook contribute to these ontological dimensions of educational psychology. Focusing on ontological relationship, they maintain that purposive behavior involves interconnected acts connected to physical and social contexts. Change and process are the key features of these interrelationships, which in their interaction produce a complex whole—a systematic unity that constitutes a new identity.

Postformalists help construct communities of practice to catalyze these critical ontologies, these relational selves. Understanding the subtle emergent character of this construction process, postformalists know that they cannot simply mandate particular relationships and force the construction of particular learning communities. Individual learners working together must construct their own communities of practice and their synergistic relationships. Postformal teachers also know, however, that they can operate to enhance such activities as opposed to impeding them. Understanding the notions put forth in critical interpretivist educational psychology, postformalism and critical ontology, empowers educators to enhance rather than impede. In such understanding "learning that" enters into a dialectical relationship with "learning how." As is usually the case different types of knowledge are required to accomplish particular complex tasks. Postformalists bring the knowledges discussed in this introduction into relationship with the immediacy of human beings interacting with one another in specific lived contexts.

In this epistemologically informed ontological context—simply put, understanding the way the produced knowledge shapes the nature of our being in the world—we focus our postformal attention on Hung, Bopry, Looi, and Koh's chapter here and its focus on the ontological insights of Martin Heidegger. If learning is inseparable from meaning making, they contend, then it is also inseparable from the process of identity formation (being) in a social community. Here, Hung, Bopry, Looi, and Koh contend, we can begin to distinguish between "learning *about*" and "learning *to be*." Thus, learning is as much an ontological act as it is an epistemological act. Most school

learning in a mechanistic context, they continue, is about committing to memory preexisting knowledge domains—the truth of scientifically based disciplines. In learning to be, the authors maintain, individuals become members of communities of practice, in the process constructing a new relational identity. Katheryn Kinnucan-Welsch in her chapter on teacher professional development considers these ideas in relation to the effort to improve teacher education.

This relational identity plays a central role in constructing what it is that a student learns. We can see this ontological dynamic play out in schools on a daily basis as students who enter particular youth subcultures where the changes in their identities profoundly shape not only what they know about the world but also how they see both the world and themselves. This is a profound learning experience. Thus, we cannot see learning and being apart from our contexts. Thus, we are not self and world in the way coffee is in a can. The self is the world and the world is the self in a critical ontology. Human being cannot be understood outside of sociopolitical context, postformalism asserts. This is a subtle proposition. As Hung, Bopry, Looi, and Koh remind us, “although being can be phenomenologically perceived separately from the world, being exists or takes meaning only in relation to the world.”

In this context the absurdity of the way IQ tests have been developed and used comes into clear focus. Constructed as measures of the individual’s ability, their failure to account for the connection between the individual and the contexts of which he or she is a part renders them useless. If the individual and his or her cognitive orientations are shaped by this being-in-the-world, psychological tests miss the origins and causes of why individuals display particular cognitive characteristics. They attribute to nature what is a manifestation of particular social, political, economic, cultural, and historical relationships. Thus, postformalism views the self and the development of selfhood and cognitive ability in new and exciting ways. In his chapter on transformative learning Edward Taylor argues that these dynamics create a dramatic rupture with the past. Our relational ontological perspectives provide us with a new way of understanding the way individuals relate to the world around them.

CONCLUSION: THE LARGER STRUGGLE

As it integrates the powerful insights emerging from the interpretivist tradition in educational psychology, constructivism, situated cognition, enactivism, and multiple forms of criticality, postformalism pushes the cognitive envelop. I find great hope in these ideas as they provide a compelling way out of the dead end of mechanistic educational psychology. As I write this introduction in the repressive political atmosphere of the first decade of the twenty-first century, the attempt to escape mechanistic educational psychology and the regressive, antidemocratic sociopolitical and educational system it is used to support has never been more important. Ray Horn and I along with the brilliant authors included in this volume hope that this work contributes to the effort to escape these authoritarian, antidemocratic, and inegalitarian impulses of the present era. If it does then we will have considered it a great success.

TERMS FOR READERS

Bricolage—The French word “bricoleur” describes a handyman or handywoman who makes use of the tools available to complete a task. Some connotations of the term involve trickery and cunning and are reminiscent of the chicanery of Hermes, in particular his ambiguity concerning the messages of the gods. If hermeneutics came to connote the ambiguity and slipperiness of textual meaning, then bricolage can also imply imaginative elements of the presentation of all formal research. I use the term here in the way Norman Denzin and Yvonna Lincoln (2000) employ it

in *The Handbook of Qualitative Research* to denote a multimethodological form of research that uses a variety of research methods and theoretical constructs to examine a phenomenon.

Complexity theory—Posits that the interaction of many parts gives rise to characteristics not to be found in any of the individual parts. In this context complexity theory studies the rules shaping the emergence of these new characteristics and the self-organization of the system that develops in this autopoietic (self-creating) situation. As the complex system is analyzed, complexity theorists come to understand that it cannot be reduced to only one level of description.

Critical—Having to do with critical theory which is concerned with questions of power and its just distribution. (See Kincheloe [2004] for an expansion of these ideas).

Epistemology—The branch of philosophy that studies knowledge and its production. Epistemological questions include: What is truth? Is that a fact or an opinion? On what basis do you claim that assertion to be true? How do you know?

Ethnography—A form of social and cultural research that attempts to gain knowledge about a particular culture, to identify patterns of social interaction, and to develop interpretations of societies and social institutions. Ethnography seeks to make explicit the assumptions one takes for granted as a culture member. Ethnographic researchers make use of observation and interviews of culture members in their natural setting, their lived contexts.

Evolving criticality—The notion of criticality—the concern with transforming oppressive relations of power in a variety of domains that lead to human oppression finds its origins in critical theory and evolves as it embraces new critical discourses in new eras. In this context much of my work has been involved with tracing an evolving criticality that studies the ways that new times evoke new manifestations of power, new consequences, and new ways of understanding and resisting them. Concurrently this evolving criticality devises new social arrangements, new institutions, new modes of cognition, and new forms of selfhood.

Formal level of cognition—Constitutes Jean Piaget's highest order of human cognition where individuals exhibit the ability to formulate abstract conclusions, understand cause–effect relationships, and employ the traditional scientific method to explain reality.

Hegemony—Italian social theorist Antonio Gramsci theorized in the 1930s that dominant power in “democratic societies” is no longer exercised simply by physical force but through social psychological attempts to win men and women's consent to domination through cultural institutions such as the schools, the media, the family, and the church. In hegemony the power bloc wins popular to consent by way of a pedagogical process, a form of learning that engages people's conceptions of the world in such a way that transforms (not displaces) them with perspectives more compatible with those of dominant power wielders.

Phenomenology—The study of phenomena in the world as they are constructed by our consciousness. As it analyzes such phenomena it asks what makes something what it is. In this way phenomenologists “get at” the meaning of lived experience, the meaning of experience as we live it. In this effort phenomenology attempts to study what it means to be human.

Positionalities—Who people are, where they stand or are placed in the web of reality. The term connotes the historical construction of human identity.

Postcolonialism—In the most technical sense the term refers to the period after colonial rule, but there are many dimensions of postcolonialism that transcend this meaning. In a critical context one of those dimensions involves examining and working through the effects of colonialism in

the political, social, cultural, economic, psychological, and educational spheres of both colonizer and colonized states and peoples.

Post-discourses—The theoretical ways of understanding that developed in the last third of the twentieth century that questioned the assumptions about the world put forth by modernist, scientific Western frameworks. They would include postmodernism, poststructuralism, postcolonialism, and postformalism.

Semiotics—The study of the nature and influence of signs, symbols, and codes.

Subjugated knowledges—Derived from dangerous memories of history and everyday life that have been suppressed and information that has been disqualified by social and academic gatekeepers, subjugated knowledge plays a central role in all critical ways of seeing. Through the conscious cultivation of these low ranking knowledges, alternative democratic visions of society, politics, education, and cognition are possible.

FURTHER READING

- Bredo, E. (1994). Cognitivism, Situated Cognition and Deweyan Pragmatism. *Philosophy of Education Society Yearbook*. <http://www.ed.uiuc.edu/eps/pes-yearbook/94.docs/bredo.htm>.
- Burman, E. (1994). *Deconstructing Developmental Psychology*. New York: Routledge.
- Gergen, K. (1997). The Place of the Psyche in a Constructed World. *Theory and Society*, 7 (6).
- Gresson, A. (1995). *The Recovery of Race in America*. Minneapolis: University of Minnesota Press.
- Horn, R. (2004). Scholar-Practitioner Leaders: The Empowerment of Teachers and Students. In J. Kincheloe & D. Weil (Eds.), *Critical Thinking and Learning: An Handbook for Parents and Teachers*. Westport, CT: Greenwood.
- Kincheloe, J. L. (2004). *Critical Pedagogy*. New York: Peter Lang.
- Kincheloe, J. L. and K. S. Berry (2004). *Rigour and Complexity in Educational Research: Conceptualizing the Bricolage*. London: Open University Press.
- Pickering, J. (1999). Beyond Cognitivism: Mutualism and Postmodern Psychology. <http://www.csv.warwick.ac.uk/~psrev/mutualism.html>.
- Richardson, F. and R. Woolfolk (1994). Social Theory and Values: A Hermeneutic Perspective. *Theory and Psychology*, 4(2), 199–226.
- Smith, H. (1998). Educational Psychology: A Cultural Psychological and Semiotic View. Paper Presented to the Meeting of the Australian Association for Research in Education. Adelaide. <http://www.aare.edu.au/98pap/smi98134.htm>.
- Thayer-Bacon, B. (2000). *Transforming Critical Thinking: Thinking Constructively*. New York: Teachers College Press.
- Varela, F. (1999). *Ethical Know-How: Action, Wisdom, and Cognition*. Palo Alto, CA: Stanford University Press.

CHAPTER 2

Educational Psychology Timeline

ED WELCHEL, DORIS PAEZ, AND P. L. THOMAS

Early 1800s	Jonathan Friedrich Herbart postulated that activities of the mind could be expressed mathematically. He is considered the first educational psychologist.
1883	G. Stanley Hall, aka “the Darwin of the Mind,” established the first psychological laboratory in the world at the Johns Hopkins University. G. Stanley Hall published <i>The Content of Children’s Minds</i> .
1886	J. Dewey writes a psychology textbook.
1887	G. Stanley Hall establishes the <i>American Journal of Psychology</i> .
1887	G. S. Hall, as the first president of Clark University, creates the first pedagogical seminary (workshop) focused on the scientific study of education, which led to the publishing of a journal, <i>Pedagogical Seminary</i> (eventually this became the <i>Journal of Genetic Psychology</i>), and the introduction of pedagogical courses in the psychology department at Clark by W. F. Burnham. Burnham stayed at Clark for 36 years and that is considered the first true “Educational Psychology” department.
1889	Edward L. Thorndike, considered the foremost authority on behavioral psychology, joins Teachers College faculty and remains there throughout his career. James Sully, <i>Outlines of Psychology: Theory of Education</i> .
1890	William James, <i>Principles of Psychology</i> . James McKeen Cattell coins the phrase “mental test.”
1891	William James is asked by Harvard to address teachers in Cambridge, Mass. These “talks” were later published as <i>Talks to Teachers on Psychology</i> , which is considered the first educational psychology textbook.
1892	G. S. Hall calls a meeting of 26 prominent psychologists to form an association. This is considered the founding of American Psychological Association (APA).
1894	J. Dewey becomes a faculty member at the University of Chicago. He publishes an article on relative frequency of word use by young children (“The Psychology

- of Infant Language” in *Psychological Review*) and founds an elementary school, considered the first university laboratory school.
- 1895 First course in educational psychology is taught at the University of Buffalo.
- 1896 Lightner Witmer establishes the first psychological clinic in the United States, at the University of Pennsylvania.
- 1897 Joseph Mayer Rice, considered the “father of research on teaching,” presents empirical evidence on the futility of the “spelling grind” to school administrators.
- 1900 J. Dewey, as president of APA, gives a “presidential” address to APA members on educational issues and the building of mutually respectful relationships between educational psychologists and classroom teachers.
- 1905 Alfred Binet, *New Methods for the Diagnosis of the Intellectual Level of Sub-normal*.
Alfred Binet and Theodore Simon design tests to quantify intelligence in children.
- 1906 Ivan Pavlov establishes classical conditioning in his publications.
- 1909 Maria Montessori, *Corso Di Pedagogia Scientifica (The Method of Scientific Pedagogy Applied to Child Education)*.
- 1910 *The Journal of Educational Psychology* is founded.
John Dewey, *How We Think*.
- 1911 E. L. Thorndike, *Animal Intelligence*.
John B. Watson, *Psychology as the Behaviorist Views It* (1913).
E. L. Thorndike, *Educational Psychology*.
- 1915 Sigmund Freud, *On Repression*.
- 1916 Lewis M. Terman publishes *The Measurement of Intelligence*.
A complete account of E. L. Thorndike’s studies is published in the Egyptian-journal *Al-Muktataf*.
- 1918 William H. Kilpatrick publishes “The Project Method” in *Teachers College Record*—claimed to combine Thorndike’s educational psychology with Dewey’s educational philosophy.
Robert S. Woodworth publishes *Dynamic Psychology*—introducing the concept of “drive.”
- 1919 E. P. Cubberley, *Public Education in the United States*.
- 1920 John B. Watson and Rosalie Rayner, *Conditioned Emotional Reactions*.
- 1922 John Dewey, *The Human Nature and the Conduct*.
“The army intelligence tests have put psychology on the map of United States”—J. M. Cattell.
- 1923 Sigmund Freud, *The Ego and the Id*.
- 1924 Max Wertheimer, *Gestalt Theory*.
- 1926 The College Board sponsors the development of the Scholastic Aptitude Test (SAT) and administers the test for the first time this year.
- 1930 B. F. Skinner, “On the Conditions of Elicitation of Certain Eating Reflexes.”
- 1931 L. L. Thurstone publishes *Multiple Factor Analysis*, a landmark work focusing research on cognitive abilities.
- 1933 Alfred Adler, *On the Sense of the Life*.

-
- 1934 Psychology begins to be a requirement in undergraduate course work.
- 1935 B. F. Skinner, “Two Types of Conditioned Reflex and a Pseudo-Type”—Pavlovian conditioning and operant conditioning distinguished.
- 1937 B. F. Skinner employs the word *operant* for the first time and applies *respondent* to the Pavlovian type of reflex.
Anna Freud, *The Ego and the Mechanisms of Defense*.
- 1938 B. F. Skinner, *The Behavior of the Organisms*.
- 1942 Carl Rogers introduces patient-centered therapy.
- 1946 Harold E. Jones becomes the first president of APA’s Division 15, Educational Psychology.
- 1947 Jerome Bruner and Cecile Goodman, *Value and Need as Organizing Factors in Perception*.
- 1948 B. F. Skinner, *Walden Two*.
The C. G. Jung Institute is established in Zurich.
- 1949 Jerome Bruner and Leo Postman, *On the Perception of Incongruity: A Paradigm*.
- 1953 B. F. Skinner, *Science and Human Behavior*.
- 1954 Abraham Maslow, *Motivation and Personality*—introduces a hierarchical theory of human personality.
B. F. Skinner demonstrates at the University of Pittsburgh a machine designed to teach arithmetic, using an instructional program.
Anne Anastasi’s textbook, *Psychological Testing*.
- 1955 Social psychologist Richard Crutchfield publishes “Conformity and Character.”
Lee J. Cronbach and Paul E. Meehl, “Construct Validity in Psychological Tests.”
- 1956 Jerome Bruner and collaborators, *A Study of Thinking*.
Benjamin Bloom, *Cognitive Taxonomy of Objectives*.
- 1957 B. F. Skinner and Charles B. Ferster, *Schedules of Reinforcement*.
B. F. Skinner, *Verbal Behavior*.
- 1958 Allen Newell, Marvin E. Shaw, and Herbert A. Simon, “Elements of a Theory of Human Problem Solving”—the first exposition of the information-processing approach in psychology.
- 1959 Wolfgang Köhler, *Gestalt Psychology Today*.
John W. Thibaut and Harold H. Kelley, *The Social Psychology of Groups*.
Noam Chomsky, *Verbal Behavior*—revision of B. F. Skinner’s edition.
- 1960 Robert Watson, “History of Psychology: A Neglected Area.”
First school of professional psychology established in Mexico.
- 1961 Carl Rogers, *On Becoming a Person*.
- 1962 Creation of bachelor courses and the profession of psychologist.
- 1963 J. B. Carroll publishes “A Model of School Learning” in *Teachers College Record* and *The Place of Educational Psychology in the Study of Education* (“The Discipline of Education” edited by J. Walton and J. L. Keuthe).
- 1964 Humanistic psychology emerges as the “third force” in psychology.
T. W. Wann edits *Behaviorism and Phenomenology: Contrasting Bases for Modern Psychology*.

- 1965 Roger Brown, *Social Psychology*.
Roger M. Gagne, *The Conditions of Learning*.
The *Journal for the History of Behavioral Sciences* is founded.
- 1966 Jerome S. Bruner, *Studies in Cognitive Growth*.
- 1967 Robert Watson establishes the first history of psychology PhD program in the world.
- 1968 Abraham Maslow, *Toward a Psychology of Being*.
Malcom Knowles presents the concept of a “learner-centered” instructional approach.
- 1969 Albert Bandura, *Principles of Modification of the Behavior*.
- 1970s Throughout this decade, Joseph Schwab accused educators and curriculum scholars of “doctrinaire adhesion” to educational psychology.
- 1971 B. F. Skinner, *Beyond Freedom and Dignity*.
- 1972 Ron Harré and Paul Secord, *The Explanation of Social Behavior*.
- 1973 Karl von Frisch, Konrad Lorenz, and Nikolaas Tinbergen receive the Nobel Prize in recognition of their studies on the behavior of animals.
- 1975 Mary Henle, *Gestalt Psychology and Gestalt Therapy*.
- Late 1970s to early 1980s Resurgence of theories about cognitivism and knowledge acquisition.

John Robert Anderson (1976) presents the Adaptive Control Theory (ACT), which modifies the view of cognitivism.
D. E. Rumelhart and Donald Norman, theory of “accretion” or knowledge acquisition, which postulates that instructional design and curriculum design should match.
David Merrill postulates the “component display theory,” which emphasizes that learners should have control over the sequence of learning.
- 1980 M. J. Lerner, *The Belief in a Just World*.
One of ten doctorates granted in the United States is estimated to be in psychology.
- 1981 American Psychological Association grows to approximately 50,500 members.
- 1982 D. Kahneman, P. Slovic, and A. Tversky, *Judgment under Uncertainty: Heuristics and Biases*.
The Humanistic Psychology Institute becomes the Saybrook Institute.
- 1983 Howard Gardner, *Frames of Mind*.
- 1985 Howard Gardner, *The New Mind’s Science*.
- 1986 China’s “Humanistic Psychology Craze,” especially its “Maslow Craze” gradually takes shape and, through 1989, Maslow’s books sell 557,900 copies.
- 1990 Donald Norman, *Things That Make Us Smart*.
- 1991 Howard Gardner, *The Unschooled Mind*.
- 1992 First published work on critical postformalism, Joe L. Kincheloe, Shirley R. Steinberg, and Deborah J. Tippins, *The Stigma of Genius: Einstein and Beyond Modern Education*.
- 1993 Roger Sperry, “The Impact and Promise of the Cognitive Revolution.”
Joe L. Kincheloe and Shirley R. Steinberg establish postformalism as a challenge to traditional educational psychology.

-
- 1994 Richard Herrnstein and Charles Murray, *The Bell Curve*.
Roger Sperry dies.
- 1996 Joe L. Kincheloe, Shirley R. Steinberg, and Aaron Gresson, *Measured Lies: The Bell Curve Examined*. The book challenges the psychometrics of Herrnstein and Murray.
- 1997 Kieran Egan, *The Educated Mind: How Cognitive Tools Shape Our Understanding*.
- 1999 Joe L. Kincheloe, Shirley R. Steinberg, and Patricia H. Hinchey, *The Postformal Reader: Cognition and Education*.
Joe L. Kincheloe, Shirley R. Steinberg, and Lila E. Villaverde, *Rethinking Intelligence*.
Second edition of Joe L. Kincheloe, Shirley R. Steinberg, and Deborah J. Tippins, *The Stigma of Genius*.
Howard Gardner, *The Disciplined Mind*.
- 2000 Joel J. Mintzes, James H. Wandersee, and Joseph D. Novaka, *Assessing Science Understanding: A Human Constructivist View*.
- 2001 Seymour Saranson, *American Psychology and Schools: A Critique*.
- 2002 Expansion of the *Educational Psychology Series* by Academic Press reflects current issues and notable “younger” or next-generation educational psychologists.
Joshua M. Aronson, *Improving Academic Achievement: Impact of Psychological Factors on Education*.
Daniel J. Moran and Richard W. Malott, *Evidence-based Educational Methods*.
Roger Marples, *The Aims of Education*.
Susan Bentham, *Psychology and Education*.
Robert D. Greer, *Designing Teaching Strategies: An Applied Behavior Analysis Systems Approach*.
Joshua Aronsen, *Improving Academic Achievement: Impact of Psychological Factors on Education*.
- 2004 Joe L. Kincheloe, *Multiple Intelligences Reconsidered*.
David Dai and Robert Sternberg, *Integrating Perspectives on Intellectual Functioning and Development*. (Sternberg’s reflections and “newer” perspective)
Chery Sanders and Gay Phye, *Bullying: Implications for the Classroom*. (new emphasis on bullying apparent in the literature)
Larisa V. Shavinina and Michel Ferrari, *Beyond Knowledge: Extracognitive Aspects of Developing High Ability*.
IDEA reauthorized as Individual with Disabilities Education Improvement Act (IDEIA), ensuring greater flexibility for assessment (e.g., eliminates need for cognitive-achievement discrepancy in learning disability identification).

PART II

Introducing Theorists Important to Education and Psychology

CHAPTER 3

Albert Bandura

SABRINA N. ROSS

Imagine two siblings (one an older brother and the other a younger sister) on a shopping trip with their mother. The older brother sees a toy he wants and continuously begs the mother to buy it until she gives in and purchases it for him. The younger sister, observing the reward her brother received for his behavior, begins to beg for a toy until she too receives one. The sister has learned to change her behavior by observing her brother's behavior and its consequences. This is the concept of observational learning developed by Albert Bandura as a major part of his Social Cognition Theory. Social cognition theory is a grand theory of human development that seeks to explain the entirety of human development and psychological functioning occurring over the life course of the individual. Bandura's theory countered commonly held views of learning through direct reinforcement by presenting humans as intelligent and adaptable learners capable of extracting complex guidelines for behavior from instances of observational learning. The reconceptualization of the process of human learning in straightforward and practical terms makes his social cognitive theory one of the few grand theories that continue to enjoy relevancy and application in contemporary times. A discussion of Albert Bandura and his development of the social cognitive theory follows.

Bandura's social cognitive theory explains the influences of social modeling, human cognition, and motivation on behavior. The development of Bandura's theory of social cognition was influenced by his early psychological research studies and also by his early life experiences. In his theory, Bandura presents humans as adaptable and agentic (i.e., capable of effecting desired change) individuals who use direct and indirect learning sources to guide their present and future actions.

Albert Bandura was born on December 4, 1925, in a small town of Alberta, Canada, the youngest and only male of six children. Bandura's belief in human agency was encouraged by his early educational experiences. He attended a small, understaffed, and inadequately resourced school in Canada that served both elementary and high school students, but although the school was underresourced, students there excelled academically. The meager staff and resources at his school made it necessary for Bandura and other students to take responsibility for their own learning. He believed the students' involvement in their own learning attributed greatly to their

academic success; these early experiences instilled in Bandura the importance of self-direction and motivation in learning. These themes are emphasized in his social cognitive theory.

Bandura also recognizes in his theory the ability of individuals to react to chance encounters and fortuitous events in ways that can meaningfully alter their life course. Bandura's decision to major in psychology resulted from his reaction to one such event. He entered undergraduate school at the University of British Columbia and enrolled in an introductory psychology course because it fit an early morning time slot that he needed for his class schedule. Once in the class, he loved it and decided to major in psychology. Before taking the psychology course, he had intended to major in the biological sciences.

After receiving his bachelor's degree in 1949, Bandura attended graduate school at the University of Iowa. He received his Master of Arts degree in 1951 and his PhD in 1952; both degrees were in clinical psychology. He accepted a faculty position at Stanford University in California in 1953. He remained at Stanford for the entirety of his career.

One of Bandura's earliest projects at Stanford involved the study of hyperaggression in male adolescents from well-to-do and seemingly well-functioning households. He hypothesized that the hyperaggressive adolescents were modeling the hostile behavior of their parents. Although the parents did not allow their sons to display aggression in their homes, they encouraged aggressive behavior in school by telling the adolescents to physically defend themselves during disputes. When these adolescents got in trouble at school for their aggressive displays, their parents typically sided with them against the school administrators. Bandura hypothesized that the adolescents learned their aggressive behavior by imitating their parents' aggression. He further hypothesized that even though the adolescents were punished for behaving aggressively at home, their observation of their parents' aggression was a more powerful influence on their behavior than was the punishment. His research findings were important because they provided evidence against the popular Freudian assumption that parental punishment would discourage aggression in children. Bandura's work with aggressive adolescents demonstrated that observation of parental behavior was a more powerful influence on child behavior than was punishment. Bandura along with his first doctoral student, Richard Walters, published his findings in his first book *Adolescent Aggression* (1959). His early work on adolescent aggression and parental modeling paved the way for his concept of observational learning.

Perhaps the most famous study that Bandura conducted on observational learning and aggression was the Bobo doll study. Bandura showed kindergarten children a film in which one of his female students physically attacked a Bobo doll, an inflatable balloon that was weighted at the bottom to make it bob back and forth when struck. After viewing the film, the children were made to feel frustrated by being placed in a room full of toys that they were not permitted to touch. Finally, the children were led to a room with a Bobo doll and other toys identical to those in the film they had viewed. The majority of the kindergartners imitated the aggressive behavior they viewed in the film; almost half continued to reproduce this behavior months later. Bandura conducted many variations on the Bobo doll experiment; each resulted in a reproduction of the aggressive behavior modeled.

Bandura's findings from the Bobo doll study dispelled several assumptions about learning and aggression. At the time he began his studies, many psychologists believed that learning was simply the result of direct reinforcement. In cases of direct reinforcement, the learner is given a reward each time the desired behavior is approximated until the desired behavior is achieved. Bandura's variations on the Bobo doll experiment demonstrated that learners do not require direct reinforcement for learning to take place. Rather, learners can receive vicarious reinforcement by seeing a model rewarded for his or her behavior and change their own behavior as a result. Recall the example of the older brother and younger sister shopping with their mother; the sister observed her brother receiving reinforcement (i.e., the toy he was begging for) for his behavior

and changed her own behavior as a result. This is an example of learning that takes place through vicarious reinforcement.

Another Freudian assumption popular with psychologists at the time of Bandura's early Bobo doll experiments was that viewing violent or aggressive acts would have a draining effect that reduced aggression in the individual. This assumption was termed the catharsis effect. Both Bandura's Bobo doll study and his studies with aggressive adolescent males disproved the assumptions of the catharsis effect. On the basis of these studies and others, Bandura developed a theory of observational learning and motivation that he termed social cognition theory.

In social cognition theory, Bandura presents human behavior as being largely a product of direct and indirect learning. As discussed previously, direct learning (also referred to as trial and error learning) is reinforced through the learner's receipt of rewards or punishments. Indirect learning (also called vicarious learning and observational learning) occurs when the learner alters his or her behavior without receiving rewards or punishment. Recall again the example of the brother and sister on the shopping trip with their mother. Before she began imitating her brother's begging, the sister had received no direct reinforcement for her behavior; she observed the brother beg and be rewarded, then she changed her behavior. For Bandura, observational learning had important advantages over trial and error learning. Whereas trial and error learning is risky and time-consuming, observational learning saves the learner both time and risk by allowing him or her to learn from the successes and mistakes of others. For Bandura, humans have a great capacity for symbolism; we can retain socially modeled information in the form of mental images or verbal descriptions that serve as symbols for future behavior. Through social modeling, individuals can extend their learning by using symbols from the original modeled behavior to guide future rules for action. Returning once again to the example of the brother and sister on the shopping trip, Bandura argued that the sister will be able to apply her learning to different situations. For example, having retained the symbol of her brother receiving a reward for begging his mother, she might try begging her father or grandparents for a desired toy. She might try begging her mother to allow her to spend the night at a friend's house. In each case, the learner becomes able to apply his or her observational learning to new situations in ways that guide his or her future actions.

Central to Bandura's theory of social cognition is the term triadic reciprocal causation, which describes the simultaneous influences of thoughts, feelings, and the environment on human behavior. For Bandura, human behavior results from interactions between individual biological factors (e.g., cognitive capabilities), psychological factors (e.g., emotional states), and the environment. These factors influence and are, in turn, influenced by one another; the interactions among these biological, psychological, and environmental factors produce variations in human behavior. The results of reciprocal causation are that humans are at the same time producers of and products of their environment.

For a practical example of triadic reciprocal causation, imagine that you and other college students are seated on the first day of class, waiting for your professor to arrive. As you wait, you join in small talk with the other students. The professor arrives; upon entering the room she makes eye contact and confidently announces that class will now begin. According to Bandura, the behaviors of the professor will be influenced by her emotional state (e.g., Is she excited about teaching the course? Does she believe herself to be an effective instructor?), her cognitions (e.g., her initial thoughts about the course and students), and the classroom environment. Suppose that when the professor enters the classroom you and your classmates continue with your small talk and fail to acknowledge her entrance. Your actions might create a negative classroom environment for the professor to react to. On the other hand, you and your classmates might stop talking as the professor enters and focus your attention on her, indicating that you are ready to begin class. These two very different environmental responses on your part will interact with the professor's

thoughts and beliefs to influence her actions as she begins teaching the course. In turn, you and your classmates will react to the professor's subsequent behavior, possibly altering her behavior and the classroom environment as a result. In this way, the professor and the environment are continuously interacting with and influencing each other through reciprocal causation.

Three very important concepts in Bandura's social cognition theory are social modeling, the self-system, and self-regulation. The concept of social modeling, or observational learning, has been discussed previously. This concept will be discussed in greater detail now, along with the concepts of the self-system and self-regulation for greater clarity of social cognition theory.

SOCIAL MODELING

Bandura used his Bobo doll study to identify the steps involved in the process of social modeling. He hypothesized that social learning could occur through the learner's actual observation of real people, observations of the environment, or observations of television or other media. In order for learning to occur, the individual must be attentive to the modeled behavior (e.g., the sister must be actively paying attention to the brother's behavior). In addition, characteristics of both the learner and the model influence learning. For example, learner fatigue or distraction decreases learning while model attractiveness, competence, and prestige increase learning of the modeled behavior.

The learner must be able to utilize mental imagery or verbal descriptions to retain the modeled behavior so that it can be reproduced later. Reproduction involves translation of the retained images and/or descriptions into actual behavior; in order for reproduction to occur, the learner must have the ability to reproduce the behavior.

The learner must be motivated to engage in the observed behavior. For Bandura, the factors influencing motivation include past reinforcement or punishment, incentives or threats, and seeing the model of the behavior reinforced or punished (as occurred when the sister observed her brother receiving his desired toy). According to him, reinforcements are better motivators of behavior than are punishments. Unlike traditional behaviorists, he does not believe that direct or vicarious reinforcements and punishments cause learning; instead he believes that they provide reasons for the learner to demonstrate learned behaviors.

In general, children tend to engage in observational learning more than adults, and inexperienced persons do it more than those with experience. For Bandura, individuals use language and symbols to translate their observations of socially modeled behaviors into guides for future actions. The extent to which socially modeled behaviors translate into future actions for the learner depends on human motivation and self-management. He hypothesized that human motivation and management are derived from an internal structure called the self-system.

The adaptive nature of humans enables them to extend observational learning to future behaviors through the self-system. For Bandura, the self-system is a set of cognitive structures that influence perception, evaluation, and behavior regulation. Bandura developed the concept of the self-system to explain consistency in human behavior. He believes that the learner consciously engages the self-system to evaluate behavior in relation to previous experiences and future consequences. As a result of these evaluations, self-regulation occurs. Self-regulation is the individual's ability to control his or her behavior.

Self-regulation is engaged when one violates some form of previously adopted social norm or standard. It involves three steps: self-monitoring, judgment, and self-response. Self-monitoring is simply the awareness of one's own behavior. Judgment involves comparing one's behavior with personal standards (i.e., judging one's behavior against oneself) or other standards of reference. Self-response involves the internal feelings associated with judgments of individual behavior. If the judgment is favorable, a rewarding self-response (e.g., feelings of pride or satisfaction)

may result, and if the judgment is unfavorable, a negative self-response (e.g., feelings of shame or inadequacy) may result. In general, individuals aim to perform actions that provide a sense of satisfaction; they tend to avoid engaging in behaviors that induce self-devaluing reactions. Over time, one's tendency to meet or fail to meet self-standards can influence perceptions of self-concept and self-efficacy. Self-concept is an individual's judgment of his or her capability. Self-efficacy is an individual's perceived ability to be effective and perform actions necessary to change one's environment.

For Bandura, self-efficacy serves as a source for human motivation across the life cycle. Self-efficacy is acquired or changed through four sources: mastery experiences (successful performance), social modeling, social persuasion, and physiological or emotional arousal. In general, successful mastery experiences increase self-efficacy while failures lower self-efficacy. Observing others succeed (social modeling) can increase self-efficacy if one perceives oneself to be like the model; observing others fail can decrease self-efficacy. Social persuasion involves the degree of praise or insult one receives for completed behaviors. Praise of the persuader can increase self-efficacy if the persuader is credible and is describing a behavior that is within the learner's ability to perform. One's physiological state also can influence self-efficacy. Whereas high levels of emotional arousal (e.g., adrenaline) can decrease performance and self-efficacy, lower levels of emotional arousal can increase performance and self-efficacy.

As mentioned earlier, Bandura's social cognition theory is a grand theory of human development that seeks to explain human behavior across the life course. For Bandura, the establishment of self-efficacy throughout various developmental "milieus" (i.e., changing situations) in the life cycle is determinant of healthy and adaptive human functioning. According to him, these milieus (i.e., infancy, family relations, peer relations, school, adolescence, adulthood, and advancing age) are commonly recognized but are not fixed stages in the Piagetian sense of human development. Bandura views development as a lifelong process, marked by individual variations in cognitive ability, environmental influence, and perception.

SOCIAL COGNITIVE THEORY AND POSTFORMAL THOUGHT

Postformal thought questions Piaget's assertions that adolescent thinking and adult thinking are qualitatively identical as well as Piaget's contention that formal operations is the final stage of cognitive development in humans. Bandura's social cognitive theory is compatible with postformal thinking in its rejection of highly fixed stages of cognitive development and its recognition of qualitatively different types of cognitive functioning that occur throughout the life cycle. For Bandura, cognitive functioning does not follow a universal or fixed path. It is multidirectional and follows diverse trajectories of change depending on individual abilities and the social context. The emphasis of social cognitive theory on the importance of context in evaluating thinking and learning outcomes discourages its adherence to fixed stages of cognitive development. Variations in social context and individual characteristics will necessarily produce variations in cognitive development.

As mentioned earlier, Bandura explains human development as the establishment and maintenance of self-efficacy resources throughout the life cycle. Such development differs according to the milieu or changing situation the individual encounters. In each milieu, Bandura identifies cognitive functioning as involving the individual's adaptation to changing situations in practical ways that enhance self-efficacy.

In infancy, adaptation involves learning that one's actions influence the social environment. The establishment of a sense of personal agency and causality result from this adaptation and enables the infant to engage in abstraction and learn to gauge likely outcomes of actions through social modeling experiences. Bandura's next milieu, the family context, provides children with ample

vicarious experiences that inform the use of social and verbal behavior to alter social outcomes and enhance self-efficacy. The peer context reinforces the child's self-efficacy as the child learns coping and problem-solving behaviors through the development of peer relationships.

Particularly applicable to educational psychology and critical theory is Bandura's recognition of the importance of self-efficacy in the school milieu for successful educational outcomes. For Bandura, the school milieu is the place where individuals learn the knowledge, strategies, and skills needed for successful participation in society. Self-efficacy is critical for mastery in the school environment and the wider social environment. According to him, individuals possessing high self-efficacy at academic task mastery will perform more successfully than individuals lacking academic self-efficacy and will also perform better at activities outside the school environment. Thus, those who come to school cognitively prepared will likely be successful in school, and their academic success will increase their academic self-efficacy and motivate them to continue to do well. For those students who enter the school setting with low academic self-efficacy, however, their school experiences will likely serve to further decrease their self-efficacy and impede their development, leaving them ill-prepared for the future. Thus, while educational practices such as competitive grading and ability grouping may serve to enhance the self-efficacy of students already possessing high levels of academic self-efficacy, these practices can also decrease the self-efficacy of students entering school with low academic self-efficacy. Bandura's recognition of social influences on school performance disparities makes his theory compatible with critical theorists who recognize the bidirectional influence of children's individual characteristics and social context on their school performance.

Adolescence, the next milieu in Bandura's theory, involves cognitive skills of adaptation, avoidance of health risk behaviors, and practice of forethought regarding potential career paths. The adult milieu differs markedly from the adolescent milieu in that it involves the adoption and management of social roles involving marriage, employment, and financial management. The milieu of middle years involves stabilization of self-efficacy, but this stability is often reversed in advancing age, however, as physical functioning and memory decline. For Bandura, self-efficacy can be maintained in advancing age through reliance on differing levels of cognitive processes. For example, memory functions may decline in advanced age, but levels of information integration can remain consistent and levels of knowledge and expertise may increase.

Bandura's theory of social cognition employs a pragmatic approach to cognitive functioning that has real-world applicability; it recognizes fluidity in cognitive development whereby different cognitive processes become relevant as one's social, cultural, and temporal contexts change throughout the life cycle. Social cognition theory recognizes the context specificity of cognitive processes and allows for fluidity in the development and demonstration of cognitive functioning across the life cycle. In this way, social cognition theory is compatible with postformal thought.

CONTRIBUTIONS

By presenting human beings as reflective, self-directed, and self-managing individuals capable of adapting to changing environments with flexibility and adaptability, Bandura's social cognitive theory suggests a positive view of human existence. For him, both socially appropriate and socially inappropriate behaviors result from social cognitive learning, not childhood trauma or unconscious drives and impulses. As a result, maladaptive behaviors can be altered through appropriate social modeling. His straightforward, efficient, and effective methodology for treating socially inappropriate behaviors continues to have broad application in therapeutic and criminological contexts.

Bandura suggests that maladaptive behaviors (e.g., aggression, phobias, and depressive psychological states) arise through observational learning and persist because some reward (either

vicarious or direct) is associated with the behavior. The goal of therapy, for him, is to enhance the individual's ability to self-regulate his or her own behavior in ways that are socially appropriate. He advocates therapy that changes maladaptive behavior through vicarious modeling (i.e., learner observes others successfully modeling behaviors to be adopted), cognitive modeling (i.e., learner imagines himself or herself modeling appropriate behavior), and systematic desensitization (i.e., learner performs behaviors that invoke anxiety gradually to decrease phobic reactions). The therapeutic applications of Bandura's social cognitive theory focus on small changes in behavior that can be generalized to other maladaptive behaviors in the individual.

Bandura has influenced public reform efforts as well with his social cognitive theory. He argues that the media is a symbolic environment that serves as a source of social modeling for learners. He has specifically argued that the attitudes and behaviors of children and adults can be altered through the modeling of violent television and film images. His argument for the causal link between violent media images and aggression resonated with concerned parents and educators advocating for media reform and has resulted in ongoing studies about the relationship between violent media images and aggression.

Bandura's social cognitive theory emphasizes the flexibility and adaptability of the individual and recognizes the individual capacity for planning and self-direction. Bandura's focus on individual agency and capacity for self-management makes the application of his theory particularly useful in changing times and diverse cultural settings. The far-reaching effects of globalization on society and technology have necessitated that individuals be able to adapt to quickly changing economic, social, and political environments. The application of Bandura's theory suggests that in the midst of changing times, individuals have the capacity to adapt, plan, and execute their lives in meaningful, productive ways.

Bandura's expansion of his concept of human agency to group dynamics resulted in his concept of collective agency; collective agency is the belief of groups of people in their ability to work together to produce change. This theoretical expansion broadens the application of social cognition theory to include strategies for social change.

CRITIQUES OF SOCIAL COGNITIVE THEORY

Biological theorists have been critical of Bandura's social cognitive theory, claiming that his social cognitive theory ignores the influence of genetics (e.g., individual biological states, physiological responses, differences in learning ability) on behavior. They argue that individual responses to their environment are partly genetic, and by ignoring this genetic influence, social cognitive theory ignores the role of the brain in information processing. In actuality, Bandura's social cognitive theory recognizes the influence of genetics on human behavior, but downplays this influence by arguing that social factors are a more powerful influence on behavior than are genetic factors.

HONORS AND AWARDS

To date, Albert Bandura has authored seven books and edited two additional works. In 1986 *Social Foundations of Thought and Action*, a book of his complete theories, was published. As a result of his contributions to the field of psychology, his advocacy for public reform, and his leadership and service endeavors, Bandura has received at least 16 honorary degrees and numerous awards and honors. Among his honors are the American Psychological Association Distinguished Achievement Award (1972), the William James Award from the American Psychological Society (1989), the Distinguished Lifetime Contributions Award from the California Psychological Association (1998), the Thorndike Award for Distinguished Contributions of Psychology to Education

from the American Psychological Association (1999), the Lifetime Achievement Award from the Association for the Advancement of Behavior Therapy (2001), the Lifetime Achievement Award from the Western Psychological Association (2004), the James McKeen Cattell Award from the American Psychological Society (2004), and the Outstanding Lifetime Achievement Award from the American Psychological Association (2004).

REFERENCES

- Bandura, A. (1997). *Self-efficacy: The Exercise of Control*. New York: W.H. Freeman.
- Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Evans, R. I. (1989). *Albert Bandura: The Man and His Ideas. A Dialogue*. New York: Praeger.

CHAPTER 4

Jerome Bruner

THOMAS R. CONWAY

Jerome Bruner is still active today in the field of educational psychology. He has continued to evolve his ideas about learning and education in many books and articles. He made a large contribution to the development of curriculum theory during the 1950s and 1960s and is considered the leading figure of the “Cognitive Revolution” in the field of psychology. Most of Bruner’s professional life has been spent in the northeastern section of the United States. During the 1970s, Bruner spent some time in England at Oxford University as the Watts Professor of Experimental Psychology. Since the late 1990s, Bruner has been a professor of psychology at the New York University of Law. During the 1960s, Bruner’s ideas and theories on education had their greatest impact on the field of educational psychology.

Jerome Bruner was born in 1915 to a middle-class family from a suburb of New York City. At the young age of 12, Bruner’s father died. After his father’s death, Bruner moved around with his mother frequently, going to several different high schools. Bruner attended Duke University for his undergraduate degree in the 1930s and then went on to Harvard University for his graduate studies. At Harvard University, Bruner received his PhD. in Psychology in 1941. It was at Harvard that Bruner studied under the auspices of Gordon Allport, a leading psychologist of the time. Bruner’s dissertation dealt with the impact of a leader’s use of technology (i.e., the radio) upon people in society. Burton Weltman in writing about Bruner’s work states, “his research focused on the relationship between propaganda, education, and public opinion” (Weltman, 1995, p. 223). Looking back at his work, Bruner claims his work was propelled by an obsession with Nazi Germany and ultimately dismisses the early years of his work (Bruner, 1983, p. 38).

During World War II, Bruner worked for the United States Army’s Intelligence Corps focusing on issues of propaganda (Hevern, 2004). His interest in public opinion and eventually his concern about the world of education were given genesis during this era. Shortly after World War II, Bruner returned to Harvard as a professor to continue his life in the world of academia. During his early years at Harvard as a professor, Bruner began to study the concept of perception. It was at this time Bruner began to reject the notions of behaviorists and began his quest to discover what motivates people to learn. Throughout his work, Bruner found that people tended to see what they wanted to see (Weltman, 1995). At this time, Bruner began to work on studies in cognition.

It would be these studies in cognitive development that would propel Bruner to the forefront of educational psychology in the late 1950s.

Bruner took issue with the teachings of B. F. Skinner, a leading behavioral psychologist. Behaviorism had dominated the field of psychology, especially following the war years of the 1940s. According to Skinner, behaviorism addressed the following concepts: that individual nature could be managed by social nurturing; inherited traits could be countered by societal factors; and conditioning could help people learn or to be trained. For Bruner, the biggest problem with behaviorism is that it denied the capacity of human reason. Bruner believed that reason could control human behavior. He had a problem with people who conditioned other people. He felt that this type of conditioning was antidemocratic and too controlling. Bruner in his work began to write about how the right hand controlled the imagination and emotion of human beings and the left hand controlled the scientific and rational side of our thinking. The theory of the right hand and left hand led Bruner to think more about how meaning is constructed. It was with these theoretical writings that Bruner began to be noticed by other leaders in the field of psychology and eventually emerged as a leader.

The seminal event that brought Bruner to the national scene was the 1957 launching of the satellite Sputnik by the Soviet Union. This event caused fear in both the hearts and minds of liberal and conservative thinkers in America. The Cold War between the United States and the Soviet Union was in full momentum by the end of the 1950s. The 1950s has often been characterized by romantic imagery of the stable American family, but a level of anxiety and fear existed in most corners of America. The Sputnik launching by the Soviets gave a platform for people critical of American education to claim that we were behind the Soviets in mathematics and science. A national conference of leaders was convened to deal with this apparent educational gap. Bruner was the leader of the national conference at Woods Hole on Cape Cod in 1959. The conference was sponsored by the National Academy of Sciences and the National Science Foundation (Smith, 2002). It was from the discussions at the conference that the classic work *The Process of Education* (1960) by Jerome Bruner emerged. This book provided the research-based evidence that backed many new curriculum programs of the 1960s. It was during this period of time that Bruner became a leading figure in the cognitive revolution that would control the world of education during the 1960s. Bruner became a leading figure on many panels such as the President's Advisory Panel of Education, advisor to the Head Start Program, and president of the American Psychological Association from 1964 to 1965 (Smith, 2004).

The Woods Hole conference helped to usher in the New Curriculum movement of the 1960s. The New Curriculum movement ultimately was concerned with the fact that the United States did not produce enough top-notch scientists (Weltman, 1995). Course materials and teacher training in the sciences was blamed for the failure of American students, as compared to students in the Soviet Union. The curriculum that was developed from the conference would ultimately lead Bruner to develop "Man: A Course of Study" (MACOS) in the mid-1960s. The MACOS curriculum was more social-studies based and sought to answer the following questions: what makes a human being uniquely human and how did humans get to be this way. Bruner was the leading figure in the development of constructivist theories of learning. The constructivist theory of learning is concerned with how an individual constructs meaning. The consequences for education were that teachers should be concerned with how a learner is thinking as opposed to the material that is taught. In addition to this concern, a teacher must realize that knowledge is not independent from the experiences of the learner. By promoting constructivist theory of learning, Bruner is oft aligned with Jean Piaget and Lev Vygotsky.

Bruner used a similar framework for his ideas as Piaget but disagreed about absolute stages of development. Bruner's objection with Piaget's stages of development was his disagreement with what makes a child ready for an "adult concept" (Weltman, 1995). Piaget's theory of

development had become gospel during the 1950s. Education in America had become dependent upon the biologically determined stages as outlined by Piaget. Piaget argued that pushing a child too early might be detrimental to a child's learning. Thus, the system of American education was neatly divided into grade levels and according to these grade levels different concepts would be taught. A young child would not be ready for the scientific fields of biology, chemistry, and physics until the high school setting. In Bruner's work *The Process of Education*, he outlined several key concepts for learning to take place at any level. Bruner wrote two follow-up books about his theories that he outlined in *The Process of Education*. Those books were *The Process of Education: Towards a Theory of Instruction* (1966) and *The Relevance of Education* (1971).

In *The Process of Education: Towards a Theory of Instruction*, Bruner claimed that structure in learning was essential in helping a person to master concepts. Structure for a developer of curriculum is important because it helps the curriculum developer to divide a subject matter into steps. This division of subject matter helps the learner to master the new concept. According to Bruner, the use of structure in education helps to make a student's learning more efficient, useful, and meaningful (Weltman, 1995). In Bruner's *The Process of Education: Towards a Theory of Instruction*, he defines that structure is needed in order to understand the larger body of knowledge. Structure does not necessarily include a list of basic facts or details that a learner must memorize. For Bruner the understating of subject comes from understanding the main concepts. Discovery learning uses this principle. A student in a discovery learning setting does not simply memorize the teacher's explanations of topics but instead works through examples to learn the subject's structures.

Bruner criticized that American education wasted too much time in delaying concepts that a young learner may be ready to comprehend. His term for readiness was the idea of a spiral curriculum (Smith, 2002). A spiral curriculum should always revisit ideas and build upon them until a learner has grasped the bigger picture. Within this spiral curriculum, Bruner's concept that intuition is a key element in the learning process was important. A learner can start with a hunch and then explore that hunch to validate if their intuition was correct. It is this stimulation of intuition that allows for "any subject [to] be taught effectively in some intellectually honest form to any child at any stage of development" (Bruner, 1983). For Bruner a learner could make a guess at the structures before there was a need to rationalize about them. In his writings he compares this to the way scientists often make their discoveries. A scientist makes an observation about a human characteristic. The scientist then makes an intuitive guess as to the origins of this characteristic. Finally, a scientist must conduct an experiment to determine if the guess was correct. Therefore, Bruner in his writing and thinking makes the following statement: "The schoolboy learning physics is a physicist" (Weltman, 1995, p. 196). Lastly, Bruner states that a learner must be motivated to comprehend a concept and external elements, such as grades, rarely help a learner master a concept. Discovery is important for a learner to acquire new knowledge. Through a learner's own cognitive efforts, they can relate the new material to concepts they have learned before.

In developing these theories about instruction, Bruner worked with children in much the same way as Piaget did in his studies. Later in the 1970s, Piaget was critical of Bruner's theory and Piaget rejected the idea that anything can be taught to anyone at any age. Bruner observed several stages that a child goes through in discovering and learning concepts. A child comes to master their world by going through each stage. For Bruner, these stages are not absolutes. There are no boundaries or time limits with a stage, but in order to master a concept all three stages must be used. The three stages are known as enactive, iconic, and symbolic.

The first stage that Bruner defined was the enactive stage. A young child best understands their environment by interacting with the objects around them. A child is not using words or imagery at this level. At this level the objects around a child are used to help them make sense of their world.

An observation often noted by parents is that an infant or toddler often seems more fascinated by the box a gift came in as opposed to the actual gift. In this stage of learning, a child will play with coins and paper money in order to begin their understanding of currency. The second stage a child encounters is called iconic. At this level a child begins to make perceptions of their world. Visual memory begins to be developed by the child. Continuing with the example of currency, a child can begin to look at pictures of coins and money and make the connection of their values. Many children's books are filled with pictures of objects. Sometimes a child might not be able to touch or see an elephant first hand but through the iconic representation of an elephant in a children's book about circuses, a child has an interaction with an elephant. Icons are presented to the child or developed by the child on their own. The third stage is called symbolic. At this point the perceptual way of thinking gives way to symbol systems, such as, language, words, and numbers. The symbolic stage allows for concepts to become compacted in the learner's mind. Using the symbol of the dollar sign (i.e., \$) in their writing will trigger for the learner their understanding of the concept of currency. Sayings such as "a penny saved is a penny earned" begin to carry meaning for the learner on the symbolic stage because of having mastered the concept of currency.

Children learn a subject matter by moving through the stages of enactive, iconic, and symbolic. The symbolic stage becomes the dominant level of learning for most people. In teaching a new concept it makes sense to use the order of the stages. However, a teacher of mathematics might realize that a student may conceptually understand the concepts of geometry but may still fall back on the iconic stage in order to work out the geometric problems. Using Bruner's theory, knowledge becomes a process in which a learner takes part in the construction and develops comprehension. Bruner wrote in *The Process of Education* that "the task of teaching a subject to a child at any particular age is one of representing the structure of that subject in terms of the child's way of viewing things" (Bruner, 1960, p. 33). The focus on the learner is very important. Thus, Bruner's theory is very student-centered. Anyone can learn any concept as long as the enactive, iconic, and symbolic terms are developmentally appropriate.

Bruner became a leading figure in America during the 1960s. After the assassination of President Kennedy in 1963, Lyndon Johnson took over as president and during his 1964 campaign looked at Bruner's concept of the Head Start program. Bruner conceived of Head Start as a way to bridge the cultural differences between the upper and lower classes of American society. Also, Bruner conceived of Head Start as a test of compensatory education (Weltman, 1995). President Johnson decided to use the Head Start program in his War on Poverty campaign. Bruner acted as an advisor to this program (Bruner, 1983, p. 152). The other major contribution to curriculum development and educational psychology during the 1960s by Bruner occurred with the development of MACOS starting in 1962.

The curriculum of MACOS was aimed at 10-year-old students, who were at the beginning stages of symbolic thought. MACOS was designed "to promote the social sciences rather than history, and structural concepts and values instead of facts" (Weltman, 1995, p. 248). The course came prepackaged with multimedia materials that a student would use to discover the concepts. Teachers needed to be extensively trained in order to use the program. The project received funding from the National Science Foundation. Between 1964 and 1967 the materials and course curriculum were tested effectively in volunteering school districts. The course was well received by students and was considered well designed by Bruner. The course emphasized discovery learning and critical thinking in interactive classroom settings. The students were not graded on their learning experiences in order to provide a stress-free environment (Weltman, p. 251). In the early 1970s a backlash against MACOS began to appear around the United States. Conservative parents in several states challenged that the program had a liberal bias and was inappropriate for their children. In particular some parents were concerned with the graphic presentation of

Eskimos seal hunting. Eventually, the controversy over the MACOS curriculum found its way to the United States Congress. Beginning in the 1970s, the National Science Foundation had to submit to the Congress for reviewing all project curriculums under budgetary consideration. As a result, MACOS lost funding and began to be removed from the many schools that adopted the curriculum. In the 1970s, Bruner's theories began to receive criticism from across the political spectrum. Left, right, and radical writers in the field of educational psychology attacked the writings about cognition by Bruner. Shortly after the failure of the MACOS project, Bruner left the United States and began his tenure at Oxford University.

Bruner continued to develop his theories about learning in many books and novels. In his later writings, Bruner became very critical of anti-intellectualism found in public opinion. One of Bruner's concerns in education had been how to bridge the gap between the "high brows" and "low brows" by developing a higher level of culture for all groups (Weltman, p. 259). Bruner wanted children to think like a scientist and thereby causing the child to appreciate the field of science. Bruner's work helped psychologists to see the child as a social being and not as a being who developed in isolation. Bruner's original theory of the child as an active scientist has changed over the years with his growth as a scholar. His concerns and writings have been focused more on the social activism and cultural studies. In his writings today, Bruner can be viewed as a poststructuralist. He has moved away from the formalism in his earlier writings and now tends to analyze statements and writings as forms of narrative text. Bruner continues to write about the link between psychology and education. His latest concern is with cultural psychology and its impact on education.

REFERENCES

- Bruner, J. (1960). *The Process of Education*. Cambridge, MA: Harvard University Press.
- Bruner, J. (1983). *In Search of Mind: Essays in Autobiography*. New York: Harper & Row.
- Hevern, V. W. (2004, April). Key Theorists: Jerome S Bruner. *Narrative Psychology: Internet and Resource Guide*. Retrieved on December 10, 2005, from the Le Moyne College Web Site: http://web.lemoyne.edu/~hevern/nr-theorists/bruner_jerome_s.html.
- Smith, M. K. (2002). Jerome S. Bruner and the Process of Education. *The Encyclopedia of Informal Education*. Retrieved on December 10, 2005, from <http://www.infed.org/thinkers/bruner.htm>. Last updated: January 28, 2005.
- Weltman, B. D. (1995). Debating Dewey: The Social Ideas of American Educators Since World War II an Examination of Arthur Bestor, Jerome Bruner, Paul Goodman, John Goodlad, and Mortimer Adler (Doctoral dissertation, Rutgers The State University of New Jersey, 1995). *Dissertations Abstract International*, 56/09, 3479.

CHAPTER 5

Judith Butler

RUTHANN MAYES-ELMA

Olson and Worsham quoted Butler as stating,

For me, there's more hope in the world when we can question what is taken for granted, especially about what it is to be a human . . . What qualifies as a human, as a human subject, as human speech, as human desire? How do we circumscribe human speech or desire? At what cost? And at what cost to whom? These are questions that I think are important and that function within everyday grammar, everyday language, as taken-for-granted notions. We feel that we know the answers.

WHY BUTLER?

Judith Butler is a very well known theorist of gender, power, sexuality, and identity. Many academics are introduced to Butler in graduate school, thus she has been described as “one of the superstars of ‘90s academia, with a devoted following of grad students nationwide,” according to the Web site theory.org.uk. I fell in love with Butler while I was doing my dissertation; her theories on the aforementioned were fascinating (which we will get to later) and in my opinion could help the educational system become stronger. Butler's theories fall directly in line with postformal thinking. The definition of postformalism that I work from has been set forth by Joe Kincheloe, Shirley Steinberg, and Patricia Hinchey in this important book, *The Post-Formal Reader*: “Post-formal thinking is concerned with questions of meaning, self-awareness, and the nature and function of the social context. . . . Post-formalism grapples with purpose, devoting attention to issues of human dignity, freedom, power, authority, domination, and social responsibility” (1999, pp. 21–22). In thinking through this lens it couldn't be more obvious that Butler fits so nice and neatly within it, although Butler would hate the idea of anything fitting nice and neatly into a box.

Although Butler's main interest and passion resides with gender, power, sexuality, and identity, many crossovers can be derived from these and used to improve our educational system. Once we understand Butler's train of thought we can use the same reasoning and apply it to the many aspects of schools today in order to change what is a purely mechanistic system with all of its testing into a postformalistic system in which each student has control of their own learning.

BUTLER'S PASSION

A true Hegelian at heart, Butler has been influenced by Hegel before she even wrote her dissertation. Thus, Hegel himself is still influencing us, but through Butler's works instead of his own. In all of Butler's books she asks questions about the formation of identity and subjectivity. She traces the process of becoming through existing power structures and asks questions of those power structures, as stated by Sara Salih in her profound book, *Judith Butler*. Butler loves to ask questions, but rarely provides us with answers to those questions. Many find Butler's works in and of themselves to be a process of becoming.

Butler's best known work to date, which has also been regarded as her most important book, would have to be *Gender Trouble* (1990, 1999). In *Gender Trouble* Butler introduces us to the concept of gender as performativity, which she states is very different from performance. According to Butler the word "performance" denotes the existence of a subject, whereas "performativity" does not. This does not mean that there isn't a subject, but instead it may be behind or before the action in question, which was and still is a radical way of discussing gender identity. The performativity is created, as Butler states, through the social or the macro. The environment in which one is in helps shape one's gendered identity. Whereas each environment is different, one can perform gender very differently within each of the various environments. According to Butler, gender is something we "do," not something we "are." Butler's approach to gender identity has been said to come from Simone de Beauvoir's (1949) highly controversial book that was ahead of its time, *The Second Sex*, in which de Beauvoir states, "One is not born, but rather becomes, a woman. No biological, psychological, or economic fate determines the figure that the human female presents in society; it is civilization as a whole that produces this creature, intermediate between male and eunuch, which is described as feminine" (p. 281). Butler agrees in this sense of becoming, not born of or into, but instead of a process. She sees gender as what she has called an "artificial unity," where people are thrown together because of either their XX or XY chromosomes, as she states in her book *Gender Trouble* (1999, p. 114). Gender is an act or many acts put together, which is always occurring and reshaping or reinventing itself. For Butler, gender is produced, not a natural and definitely not a constant.

Butler also stated in *Gender Trouble* that feminists should not look at gender and the power structures that are produced and restrained by it in order to emancipate oneself, but instead understand how the category of "woman" is produced and for what political purpose (p. 2). In her book *The Psychic Life of Power*, Butler (1997) states that how we become our gender is by submitting to power (p. 2). She believes that the power structure itself gives us power and in order to change what power we have we must first change the system. Power forms our becoming and we in turn form power; it is very fluid. Just as Butler did not like the term "performance" when dealing with gender identity because it denotes the presence of a subject she also uses this idea of a non-preexisting subject in her ideas of reshaping power systems. Since we do not preexist, but instead become—or construct our own identities—Butler believes that it is possible to subvert oppressive power systems and recreate them into emancipatory systems.

In order to reshape power, thus reshaping reality we must reshape language, according to Butler. When Wittig (1992) stated in his book, *The Straight Mind and Other Essays*, that "Language casts sheaves of reality upon the social body, stamping it and violently shaping it," Butler agreed (pp. 43–44). In *Excitable Speech* (1997) Butler noted that we can turn words in our language that have negative connotations into ones that have positive connotations. We can embrace the term "woman" or "feminine" even when others are using it as negative. We can redefine what these terms mean and in turn how they should be used.

It is no secret that some do not like or agree with Butler, but no one can deny the fact that she has influenced and had a huge impact upon many different critical and theoretical fields. In Shildrick's

opinion, in his chapter on Judith Butler in Brown, Collinson, and Wilkinson's book *Blackwells Biographical Dictionary of Twentieth-Century Philosophers* (1996), Butler's theorizations of performative identity are indispensable to postmodern feminism. McNay agreed in his article "Subject, Psyche & Agency: The Work of Judith Butler" in volume 16 of the journal *Theory, Culture & Society*, when he stated that Butler has "pushed feminist theory into new terrain" (1999, p. 175). Whereas Dollimore (1996) stated in his article "Bisexuality, Heterosexuality, and Wishful Theory" in volume 10 of the journal *Textual Practice*, that Butler is brilliant; he also found her to be "hopelessly wrong" (pp. 533–535). Whatever opinion you may have of Judith Butler I am sure you have not seen or heard the last of her. As Butler states herself in *Contingency, Hegemony, Universality: Contemporary Dialogues on the Left*, which she coauthored with Laclau and Zizek, she has not "fallen asleep on the job" (2000, p. 269). She will continue to discuss the "politics of discomfort," as Salih has so eloquently stated in her book *Judith Butler* (2002, p. 151).

BUTLER APPLIED TO EDUCATION

In our schools today we have curriculums that are dictated by standardized tests, thanks to No Child Left Behind (NCLB), which I'm sure Butler would agree should be renamed All Children Left Behind. Testing, now more than ever in our history determines the educational purpose for each child and school. Everything revolves around the test!

From studies we know that certain "types" of students do poorly on standardized tests namely any child who is the "other," which is based on a concept by Michel Foucault in his best-selling book *The History of Sexuality*; which includes anyone who is not an upper/middle class, white male. Many children learn one thing from this constant testing—they are stupid, they are not as good as the other children, and they will not amount to anything in life. We then label these students as "special needs," which Butler would disagree with altogether. Putting anything into a tight, neat category is an injustice, according to Butler, but that is what our current system does to children whether they do well or do poorly on the tests. This is not just an injustice for those who don't do well; it is also for those who do well. They are being set up for failure right from the start, they might not be able to live up to the expectation that others have of them from their tests scores. This "artificial unity," as Butler (1999) has deemed it in her infamous book *Gender Trouble*, is a result of standardized testing. Students are grouped into categories dependent upon how well they did on their tests. In this group the only thing that they have in common is their test score range, which makes it an "artificial" group.

And whose knowledge has been deemed the "official knowledge" as to put children into these "artificial" groups? Butler knows that the "knowledge" on the standardized tests and the "knowledge" that is being deemed important in class is not the "others" knowledge, but instead an elitist knowledge. It is a Eurocentric, patriarchal knowledge that has been deemed important and "best." The tests that every student must take are nothing more than an attempt to brainwash and perpetuate white supremacy. The "others" or outsiders as some may call them are expected to conform, or they will be banished from the elitist system. Isn't it ironic that the public school system that Horace Mann and Henry Barnard, and later John Dewey, set out to create with their idea of the universal schooling for all, a system where ALL students could receive an education and be valued, has turned full circle into what they were trying to get away from in the beginning. If lawmakers had it their way, every child who is not the "norm" (aka a white, upper/middle class male) would not be allowed to attend public school. Instead of honoring each individual, as Butler would have, we have instead honored who we deem worthy. So it then becomes a case of those who do poorly on the tests are obviously unworthy.

Butler believes that there is no "right" and "wrong," there are no binary oppositions, instead everything is fluid because things change with the social. In other words the micro changes

along with the macro; each has an affect upon the other and each changes and is changed by the other. Interpretation is the key, according to Butler. Everything is up to interpretation. It is this interpretation that tells each of us what the world around us really is; it explains our own reality—knowing that there is no such thing as one “true” reality, but instead multiple realities, each being shaped by our interpretation of the macro. What Butler believes forms our interpretations is our culture, our social, and our environment in which we have been brought up and in which we currently live. So, again our interpretations are fluid as well, the micro and macro both play a part of forming each other’s “realities.” Which is why minorities (and I mean ALL types of minorities: race, creed, color, culture, gender, sexual orientation, etc.) do not do well on standardized tests because their “realities” are not the same as the white guy who made the test. What may be important to Mr. White Guy may not be, and probably isn’t, what minorities deem as important. Instead of having children create their own realities, as Butler would have done in schools, NCLB has mandated that every student conform to the “right” and dominant reality.

When Butler stated that we could change reality and thus the power systems that operate within by changing the language, I believe she must have known that this would hold true for education as well. The power in our educational system, much less our country, is in the hands of the “elite,” or what society has deemed elite—the Eurocentric, upper/middle class male, and in accordance with that falls the language we are to use, the “proper English” we are to teach our students. In order to change this power system, the system that thinks the answers to all our problems are in tests, we must change the language. A great place to begin this transformation is in our schools and classrooms. We concentrate on test scores for individuals and make sure that each individual child listens and memorizes, instead of coming together to learn from one another. Since there is no “I” in gender as Butler (1999) has stated in *Gender Trouble*, I would like to take it one step further and state that there is no “I” in education (p. 145). Gender is a performance, fluid and free, it changes as its environment changes, so should education.

In college I took a variety of subjects and courses. Some of which were standard banking system approaches to learning, while others were far greater than anything I could have imagined; classes where I was allowed to be free, to challenge myself, and educate myself. I was allowed to disagree with those philosophers, theorists, and scientists that many would say were “the greats.” I learned from those around me through projects and discussions, some of which were very heated, but what is wrong with that. I became a more well rounded, better educated, and a more critical person through my discussions and dealings with different types of individuals, individuals who had been previously silenced in my educational world because their knowledge was not deemed worthy in my school. But why did I have to wait until I was in college to have these educational experiences? Why couldn’t I have had them in preschool? Butler would agree that the reason I didn’t was because it is too risky for those “elite” to have people think for themselves. If I had said the things that I did or gave the opinions I gave while I was in college during my K-12 education I would have been punished, just as Butler (1999) says we are punished for “doing” our gender “incorrectly” or against the status quo, in her book *Gender Trouble*.

With standardized testing, and NCLB in the larger context, there is always a right and a wrong, a correct way and an incorrect way, which is of course based on Eurocentric, patriarchal values. There is no interpretation, only the following of a set script, which ensures upper/middle class whites succeed and others fail and pushing those who do “fail” into trade schools or worse pushing them out of school altogether. Our country’s lawmakers and those specifically behind NCLB’s purpose would have to be to ensure our country has white, male CEOs and minority McDonald’s workers, if they are even lucky enough to get that job in these trying times.

I’m sure Butler would agree that NCLB has begun and encouraged others to believe in the propaganda that they have been trying to “sell” for quite some time now. In my opinion, just as the Nazis unleashed their propaganda against the Jews in order to demoralize them and bring their

status as seen by the rest of the world down to lower than animals; NCLB is trying to do the same thing to all those children who do not fit the “correct” profile—white, upper/middle class male. All of those who do believe that standardized tests are correcting the problem are inadvertently following and perpetuating the aforementioned propaganda—the NCLB propaganda.

Butler believes that we need to empower those who are being disserved under our current system. Instead of using what many deem the “filing cabinet system” where teachers impart wisdom, knowledge, or intelligence (whatever you want to call it) onto the students, thus mandating that they file it to memory so it can be spit out later on a test, we should actually help each other create knowledge. In this model teachers and students are all active participants, none no better than the rest. Again, they work together and learn from each other’s “realities.” They come into contact with “others” knowledge and grapple with it (which is part of the postformal definition used earlier) in order to interpret it for themselves in accordance with some other knowledge that they have previously interpreted and which has become a part of their own created identity. Together everyone will derive meanings of things in their own way, no right and no wrong. People just might even open their minds a bit.

Butler once spoke of an incident that happened to her in an interview she gave to Olson and Worsham (2000), which appeared in volume 20 of *The Journal of Composition Theory*, that speaks to this point of learning from each other. While she taught at Berkeley a student asked her if she was a lesbian. He asked it in such a way to make sure she knew that his definition and ideas of the word “lesbian” were negative. She did not let this deter her though. She saw this as an opportunity to educate him about her definition of the word “lesbian.” She replied that she was indeed a lesbian and she said it without shame or humiliation, which stunned the student because he was obviously looking for a shameful, humiliated reaction. Butler stated, “It wasn’t that I authored that term: I received the term and gave it back; I replayed it, reiterated it . . . It’s as if my interrogator were saying, ‘Hey, what do we do with the word *lesbian*? Shall we still use it?’ And I said ‘Yeah, let’s use it *this way*!’ Or it’s as if the interrogator hanging out the window were saying ‘Hey, do you think the word *lesbian* can only be used in a derogatory way on the street?’ And I said ‘No, it can be claimed on the street! Come join me!’ We were having a negotiation” (p. 760). This of course is a very risky conversation to have according to the higher powers that run our country’s educational system, but these are the kinds of conversations we need to be having, instead of having a mandated curriculum that makes children memorize “facts” (and I use that term loosely) and spit them out again on a test.

In education we need to discuss and learn from one another. We need to discuss those issues that have been deemed “taboo” in our culture, how else are we to move past them? How else are we to emancipate ourselves, change the power system, and thus change ourselves? This is real education, the type that will never occur under the NCLB legislation because it would disrupt the current macro system and that of course would just be too risky. Call me a dreamer, and maybe it is because I believe in Butler’s passion, but I believe that we can have an educational system that has a positive, lasting effect upon society instead of the negative one we are now perpetuating and endorsing with our current educational system’s legislation. I believe in an educational system that wipes out injustice and empowers those who are currently considered “others.” We know how and what to implement in order to make this dream a reality, Butler has put forth many ideas that would help us achieve our goal, we just need to do it now.

Just as Butler loves to ask questions, we need to begin to ask questions of our educational system. We need to look at what is working and what is not working, what is damaging our children and what is empowering our children, what can help us and our descendants have a bright future, and what is keeping all of us from that future which unless we change will never be attained.

CHAPTER 6

John Dewey

DONAL E. MULCAHY

In his lifetime, John Dewey not only achieved prominence in the fields of psychology, philosophy, and education but very significantly shaped new thinking in all three. As is evidenced by the attention given in current debate to issues of assessment and testing in schools, of the insights he shared, none are more contentious and of continuing relevance today than his work in the field of educational psychology.

INTRODUCTION

From quiet, humble beginnings, and even self-doubt, John Dewey's long and highly decorated career leaves him remembered as one of the greatest thinkers of the twentieth century and a towering figure, alongside Plato and Rousseau, in the field of education. Throughout, Dewey remained a man of admirable personal qualities: a devoted husband and father, a source of succor and comfort to society's marginalized, a defender of citizens' and workers' rights, and a person of modest demeanor who dealt as nobly with pain and loss in his personal life as he did with fame and recognition. In his own life he exemplified his philosophical convictions: that theory is meaningless without action, that reason and emotions are interwoven, and that knowledge and intelligence are to serve living. Ever the pragmatist, Dewey also believed philosophy should be used to serve both education and social betterment.

As an educational psychologist, Dewey found himself at odds with many of his contemporaries. He understood the human mind to be in need of cultivation. He believed that one's mind is constantly striving to make connections from lived and learned experiences to new encounters and information. Of utmost importance to one's ability to learn, thus, was the relevance of new information or concepts. In believing that we learn in order to live, Dewey believed that the child's interest or impulses must be the starting point for the school curriculum. If the child perceives no importance or purpose in the activity undertaken, the child will not only be less willing but less capable of learning from the activity. Relevance, purpose, and connection of the curriculum to the student's immediate daily life, Dewey felt, was crucial to a democratic and psychologically sound approach to school. In opposition to such an approach were the likes of G. Stanley Hall and David Snedden who saw school as serving the purpose of creating a unified,

monocultural, socially efficient school and society. He also stood in opposition to the ideas of the famous educational psychologist of the day, Edward L. Thorndike.

It could be said that the scientific approach to education, conceived and developed by Edward L. Thorndike, has had the most profound and lasting impact on educational psychology and the urban school. In contrast to Dewey's understanding that one makes connections from one experience to another, and his view of the need for an individual to internalize and construct understanding, Thorndike held that students learned through response to stimuli. His "laws of learning" assumed children would learn only in response to punishment and reward. He also believed that what was learned in one context was not transferable to another. The need, therefore, for subjects such as Latin and the mental discipline that it nurtured, no longer existed. The notion of mental discipline as a concept was seen as mythical. Thorndike went on to create IQ tests and aptitude tests and many more mental tests to separate and track the intelligent from the unintelligent and the academic from the worker.

In *Left Back* Diane Ravitch, notes that this "mental testing was the linchpin of the scientific movement in education." The standardized test that remains with us today came from this period, the first created by Thorndike himself and his colleagues at Teacher's College. While most schools across the country used the tests as a convenient and easy method of sorting students, many critics at the time saw the danger of their misuse. According to Ravitch these critics warned that "the 'norm' on the new tests might be mistaken for a standard, when it was only a statistical average of those who had taken the test." Today we see the legacy of mental testing. It is a legacy that has left many believing one's intelligence is fixed and measurable. Thorndike's many textbooks and the administrative Progressives' desire for vocational schooling and a centralized school system all helped engrain such a notion in the generations of teachers and university professors that followed. Psychologists turned to the simplicity of testing to track students in the service of society, rather than engage, as would Dewey, a deeper and more complex psychology that recognized the cognitive process as a whole.

These views would lead Dewey to make highly significant contributions to the fields of philosophy, psychology, and educational theory, as we shall see. No less important was their challenge to widely accepted psychological beliefs of the day and their implications for theory and practice of education. Of particular interest here is the manner in which Dewey sought to democratize the notion of intelligence itself by challenging these beliefs and the way in which they shaped schooling to perpetuate existing social and economic inequalities. This he would do by emphasizing the importance of lived experience as the basis for future learning and attempting to give to all students the opportunity to bring their particular experience to bear upon the social, economic, and political issues of their own day. There is no better way to come to an appreciation of the persistent optimism of Dewey's thought and his constructivist stance on these matters than by understanding his early career and his social activism.

FORMATIVE INFLUENCES

Born in Burlington Vermont in 1859, John Dewey began his professional career as a rather shy young schoolteacher after completing his graduation from the University of Vermont in 1879. Having spent some 3 years teaching, in 1882 he entered graduate studies in philosophy at the Johns Hopkins University in Baltimore. Following the completion of his PhD in 1884 he accepted a teaching position in the philosophy department at the University of Michigan. In 1894 he moved to the University of Chicago as a professor of philosophy and head of the Department of Philosophy, Psychology and Pedagogy. Dewey founded the Laboratory School at the University of Chicago where he worked closely with his wife. After a disagreement with the university authorities related to the running of the Laboratory School, in 1904, Dewey moved to the New

York City and the Department of Philosophy at Columbia University, where he remained until his retirement in 1929.

Though known to many in education as the “father of progressivism,” it was as a philosopher and psychologist that Dewey first gained widespread recognition. At Chicago and Columbia, and even following his retirement, however, he was deeply involved in a variety of social, educational, and political undertakings, becoming in many ways as much a social activist as a philosopher. While still in Chicago, alongside his innovative work with the Laboratory School at the University of Chicago, he was also active in a number of social causes. Perhaps most notable among these was his work with Jane Addams in conducting the affairs of Hull House. Hull House was a settlement house for those, including immigrants, dislocated by the rapid social, industrial, and technological changes of the era.

Following his move to New York, Dewey became a founder member and the first President of the American Association of University Professors in 1915. In addition, he was a charter member of the Teachers Union (TU) in New York City and later the New York Teachers Guild. Dewey was also active in the “outlawry of war” movement after the World War I. He held office in a number of civic organizations such as the American Civil Liberties Union, and he helped found the New School for Social Research. During the 1920s he lectured in countries around the world including China, Japan, Mexico, Russia, and Turkey. In 1937 he traveled to Mexico City while serving as the chairman of the commission of inquiry into the charges brought against Leon Trotsky.

To know of these varied practical involvements by Dewey aids in understanding a fundamental feature of his thought in philosophy, psychology, and education, namely, the interplay of thought and action, of experience and reflection, of science and philosophy, of education and psychology. It also explains why Dewey’s thought has come to be seen today as contributing to a serious critique of contemporary psychological theory in education. In educational terms these aspects of his approach were exemplified in the Laboratory School at Chicago. The teachers in the Laboratory School were charged with the continuous search for more effective ways of teaching. Here ideas and theories from psychology and philosophy were put into action to assess their effectiveness and reliability in improving schooling. Following observation and further reflection, refinements could be made and educational reform placed on a more scientific footing. This interplay between the scientific method and human cognition as Dewey perceived it is the central focus of his book, *How We Think*. In this book he is concerned with coming to understand the complete act of thought and he envisions the book as a sort of guide to understanding how we come to know. By contrast with the educational psychology of his time, Dewey strongly believed that individuals come to understand the world they encounter in a unique way. As Joe Kincheloe notes in *Rethinking Intelligence*, Dewey realized that only in relation to “lived context can individuals aspire to cognitive growth because higher thinking always references some lived context.” As a basic philosophical stance, he believed that to remove context was to remove relevance. School, therefore, must be of relevance to the child’s present day life, and school activities should connect to the everyday needs and actions of the students. For school to disconnect prior experience and daily life from the classroom, he believed, was to render school in many ways useless. His characterization of how we think also reveals how Dewey placed great faith in the capacity of human beings to think and reason.

Of all his practical involvements, however, Dewey’s interest in and association with the progressive education movement is the one that most impacted his work as an educational theorist. Although he was never an official spokesman for the movement, and on occasion felt compelled to point out the errors of its ways—most notably in the publication of *Experience and Education* in 1937—he was often associated in the public’s mind with many of the movement’s weaknesses and excesses. Interestingly, in the judgment of historians he is generally held in high esteem.

Indeed, the ideas and ideals of Dewey have been claimed by traditionalists and progressives alike, a testament, no doubt, to his insight into the educational, psychological process. This being so, it may be helpful to introduce Dewey's thoughts on education by way of an organizational framework that identifies a number of the key concepts that may be said to characterize progressive educational theorizing in general. In doing so it will assist in highlighting the distinguishing features his educational thought while drawing on his philosophical ideas to elaborate where necessary.

ORGANIZING PRINCIPLES OF PROGRESSIVE EDUCATION

In his book, *Issues and Alternatives in Educational Philosophy*, George R. Knight has identified the following six principles that can be used to characterize progressive educational thought: (1) The process of education finds its genesis and purpose in the child; (2) pupils are active rather than passive; (3) the teacher's role is that of advisor, guide, and fellow traveler rather than that of authoritarian classroom director; (4) the school is a microcosm of the larger society; (5) classroom activity should focus on problem solving rather than on artificial methods of teaching subject matter; (6) the social atmosphere of the school should be cooperative and democratic.

The process of education finds its genesis and purpose in the child. Although Dewey would never approve of efficiency models in education either in his own time or today, he did express the need for a social vision in schooling. Above all, he believed most clearly in the centering of the curriculum around the child. Where proponents of social efficiency like Philbrick said school was about the imposition of tasks whether or not the child liked it, Dewey argued that tasks without a known purpose reduce one's desire to complete that task successfully, and to fight a child's nature is counterproductive. He says, in *The School and Society*, that one should "begin with the child's ideas, impulses, and interests" and use those to direct the child's education.

For Dewey, the starting point in learning and in teaching is a problem felt by the child, as distinct from a need or desire felt by the teacher or the community to pass on information about a topic considered important to any particular body of knowledge. Knowledge, he wrote, was of no educational value in itself but only insofar as the child could benefit from interacting with it. This, of course, is in stark contrast to the view of educational psychologists such as Thorndike who believed knowledge transfer from one experience to another was not possible. As Dewey colorfully put it, the fact that we do not feed beefsteak to infants does not mean it has no nutritional value. It simply has none for infants who are not ready to consume it. Similarly with knowledge and the psychology of the student: in and of itself information is of no educational value until the child is ready to benefit from interacting with it. At the same time, he was keen to emphasize that responding to problems of inquiry encountered by the child could be the very means of bringing him or her into contact with important bodies of knowledge. Rejecting what he considered the faulty either/or dichotomy between child and subject matter, in *Experience and Education*. Dewey argues that a continuum could be constructed from the incomplete and unorganized experience of the child to the highly organized and abstract knowledge of the adult world represented by the teacher and housed in the academic disciplines. The teacher's job was to introduce this knowledge to the child in accordance with his or her interests and level of prior experience or knowledge—just as a child's diet is gradually strengthened as it grows and is capable of digesting more adult foods. This would be done through the "progressive organization of subject matter." Hence Dewey emphasizes on method.

Pupils are active rather than passive. Central to method in Dewey's view is the recognition that children are naturally active rather than passive. Writing of the nature of method in *My Pedagogic Creed*, according to Ronald F. Reed and Tony W. Johnson, Dewey said, "the active side precedes

the passive in the development of the child-nature . . . the neglect of this principle is the cause of a large part of the waste of time in school work. The child is thrown into a passive, receptive, or absorbing attitude. The conditions are such that he is not permitted to follow the law of his nature; the result is friction and waste.” The admonitions of Rousseau notwithstanding, when Dewey began his work in education, the 3 Rs and the classical liberal arts subjects dominated the curriculum, and both schooling in general and teaching in particular were highly regimented and authoritarian. Teachers were believed to possess knowledge and it was their job to ensure the child received that knowledge. As populations exploded in cities across the United States and schools were overwhelmed with new students, authoritarian and socially efficient schooling assumed its role as problem solver. In Dewey’s opinion, however, this approach ran counter to the learning process and the psychology of the child. Dewey searched for a new, alternative approach. He sought a curriculum that would put the primary focus on the child’s needs, and the natural dispositions, and ways of learning of the child rather than on predetermined sets of information that were disconnected from the everyday life of the child. Understanding that the educational psychology of his day was in support of the authoritative, behaviorist approach to school, he spoke out in opposition pointing out that such an approach did not encourage what he called “cognitive inventiveness” but rather worked to shut down the mind of the child.

Drawing on how he envisions a young child’s learning taking place naturally in the home—the natural psychology of the child—Dewey suggests that just as participation in household tasks becomes an occasion of learning in the home so also in the school setting can activities lead to learning. In the school, moreover, it could be done more systematically. In *The School and Society* Dewey points out that, once again, the starting point for learning would be the activities of the child: “The child is already intensely active, and the question of education is the question of taking hold of his activities, of giving them direction. Through direction, through organized use, they tend toward valuable results.” It then becomes the role of the teacher to guide such activities toward valuable ends.

The teacher’s role is that of advisor, guide, and fellow traveler rather than that of authoritarian classroom director. For Dewey, the teacher is a facilitator rather than an instructor. He or she must start with the child’s impulse and, as described in the excerpt above, guide the child through its own discovery and learning. Here he is careful to point out that engaging in mindless or merely indulgent activity by the child does not lead to worthwhile learning. He says that we must not “simply humor” a child’s interest. Rather, when confronted with “the world of hard conditions,” that interest or impulse must accommodate itself, “and there again come in the factors of discipline and knowledge.” With organization of equipment and materials the teacher can be a true guide and fellow traveler toward knowledge. This Dewey explains with reference to an example drawn from the Laboratory School where the teacher led children to explore and discover based on a lesson centered on the cooking of eggs. When one boy asked to follow a recipe the teacher responded by saying that doing so would not enable them to “understand the reasons for what they were doing.” Instead the class reviewed the constituents of the egg, how eggs compared to vegetables and meat, and then experimented with cooking the egg in different water temperatures. The point being, for a child simply follow directions—drop the egg in boiling water and take it out after three minutes—“is not educative.” To “recognize his own impulse” and come to understanding, is indeed educative.

While the teacher may be a guide, and must be responsive to the progressive organization of subject matter, the teacher must also be a follower: a follower of the child and, importantly, a follower of how the interests and concerns of the child are related to how he or she learns to become an independent learner and knower. For Dewey, this process followed a logically discernible course and was considered so important for the teacher that he presented the idea in a form specially written for teachers in *How We Think*. It is an aspect of Dewey’s educational

psychology that is closely linked to his general philosophy of pragmatism, and to its epistemology in particular. It also has implications for both the methodological and for the curricular aspects of education.

As was said earlier, in *How We Think* Dewey explains the process in which we come to know with reference to what he termed the complete act of thought (CAT). It is a psychological process that reflects the influence of scientific method and Dewey's view that living precedes knowing. That is to say, we do not live in order to know but rather know in order to live. This understanding again points up the importance of school activities being relevant to the child's present life for if new information does not relate to it, the child's mind perceives it as being of no use. The complete act of thought is set out by him as a five-stage process. In stage one a person encounters a problem in living that appears as an obstacle to be dealt with if progress is to be made. In the second stage, one moves beyond initial bafflement, identifies the particular obstacle or problem to be dealt with, and engages in an initial reflection upon the problem. Steps are taken to ascertain the circumstance in which the problem arose, its likely causes, and how it should be dealt with. In the third stage, there is reflection on the most likely answer or solution to the problem during which time the individual ponders a possible range of solutions and frames some tentative hypotheses. This leads to a fourth stage in which a hypothesis is chosen—following more prolonged and systematic reflection on the likely consequences of a given action. Stage five consists of putting to the test the chosen hypothesis in order to see if it holds up by solving the problem that has been encountered. If the hypothesis holds up—if it works—it is deemed to be true, or as Dewey preferred to put it in *How We Think*, the hypothesis is treated as “a warranted assertion.” If it does not work, it is not deemed to be true and another hypothesis must be chosen.

Classroom activity should focus on problem solving rather than on artificial methods of teaching subject matter. If the complete act of thought represents the way we think and come to know, it is important that teaching and learning in the classroom should follow a similar sequence and begin with problems encountered by the child. Drawing from Kilpatrick, Dewey developed the idea that problem solving was an integral part of a child-centered curriculum. Such an approach works with the natural psychology of the child. It develops social skills, cooperation, and discovery, and problems can be generated by the students to ensure relevance and purpose. It is for this reason that, for Dewey, teaching and learning should follow from the interests of the child and not be forced upon him or her. But even when knowledge is arrived upon in this way, he was careful to emphasize that knowledge or truth is not to be seen as fixed and permanent. He used the term warranted assertion to signify that something may be considered knowledge in so far as it works to solve a particular problem. But in different circumstances the same “knowledge” or “truth” may not be borne out. In keeping with this, and in opposition to the trend of educational psychology of the time, Dewey spoke not of education or learning as a preparation for life—as in something down the road—because he believed that children had lives to live in the here and now. Given that he recognized the unfixed nature of “knowledge,” the fixed nature of the school curriculum presented a second reason for not viewing education as a preparation for life. It follows that Dewey believed that learning how to learn was the more fundamental educational acquisition.

The school is a microcosm of the larger society; the social atmosphere of the school should be cooperative and democratic. “What nutrition and reproduction are to physiological life,” Dewey wrote in *Democracy and Education*, “education is to social life.” Up to this point the methodological aspects of Dewey's thought and their philosophical underpinnings have been dealt with. But for Dewey education and schooling were inextricably interwoven with the immediate community and the broader society. Education is the lifeblood of society, its source of sustenance and continuance; society, including its values, institutions, and practices, are to be the shapers of the young and hence of their education and learning. In advanced societies there are attendant

dangers in the latter. In particular, there is “the standing danger that the material of formal instruction will be merely the subject matter of the schools, isolated from the subject matter of life-experience. The permanent social interests are likely to be lost from view.” In *Rethinking Intelligence*, Kincheloe notes that Dewey maintained the educational psychology of his day was “antithetical to preparation for life in a democratic society.” He goes on to stress that Dewey was “especially critical of those psychologists and educators who argued that many students . . . were incapable of working with their minds.” Dewey believed that IQ testing, along with noninterpretive psychology in general, ran counter to the ideals of a democratic society. He saw its implementation as a means of maintaining the status quo.

Just as importantly for Dewey, as Perkinson points out in *Since Socrates*, “the emerging democratic society required more than simply taking the traditional education previously given to the few and extending it to the many. . . . A democratic social order stood in need of a new kind of education, a democratic education.” It was such an education that Dewey envisioned for the Laboratory School in Chicago, one where children learned from living and working with and for one another in daily tasks. In this way they learned not only subject matter but also what it meant to share and to come together to form community.

FIFTY YEARS LATER

In contemporary discussion, John Dewey could most obviously be associated with educational psychologists in the constructivist camp and even with critical pedagogy. As constructivists believe in the ongoing assimilation of new information into one’s being, Dewey makes clear, in *My Pedagogic Creed*, that he too believed that education was “a continuing reconstruction of experience.” The constructivist psychology teaches that the process of learning is an internal process unique to the individual. This belief runs counter to the behaviorist belief that persisted in schools of Dewey’s time and persists in schools today. Just as he recognized that viewing knowledge as existing outside the individual and applicable outside of context is folly, constructivists today resist the notion that testing knowledge void of context is somehow relevant. He assumed each child came with understandings and knowledge based on their lived experiences. These experiences, “the child’s own social activities,” as Dewey put it according to Diane Ravitch in her book *Left Back*, should be understood as the basis for how the child will receive and assimilate new information. In keeping with this belief in the individual construction of understanding and knowledge, and in the efficacy of “hands-on” discovery learning, Dewey promoted projects and experiments over a preset curriculum.

Critical pedagogy also draws on Dewey’s educational psychology. Dewey believed, for example, as do those in critical pedagogy, that relevance to the child’s life is of vital importance. He said in *My Pedagogic Creed* that school “must represent present life.” In addition, the belief that knowledge is not unchanging is common to both Dewey and critical pedagogy. Just as critical pedagogy speaks of the inseparability of the knower and the known, of how knowledge is not existent in space but only exists as a part of one’s psyche, he sees knowledge as always changing and only valid in relation to the individual and how it relates to his or her life experience. Furthermore, as does the critical pedagogue, Dewey believes that school is responsible for producing socially aware, democratic citizens. In *The School and Society*, he makes clear that school needs to provide a socially guided experience that prepares individuals for changing times and so should be “an active community . . . an embryonic society, instead of a place set apart in which to learn lessons.”

In the same way that Dewey rejected the notion that some students were unable to work their minds and recognized the use of tracking as a tool to suppress the economically deprived and otherwise marginalized citizens, critical pedagogy also rejects blind adherence to so-called

scientific truth. In moving beyond the positivistic belief that meeting certain criteria (especially when decontextualized and overlooking social and economic factors) is a valid form of assessment, critical pedagogy recognizes that social, political, and economic contexts, one's life experience, and an infinite number of other factors that influence our unique perspective, cannot be overlooked. Dewey's educational psychology took account of the impact such factors have on the child's mind and predisposition to learning. When Dewey spoke of the need to develop social intelligence, it was the need to account for this variety of contexts and conditions that he was emphasizing. These are contexts and conditions largely overlooked in the standardized testing movement heralded by the behaviorist psychology of Thorndike and others.

FURTHER READINGS

- Cremin, Lawrence A. (1957). "The Progressive Movement in American Education: A Perspective." *Harvard Educational Review XXVII*, 4: 251–270.
- Dewey, John (1956). *The School and Society*. Chicago: The University of Chicago Press.
- Dewey, John (1937/1963). *Experience and Education*. New York: Collier.
- Dewey, John (1996). *Democracy and Education*. New York: The Free Press.
- Dewey, John (1933). *How We Think*. Boston: D.C. Heath.
- Garrison, Jim (1999). John Dewey. In *Encyclopedia of Philosophy of Education*, http://www.vusst.hr/ENCYCLOPAEDIA/john_dewey.htm.
- Knight, George R. (1989). *Issues and Alternatives in Educational Philosophy*. Berrien Springs, MI: Andrews University Press.
- Perkinson, Henry J. (1980). *Since Socrates*. New York: Longman.
- Ravitch, Diane (2001). *Left Back: A Century of Battles Over School Reform*. New York: Touchstone.
- Reed, Ronald F. (2000). Tony W. Johnson. In *Philosophical Documents in Education*. New York: Longman.
- Tyack, David B. (1974). *The One Best System: A History of American Urban Education*. Cambridge, MA: Harvard University Press.

CHAPTER 7

Erik Erikson

JAMES MOONEY

INTRODUCTION

Erik Erikson was one of the most influential minds of the twentieth century. Philosophically rooted in the psychoanalytic theories of Sigmund Freud, who he knew and with whom he worked, Erikson's work in the field of psychology, particularly the areas of identity development, psychohistory, and psychosocial development, were groundbreaking and continue to have relevance in the study of human psychological development. This chapter will give a biographical account of Erikson's life, as well as describe the important intellectual contributions he made to his field and to educational psychology.

BIOGRAPHICAL INFORMATION

Erik Erikson was born in Frankfurt, Germany on June 15, 1902. He was raised as Erik Homburger, having been given his stepfather's surname. Erikson completed school at the age of 18 and spent a year traveling throughout Europe, reading, writing, and sketching. He briefly attended two art schools, the Badische Landeskunstschule in Karlsruhe and the Kunst-Akademie in Munich. His artistic works included huge woodcuts that were displayed in an exhibition in Munich's Glaspalast (Coles, 1970).

After two years in Munich, Erikson moved to Florence, where he befriended an American writer (and later child psychoanalyst) named Peter Blos. In 1927, Blos opened a school in Vienna for the children of Dorothy Burlingame and other Americans living in Vienna. He invited Erikson to join him at the school as an art and history teacher. This move would first usher Erikson into the fields of education and psychology. Mrs. Burlingame was very close friends with Anna Freud, child analyst and daughter of Sigmund Freud, and it was through this association that Erikson began to work with Sigmund and Anna Freud in the field of psychoanalysis (Coles, 1970).

From 1927 to 1933, Erikson lived in Vienna, teaching art at his friend Peter Blos's school, working with Anna Freud and himself being analyzed by her, and studying clinical psychoanalysis with August Aichhorn, Edward Bibring, Helene Deutsche, Heinz Hartmann, and Ernest Kris at

the Vienna Psychoanalytic Society. He also studied the Montessori philosophy of education and graduated from the Lehrerinnenverein, the Montessori teachers' association (Coles, 1970).

Blos and Erikson's school in Vienna balanced a traditional teacher-centered model with a more progressive form of education that could later be described in the field of educational psychology as Constructivism. The students were given a greater degree of freedom to determine what and how they wanted to learn. Hands-on activities and projects were encouraged, and the students selected what aspects of history, geography, mythology, and the arts that they were to learn, and how to explore these concepts and demonstrate their mastery of the material (Coles, 1970).

Upon the completion of his studies at the Vienna Psychoanalytical Society in 1933, Erikson was granted the title of full member of the Society. He and his wife, concerned about the rising political turmoil in Germany, Russia, and Italy, decided to leave Vienna and eventually settled in Cambridge, Massachusetts. Despite the fact that Erikson was not a doctor and had no degree, his uncommon and much sought-after training as an adult and child psychoanalyst landed him positions at the Harvard Medical School and Massachusetts General Hospital. His studies at Harvard included a study on the role of play in human development and self-expression (Coles, 1970).

In 1936 Erikson left Harvard to become an instructor and shortly thereafter an assistant professor in the Yale Medical School. There, he continued his analysis of troubled children. In 1939, Erikson moved his family once again—this time to California, where he resumed analyzing children and taught at the University of California at Berkeley. His research and work in California, including his study of the Yurok Indians, culminated in the 1950 publication of *Childhood and Society*, one of his most important and well-known works. It was also during this time that Erik Homberger became an American citizen and officially changed his name to Erik Erikson (Coles, 1970).

Erikson resigned from Berkeley on June 1, 1950, and returned to Massachusetts to work at the Austen Riggs Center in Stockbridge. It was here that Erikson developed his theories of adult ego and identity development. Erikson also became interested in the relationship between the studies of history and psychology, and in 1958 he published another major work, *Young Man Luther*. In this book, Erikson studied the childhood of the fifteenth-century Christian Reformer and how his upbringing effected his adulthood (Coles, 1970).

Erikson's other major works include *Dimensions of a New Identity*, *Life History and the Historical Moment*, *Toys and Reasons*, *Identity and the Life Cycle*, *The Life Cycle Completed*, *Vital Involvement in Old Age* (with Joan M. Erikson and Helen Q. Kivnick), and *A Way of Looking at Things: Selected Papers from 1930 to 1980* (edited by Stephen Schlein). Erikson died in 1994.

ERIKSON'S CONTRIBUTIONS TO THE FIELD OF PSYCHOANALYSIS AND HIS INFLUENCE ON EDUCATIONAL PSYCHOLOGY

Issues of Identity

Erik Erikson contributed significantly to the field of psychoanalysis and was considered one of the great intellectuals of his time. He unwittingly brought the terms "identity" and "identity crisis" into common use. Because of the enormous impact that education has on each child's life, educators must be aware of the ongoing struggle that children face to develop a strong and positive sense of "identity." Erikson described "identity" as something that is developed in a person from the time of the person's birth, and that reaches its "crisis" point during adolescence. Identity provides a connection between one's past and one's future. The "identity crisis" of adolescence is crucial for a complete identity development because it is during that time that the individual establishes not only a personal identity (or self-knowledge), but also determines the individual's place within culture and society (Evans, 1967).

It is important to note that in the context of the concept of “identity crisis,” Erikson described the word “crisis” not as an impending disaster, but rather as a critical developmental turning point. It is during an “identity crisis” that an individual’s development can and must turn in one direction or another, to determine who that person is to become. Educators must recognize that being violent and angry or depressed and withdrawn during an “identity crisis” is not necessarily a sign that an adolescent is mentally or emotionally disturbed; rather, these behaviors may be a normal part of the developmental process (Erikson, 1968, pp. 16–17).

Psychohistory

Erikson also broke new ground in the field of psychohistory with his analyses of the lives of political and spiritual leaders Martin Luther and Mahatma Gandhi. “The main object of psycho-historical investigations,” said Erikson, “is to try to relate the particular identity-needs of a given leader to the ‘typical’ identity needs of his historical times” (Evans, 1967, p. 66). In other words, Erikson’s psycho-historical works, in combining the fields of history and psychology, examined how the childhood and young adulthood experiences of Luther and Gandhi and their own senses of identity matched the overall identities of the groups of people they led in their respective times and places.

During his investigations in psychohistory, Erikson developed the notion of “moratorium.” He noticed that many men who later in life would become great historical figures took a kind of break from life during their adolescent or young adult years. Erikson described the moratorium as delay, a gap between the end of identification as a child and the beginning of identification as an adult. Erikson himself took a moratorium of sorts starting at the age of 18, wandering Europe as an itinerant artist.

In today’s society, the college years are meant to serve as the bridge between childhood and adulthood. However, for many college-age people, the pressures and demands of traditional schooling fail to provide a break or “moratorium” that allows for positive identity development. Perhaps that is why so many young adults during this time drop out of school, enter therapy, or commit suicide. In relation to Erikson’s work, depending upon each person’s individual needs, a one or two year “moratorium” between high school and college may be a healthy and beneficial step for ensuring later success and happiness.

Erikson’s work in the area of psychohistory makes clear that educators must recognize that the identity-needs of any individual child are greatly influenced by the social and historical context in which the child is living. Erikson (1968) pointed out that for today’s children, technology is playing a greater and greater role in their lives. All children must negotiate positive relationships with the technology surrounding them, because part of a sense of competence that is so crucial to positive identity formation is technological competence.

Also it is critical for educators to acknowledge and understand how race or culture impacts a child’s sense of identity within the larger society. Erikson (1968) wrote, “Where he finds out immediately, however, that the color of his skin or the background of his parents rather than his wish and will to learn are the factors that decide his worth as a pupil or apprentice, the human propensity for feeling unworthy may be fatefully aggravated as a determinant of character development” (p. 124).

Psychosocial Identity Theory

Perhaps the most notable and well known of Erikson’s contributions to the field of psychoanalysis is his adaptation and expansion of Freud’s five psychosexual stages of human development into his eight psychosocial stages of human development. Erikson differed from Freud in that he looked at human development from a broader cultural and societal viewpoint, and he proposed that human development does not end with physical maturation, that is, at the end of puberty.

Rather, adults also develop and go through stages, with each stage having its own crisis that must be resolved.

The crisis Erikson identified in each stage is a conflict between the development of a positive characteristic and its opposing negative characteristic, such as trust versus mistrust. While the more positive trait is certainly desirable, Erikson warned that a balance must be struck. While autonomy is certainly preferable to shame and doubt, children must learn about their own limitations, and they must develop a realistic understanding of the world and their place in it. The successful negotiation of each stage leads to the acquisition of what Erikson calls a virtue or strength, such as hope or willpower (Evans, 1967).

Erikson's stages are epigenetic in nature, meaning that each stage builds upon the previous. For example, a child must develop trust in the first stage in order to be successful in becoming self-willed in the second. Identity formation begins during the first stage, builds and climaxes in the "identity crisis" of adolescence, and continues throughout adulthood. Erikson noted that not only are the stages sequential, but hierarchical as well. He also noted that the ages associated with the stages are rough estimates and that the stages of each individual will vary in duration and intensity (Evans, 1967, pp. 21–22).

Table 7.1 shows the eight stages of human development as defined by Erikson. The quotes were taken from an interview with Erik Erikson while he was a professor at Harvard (Evans, 1967).

In 1997, 3 years after Erik Erikson's death, Erikson's wife Joan Erikson published an extended version of his book *The Life Cycle Completed*. Joan Erikson proposed a ninth stage that occurs when people reach their 80s and 90s. While she did not offer one particular crisis or set of conflicting characteristics for this ninth stage, she did address each of the conflicts of each of the first eight stages and the related characteristics and how each of these are relevant and recurring in the ninth stage.

Particularly relevant to the field of educational psychology are Erikson's theories regarding the latent, or school-age, stage of psychosocial development. It is during this stage that teachers and school take on a central role in a child's life and the child's development of a sense of identity. Depending upon the child's success in navigating the crisis of this stage, the child can enter adolescence with a strong sense of competence, or feelings of ineffectualness and inferiority that can plague the child for the rest of the child's life. In order for a child to achieve a sense of competence, he or she must learn to be industrious. It is a strong psychological urge of children in the school-age stage to develop a sense of industry, of being able to create and to carry a project through to a successful conclusion (Erikson, 1968).

Erikson (1968) examined two models of American education, traditional and constructivist, and explored the advantages and pitfalls of each. A more traditional model of education offers students a needed structure, a sense of direction, and a purpose; however, Erikson noted "an unnecessary and costly self-restraint" can arise from this form of education and can inhibit a child's natural desire to learn, as well as the child's own creativity, imagination, and playfulness (Erikson, 1968, p. 126). A more unstructured approach to education, on the other hand, can cause children to lack basic skills and knowledge necessary for successful participation in society, and can create uncertainty and a lack of confidence in children's learning experiences (Erikson, 1968).

SELECTED MAJOR WORKS

Childhood and Society (1950)

Erikson's first book, *Childhood and Society* is also one of his most well known and highly respected. It is divided into four parts: Part One describes and illustrates his case study

Table 7.1
Erikson's Eight Stages of Human Development

Stage	Ages	Virtue/Strength to be Acquired	In Erikson's Words
Sensory-Oral Stage: Basic trust vs. Basic mistrust	0–1 year	Hope	"A certain ratio of trust and mistrust in our basic social attitude is the critical factor. When we enter a situation, we must be able to differentiate how much we can trust and how much we must mistrust" (Evans, 1967, p. 15).
Muscular-Anal Stage: Autonomy vs. Shame and doubt	2–3 years	Willpower	"Just when a child has learned to trust his mother and to trust the world, he must become self-willed and must take chances with his trust in order to see what he . . . can will" (Evans, 1967, p. 19).
Locomotor-Genital Stage: Initiative vs. Guilt	3–6 years	Purpose	"It is during this period that it becomes incumbent upon the child to repress or redirect many fantasies which developed earlier in life. He begins to learn that he must work for things . . ." (Evans, 1967, p. 25).
Latency Stage: Industry vs. Inferiority	7–12 years or so	Competence	"Every culture at this stage offers training. . . [T]he word "industry" . . . means industriousness, being busy with something, learning to complete something, doing a job" (Evans, 1967, pp. 27–28).
Adolescent Stage: Identity vs. Role diffusion	adolescence, 12–18 years or so	Fidelity	"We have almost an instinct for fidelity—meaning that when you reach a certain age you can and must learn to be faithful to some ideological view" (Evans, 1967, p. 30).
Young Adulthood Stage: Intimacy vs. Isolation	20–30 years or so	Love	"Intimacy is really the ability to fuse your identity with somebody else's without fear that you're going to lose something yourself" (Evans, 1967, p. 48).
Adulthood Stage: Generativity vs. Stagnation	30–50 years or so	Care	"At this stage one begins to take one's place in society, and to help in the development and perfection of whatever it produces" (Evans, 1967, p. 50).
Old Age and Maturity Stage: Ego integrity vs. Despair	50s and beyond	Wisdom	"Only in old age can true wisdom develop . . . some wisdom must mature, if only in the sense that the old person comes to appreciate and to represent something of the 'wisdom of the ages' or plain folk 'wit'" (Evans, 1967, p. 54).

methodology; Part Two describes his work done with the Sioux and Yurok Indian tribes; Part Three describes his theories on ego development and introduces his eight stages of human development; and Part Four describes how a person's sense of identity evolves during youth.

Young Man Luther (1958)

The first of Erikson's two psycho-historical books, *Young Man Luther* examined the youth of Protestant Reformer Martin Luther. This book broke new ground by fully engaging the methodologies of psychoanalysis and historical biography.

Identity: Youth and Crisis (1968)

Identity: Youth and Crisis is a collection of essays that Erikson wrote in the 1950s and 1960s. Essay (chapter) titles include "The Life Cycle: Epigenesis of Identity," "Identity Confusion in Life History and Case History," and "Race and the Wider Identity." In this book, Erikson addressed the connections between psychosocial development and education.

Gandhi's Truth (1969)

Erik Erikson won a Pulitzer Prize and a National Book Award for his work on *Gandhi's Truth*, a psycho-historical look at the life and struggles of Mahatma Gandhi. It is "an account of a search for 'the historical presence of Mahatma Gandhi and for the meaning of what he called Truth'; a search by a Western man for the enduring side of a great Indian leader's character; [and] a search by a psychoanalyst for a particular person's ethical spirit" (Coles, 1970, p. 293).

CONCLUSION

Erik Erikson's long life was filled with rigorous scholarly research. He spent his life reading, writing, teaching, and examining the psychological development of human beings. Not least among Erikson's achievements was the development of his epigenetic stages of human psychosocial development. Erikson's theories on identity-formation and psychosocial development, as well as his work in the field of psychohistory, offer insights for educators and students of educational psychology. Through attempting to understand the natural psychological development of human beings as outlined in Erikson's theories, practitioners can develop philosophies and strategies to meet the needs of their students and aid in helping them develop competence and positive senses of identity.

REFERENCES

- Coles, R. (1970). *Erik H. Erikson: The Growth of His Work*. Boston: Little, Brown and Company.
Erikson, E. (1968). *Identity: Youth and Crisis*. New York: W. W. Norton & Company.
Evans, R. I. (1967). *Dialogue with Erik Erikson*. New York: Harper & Row.

CHAPTER 8

Howard Gardner

JOE L. KINCHELOE AND TODD FELTMAN

Howard Gardner has been a key figure in educational psychology over the last three decades. Gardner was born on July 11, 1943, in Scranton, Pennsylvania, to Jewish parents who escaped Nuremberg in 1938. Gardener's parents wanted him to attend high school at Phillips Academy in Andover, Massachusetts, but Gardner chose the Wyoming Seminary, a preparatory school in Kingston, Pennsylvania. After a successful stint at Wyoming, Gardner was admitted to Harvard University prepared to study history and eventually go into law. As fate would have it, Gardner worked at Harvard with well-known psychologists Erik Erikson and Jerome Bruner. In 1965, Gardner graduated *summa cum laude* and the next year began work in the university's doctoral program in psychology.

While pursuing his doctoral work Gardner became involved with the Project Zero research team on art education—an affiliation that continues into the twenty-first century. Project Zero gave Gardner an opportunity to expand his interest in cognitive, developmental, and neuropsychology. After completing his doctorate Gardner continued to work at Harvard. Currently, he is the Hobbs Professor of Cognition and Education at the Harvard Graduate School in Education and an adjunct professor of neurology at the Boston University School of Medicine. He now codirects Project Zero.

Gardner's theory of multiple intelligences (MI)—made popular by his 1983 book *Frames of Mind*—has exerted a profound influence on cognitive studies, educational practice, and the field of educational psychology in general. Rejecting the notion of a single manifestation of intelligence long promoted by psychometrians, Gardner maintained that people possessed MI. In *Frames of Mind*, he posited seven different intelligences—in the 1990s he added an eighth one. The following is a delineation of Gardner's eight intelligences:

- Linguistic intelligence involves a facility with the use of spoken and written language. Individuals who possess this particular intelligence, Gardner argues, are able to learn foreign language(s) more easily. Such individuals use language as a way to enhance their memory of information. In this linguistic context Gardner maintains that writers, poets, lawyers, and public speakers as those people who possess linguistic intelligence. This particular intelligence, of course, is prized in the classroom environment.

- Logical-mathematical intelligence deals with the ability to analyze problems using logic, perform operations in mathematics and science. According to Gardner, people with this particular intelligence possess the capacity to reason using deduction, think sequentially and linearly, and discern patterns in data. Engineers, architects, scientists, and mathematicians, Gardner posits, tend to possess this mode of intelligence—a form of cognition, like linguistic intelligence, that is highly valued in the traditional classroom.
- Musical intelligence involves the ability to perform, write, and appreciate music. According to Gardner one who possesses musical intelligence is able to identify and create musical pitches, tones, and rhythms. Obviously, musicians and composers would generally be the people who possess this type of intelligence.
- Bodily kinesthetic intelligence involves the capacity to use the body to perform physical feats that often involve solving problems. In this context individuals are able to coordinate mind with bodily movement. Gardner sees great athletes, artists, and artisans as individuals often endowed with bodily kinesthetic intelligence.
- Visual-spatial intelligence, according to Gardner, involves the ability to fashion a mental representation of the spatial realm and to employ that construct to execute valuable endeavors. Gardner contends that artists, architects, engineers, and surgeons typically possess high levels of visual-spatial intelligence. Gardner's construction of this intelligence involves the capacity to discern the visual world in an "accurate" manner, to interpret such perceptions according to one's experience in the world, and to reconstruct various dimensions of such perceptions far away from the original object of perception.
- Interpersonal intelligence—one of Gardner's two personal intelligences—involves the ability to understand and act in response to the motives of other people. Individuals who possess this intelligence, Gardner believes, are able to work successfully with diverse people. Educators need a highly developed interpersonal intelligence, as well as do businesspeople, counselors, and leaders in religion and politics.
- Intrapersonal intelligence—Gardner's second personal intelligence—is focused on self-knowledge and self-understanding. An individual with great intrapersonal intelligence is aware of and constantly monitors how one's emotions affect his or her well-being and his or her relations with the world. According to Gardner intrapersonal intelligence is a central dimension in the effort to regulate one's life.
- Naturalistic intelligence is the ability of individuals to situate themselves in the natural environment. Such "situating," Gardner argues, involves the ability to recognize and classify the flora and fauna of a region, to recognize a species. The central manifestation of naturalist intelligence from Gardner's perspective involves this ability to categorize and classify. Individuals who possess naturalist intelligence often move into the fields of biology, ornithology, and agriculture. Also, Gardner adds, those who hunt and cook often exhibit this form of intelligence.

In addition to these eight intelligences, Gardner and his colleagues have proposed two other possible intelligences. These include spiritual intelligence and existential intelligence. In the last half of the first decade of the twenty-first century Gardner feels that spiritual and existential intelligence should not be added to the list because innate complexities of these domains. Of course, many would argue that all of the intelligences fall into the same complex matrix. Numerous educational psychologists and scholars from other fields believe that Gardner made a critical categorical error in his original research when he decided to call these domains "intelligences" and not another, less historically inscribed term.

Ever confident, Gardner boldly asserts that all these eight intelligences are essential for living a fulfilling life. Therefore, in MI theory it is important, especially in the elementary school years, that teachers teach to all these intelligences. Gardner insists that his theory of teaching with the application of various intelligences is connected to the child-centered learning philosophy of John Dewey. In this context he maintains that everyone is capable of seeing the world through the lens of the eight intelligences. Via his cognitive research Gardner reports that he empirically proved that students have different types of minds and as a result they learn, remember, act, and comprehend in diverse ways. Thus, the Deweyan connection emerges, as Gardner pushes schools to move away from exclusive reliance on linguistic and logical intelligences. There is no

question that this linguistic-logical combination is important for mastering the agenda of school, he contends, but educators have gone too far in ignoring the other intelligences.

As teachers de-emphasize the other six intelligences, Gardner argues that we relegate numerous students to the domain of “low ability.” A multiple-intelligence grounded curriculum, he promises, would preclude such relegation and help all students succeed. Thus, Gardner’s educational psychology insists that educational leaders should examine the eight MI and make sure they are implemented in the general curriculum and the everyday life of the classroom. Students could benefit from an awareness of the intelligences they possess, how they operate in their learning, and how such an awareness might inform career choices.

When many of us concerned with the postformal issues of cultivating the intellect while concurrently working for social, educational, and economic justice first read Gardner’s theory of MI in 1983, we were profoundly impressed by the challenge he issued to traditional educational psychology, psychometrics in particular. We believed that Gardner stood with us in our efforts to develop psychological and educational approaches that facilitated the inclusion of students from marginalized groups whose talents and capabilities had been mismeasured by traditional psychological instruments. Gardner’s theory appeared to assume a wider spectrum of human abilities that were for various reasons excluded from the domain of educational psychology and the definition of intelligence. We taught MI theory to our students in hopes of exposing and overcoming some of the ways particular students were hurt by these exclusionary disciplinary practices. As Gardner has continued to develop his theory over the last twenty years, those of us associated with postformalism and critical pedagogy grew increasingly uncomfortable with many of his assertions and many of the dimensions he excluded from his work. Simply put, we did not believe that MI theory was succeeding at what it claimed as its cardinal goal: helping students from diverse backgrounds and cognitive orientations succeed in school.

Gardner’s *Frames of Mind* was enthusiastically received by sectors of a public intuitively unhappy with psychometrics’ technocratic and rationalistic perspective on human ability. Within the narrow boundaries of the American culture of scholarship, Gardner became a celebrity. Teachers emerging from a humanistic culture of caring and helping were particularly taken with the young (forty is young in the world of academia!) scholar, many traveling all over the country to hear him speak. Multiple intelligences, such teachers maintained, provided them with a theoretical grounding to justify a pedagogy sensitive to individual differences and committed to equity. Though Gardner consistently denied the political dimension of MI, liberal teachers and teacher educators viewed it as a force to democratize intelligence. Living in a Eurocentric world, many interpreted Gardner to be arguing that cognitive gifts are more equally dispersed throughout diverse cultural populations than mainstream psychology believed. They took MI as a challenge to an inequitable system.

Frames of Mind struck all the right chords:

- Learning is culturally situated.
- Different communities value different forms of intelligence.
- Cognitive development is complex, not simply a linear cause–effect process.
- Creativity is an important dimension of intelligence.
- Psychometrics does not measure all aspects of human ability.
- Teaching grounded on psychometrically inspired standardized testing is often deemed irrelevant and trivial by students.

Numerous teachers, students, parents, everyday citizens, and some educational psychologists deemed these ideas important. And, we agree, they are—especially in light of the positivist

reductionism and standardization of the twenty-first-century educational standards movement, No Child Left Behind, and its cousins proliferating throughout numerous Western and Western-influenced societies. As with most popular theories, the time was right for Gardner's unveiling of MI theory. Multiple intelligences resonated with numerous progressive impulses that had yet to retreat in the face of the right-wing educational onslaught coalescing in the early 1980s.

Initially, most of the critiques of MI emerged from more conservative analysts, who argued that theory shifted educational priorities away from development of logic in the process producing a trivialized, touchy-feely mode of education. In *Multiple Intelligences Reconsidered* (2004) Joe Kincheloe and a group of well-respected critical researchers provided a progressive/postformal critique of the theory, maintaining that despite all its democratic promise Gardner's theory has not met the expectations of its devotees. The reasons for this failure are multidimensional and complex but often involve many of the basic postformal concerns with educational psychology in general. One aspect of its failure comes from Gardner's inability to grasp the social, cultural, and political forces that helped shape the initial reception of MI. Even when he has addressed what he describes as a "dis-ease" in American society, Gardner fails to historicize the concept in a way that provides him a broader perspective on the fascinating relationship between American sociocultural, political, and epistemological dynamics of the last two decades and MI theory.

Postformalists argue that Gardner is entangled in this sociocultural, political, and epistemological web whether he wants to be or not. Not so, he maintains, contending that his is a psychological and pedagogical position—not a social, cultural, political, or epistemological one. In what critical analysts view as naïve, decontextualized, and psychologized modus operandi, Gardner asserts that the psychological and pedagogical domains are separate from all these other denominators. Grounded in cultural psychological ways of seeing and social theoretical lenses, postformalists maintain that such an assertion constitutes a profound analytical error on Gardner's part. The epistemology (ways of knowing) traditionally employed by Gardner's psychometric predecessors and contemporaries is the epistemology of MI. As Richard Cary puts it in his chapter on visual-spatial intelligence in *Multiple Intelligences Reconsidered*: "Although MI theory is more appealing and democratic at first glance, it remains a stepchild of positivism's exclusively quantitative methodologies and of grand narrative psychology." Indeed, there is less difference between Gardner and the psychological/educational psychological establishment than we first believed. As in so many similar domains, Gardner has been unwilling to criticize the power wielders, the gatekeepers of the psychological castle.

In her important chapter in *Multiple Intelligences Reconsidered*, Kathleen Berry extends this point:

[Gardner's] works, as scholarly and beguilingly penned as they are, have seduced the field of education into yet another Western logo-centric, psychological categorization. Under the guise of educational/school reform, his theory of MI has spawned a host of other supportive theories, practices, disciples, and critics. . . . Once labeled, however, whether in the singular or the plural, intelligence acts as an economic, social, political, and cultural passport for some and for others, a cage. . . .

Obviously, many scholars within the postformal universe are especially concerned with the democratic and justice-related dimensions portended in Gardner's early articulation of MI. Taking our cue from the concerns of many people of color, the poor, colonized individuals, and proponents of feminist theory, we raise questions about the tacit assumptions of MI and its implications for both education and the social domain. In the spirit of postformalism we raise questions about knowledge production and power in the psychological domain in general and in MI. Postformalism is especially interested in modes of cognition that recognize the complicity of various academic discourses, psychology in particular, in the justification and maintenance of an inequitable status

quo and an ecological and cosmological alienation from the planet and universe in which we reside. As Marla Morris puts it in her chapter in *Multiple Intelligences Reconsidered*:

If we are to talk about a naturalistic intelligence, we need to understand that intelligence does not mean anything goes, just because a scientist works with or in nature. Further, one need not be a farmer or a biologist to develop a naturalistic intelligence. On this point, I think Gardner is too literal. I argue that an ecological sensibility springs from a sensitive, ethical, and holistic understanding of the complexities of human situatedness in the ecosphere.

Gardner seems either unable or unwilling to trace the relationship of MI to these issues.

Indeed, what postformalists and any other cognitive theorists designate as intelligence and aptitude produces specific consequences. The important difference between postformalism and Gardner's educational psychology involves postformalists' admission to such ramifications and their subsequent efforts to shape them as democratically, inclusively, and self-consciously as possible. Gardner, concurrently, dismisses the existence of such political and moral consequences and clings to the claim of scientific neutrality.

Despite all of these concerns we still believe there is value in Gardner's work. Postformalists call on their colleagues to seek the kinetic potential of Gardner's ideas in the sociopsychological and educational domain. In this context we seek to retain the original democratic optimism of Gardner's theories, confront him and his many sympathizers with powerful paradigmatic insights refined over the last 25 years, and move the conversation about MI forward with a vision of a complex, rigorous, and transformative pedagogy. In particular postformalists want to engage Gardner in a conversation about power, cognition, schooling, and the future of educational psychology. We hope he will work with us in a synergistic, mutually respectful conversation.

Power is omnipresent in both its oppressive and productive forms. In its oppressive articulation postformalists trace its effects in educational psychology. In a world where information produced for schools and media-constructed knowledge for public consumption are misleading, ideologically refracted, edited for right-wing political effect, and often outright lies, the notion of learning to become a scholar takes on profound political meanings—whether we like it or not. Do we merely “adjust” students to the misrepresentations of dominant power or do we help them develop a “power literacy” that moves them to become courageous democratic citizens? While the stakes were already high, dominant power wielders have upped the ideological ante in the twenty-first century.

In raising these concerns we are not arguing that Gardner has supported this type of ideological management. We are contending that Gardner has fallen prey to false dichotomies in his work separating the political from the psychological and educational. Indeed, he has been unwilling to address the relationships connecting dominant power, psychological theory, and teaching and learning. In this era of U.S. empire building and the effects of transnational capital and the knowledges they produce, such political decontextualization can be dangerous. This fragmentation has exerted a profound influence on the character and value of Gardner's work. Like other educational psychological theories Gardner's MI fail (or refuse) to consider such dynamics in the course of their development and application.

The power concerns emphasized here played little role in Gardner's previously mentioned educational experiences in developmental and neuropsychology at Harvard.

Such an educational and research background protected Gardner from the emerging concerns with the relationship between psychological knowledge production and power. In writing about motivation and learning in *Frames of Mind*, for example, he addresses the development of a general, universal theory of motivation. Such theorizing takes place outside the consideration of motivation's contextual, cultural, and power-related specificity. A student, for example, from

a poor home in the southern Appalachian mountains in the United States whose parents and extended family possess little formal education will be situated very differently in relation to educational motivation than an upper-middle-class child of parents with advanced degrees. The poor child will find it harder to discern the relationship between educational efforts expended and concrete rewards attained than will the upper-middle-class child. Such perceptions will lead to different levels of performance shaped by relationship to dominant power in its everyday, lived world manifestations. Such motivational and performance levels have little to do with innate intelligence whether of a linguistic, visual-spatial, or mathematical variety. Gardner has not made these types of discernments in his MI theorizing.

Thus, power theory has not been important to Gardner's work. Sociopolitical reflection is not an activity commonly found in the history of developmental and neuropsychology. Indeed, such concerns have been consistently excluded as part of a larger positivistic discomfort with the ethical and ideological. Such political dynamics reveal themselves in Gardner's *Intelligence Reframed* (1999), as he writes of Western civilization as a story of progress toward both democracy and respect for the individual. Democracy has been achieved in the United States and the civilized West, Gardner assumes, as he cautiously avoids confronting democratic failures in these domains outside the tragedy of the Third Reich. He explores business involvement with education in *The Disciplined Mind* (1999) but expresses little concern with corporate power's capacity to shape the ideological purposes of schools.

Although Gardner writes about MI producing "masters of change," it seems to postformalists that he describes such individuals as mere technicians to be fed into the new corporate order of the globalized economy. They are not empowered scholars who understand the larger historical and social forces shaping the macro-structures that interact with the complexities of the quest for democracy and the production of self. There is no mention here, for example, of the

- impact of 500 years of European colonialism;
- continuing anticolonial movements of the post-1945 world;
- Western neoliberal/neoconservative efforts to "reclaim" cultural, political, and intellectual supremacy over the last 25 years;
- education for the new American Empire being promoted by George W. Bush and his corporate and political cronies around the world.

Such macro-forces exert profound influences on how we view the roles of Western psychology and education or where we stand or are placed in relation to them. MI and its masters of change stand outside history. They are passive observers of the great issues of our time.

Studying Gardner's work, we perceive no indication that he has ever imagined a critique of his work in light of the issues of power. In *Frames of Mind* he asserted that he could envisage two types of modifications of MI: he could be convinced to drop one or two of the intelligences or he could be persuaded to add some new ones. In this power vacuum Gardner is not unlike many other upper-middle-class North Americans and Western Europeans in that he cannot imagine how dominant-power inscribed psychologies and educational practices can harm individuals—especially those marginalized in some way by the dynamics of, say, race, class, colonialism, or gender. Gardner's naïve acceptance of the benefits of school for all came across clearly in *Frames of Mind*:

... the overall impact of a schooled society (as against one without formal education) is rarely a matter of dispute. It seems evident to nearly all observers that attendance at school for more than a few years produces an individual—and, eventually a collectivity—who differs in important (if not always easy to articulate) ways from members of a society that lacks formal schooling (1983, p. 356).

Gardner would be well served to familiarize himself with literature that documents the way school often serves to convince many individuals from marginalized backgrounds that they are unintelligent and incompetent. The most important curricular lesson many of these students learn is that they are not “academic material.” The individuals we are talking about here are young people who are profoundly talented but because of their relationship to the values and symbol systems of schooling are evaluated as incapable of dealing with the higher cognitive processes of academia. Was it not some of these individuals that MI theory was supposed to help? Weren’t we supposed to see valuable talents in individuals that were overlooked by a monolithic mode of defining intelligence?

In conclusion, MI is a child of a Cartesian psychology that fails to recognize its own genealogy. Gardner uses the intelligences to pass along the proven verities, the perennial truths of Western music, art, history, literature, language, math, and science. The notion of constructing a meta-analysis of the ways cultural familiarity occludes our ability to see the plethora of assumptions driving work in these domains does not trouble Gardner’s psychic equilibrium. If Gardner were interested in performing a cultural meta-analysis of his theories, he would begin to see them as technologies of power that reproduce Western and typically male ways of making meaning. Gardner seems oblivious to the epistemological, cultural, and political coordinates of his work. We don’t understand why he doesn’t sense that the classification systems and cognitive frameworks of MI routinely exclude “the knowledge and values of women, nonwhite races, non-Christians, and local and premodern ways of knowing. How can a man so erudite who proclaims a progressive ideological stance miss these omissions?

In the descriptions of what counts as intelligence and curricular knowledge in Gardner’s eight domains resides a battle over cultural politics. Whose science, literature, music, history, art, and infinitum gains the imprimatur of the labels classical and canonical? When patterns of racial, cultural, gender, and class exclusion consistently reveal themselves in Gardner’s work, why would nonwhite and non-European individuals and groups not be suspicious of it? Again, Gardner’s reading of expressions of such concerns is inexplicable. In *Intelligence Reframed*, for example, he states that MI has been disparaged “as racist and elite . . . because it uses the word intelligence and because I, as its original proponent, happen to be affiliated with Harvard University . . .” (1999, p. 149). We can assure Gardner that if he were a professor at Brooklyn College’s School of Education who developed the “theory of multiple talents” and had exerted comparable levels of influence on the fields of psychology and education, postformalists would still criticize his exclusionary scholarship. Gardner the progressive is trapped on a terrain littered with cultural political and epistemological landmines. His work with all of its possibilities and limitations serves as an excellent example to educational psychologists of the need for a postformal critique of the discipline.

CHAPTER 9

Carol Gilligan

KATHRYN PEGLER

From Erik Erikson, I learned that you cannot take a life out of history, that life-history and history, psychology and politics, are deeply entwined. Listening to women, I heard a difference and discovered that bringing in women's lives changes both psychology and history. It literally changes the voice: how the human story is told, and also who tells it.

—Gilligan, 1993, p. xi

Gaining this postformal perspective from Erik Erikson was like the planting of a seed inside of Carol Gilligan leading her to a gradual awakening on the journey to a powerful discovery. For centuries, a critical part of the population was missing from theories of moral and intellectual development. Until Gilligan published her findings in an article that led to the publication of her book, *In a Different Voice: Psychological Theory and Women's Development* (1982), women's voices had not been present in human or moral development theories. This revolutionary and controversial book demonstrated how the inclusion of women's voices challenges the existing theories of psychological development that are based solely on the studies of boys and men. In addition, Gilligan's postformal ideas challenge the notion that there is only one single and absolute path to moral or philosophical truth. Gilligan's theory has had a tremendous impact on a multiplicity of fields including psychology, education, gender studies, and law.

Matters of moral significance have been an intricate part of Gilligan's life since childhood. She was born in New York City on November 28, 1936, and grew up during the Holocaust. Her parents' examples influenced her greatly as they were involved with aiding refugees from Europe. William Friedman, Gilligan's father, was a child of Hungarian immigrants. He became a lawyer, and during the Holocaust, he accepted other lawyers into his firm who were escaping Hitler. Mabel Caminez Friedman, Gilligan's mother, was the daughter of German and Ukrainian immigrants who helped refugees by getting them settled in New York. In addition, Gilligan was a student at the Walden School in New York City. Walden was a progressive school widely known for calling attention to and discussing issues of moral relevance.

As an English Literature student at Swarthmore College in the 1950s, Gilligan was at ease participating in the small coed classes where they studied the human experience as they read the works of many celebrated male and female writers. Later on as a student attending Harvard

and studying psychology, she did not feel that same comfort. Something was amiss. At Harvard, the focus of study was on male psychologists researching mainly male subjects in the long-established and unquestioned patriarchal practice. Gilligan could not yet identify the discord; however, she felt there was a discrepancy in the way professors spoke. These discussions lacked the intricacy and the aliveness of the authentic human experience that she learned through her study of Euripides, Shakespeare, George Eliot, and Virginia Woolf.

During the sixties and early seventies, Gilligan was a social activist involved in issues of moral importance. As a lecturer at the University of Chicago, she refused to present grades because they were being used as basis for the Vietnam draft. Gilligan also took part in sit-ins and became involved in the civil rights movement, the antinuclear movement, and the women's strike for peace. In addition, she went knocking on doors in order to get people to register to vote.

Initially Gilligan had no plans of entering the field of psychology. As the mother of three small sons and a member of a modern dance group, she taught part-time to make money in order to have some help in the house. At this time, she had the opportunity to teach with Erik Erikson at Harvard in his course on the human life cycle. She then taught with Lawrence Kohlberg in his course on moral and political choice (Wylie and Simon, 2003). Gilligan was drawn to Erikson and Kohlberg, as they had similar interests concerning the connection of psychology and political choice and philosophy and literature. Furthermore, like Gilligan, both men were dedicated to the civil rights and antiwar movements. Gilligan worked closely with Kohlberg and even coauthored the article "The Adolescent as a Philosopher: The Discovery of the Self in a Postconventional World" (1971) with him. However, during this time, Gilligan began to feel uneasy using Kohlberg's criteria to judge moral development because of the way women were categorized. Under Kohlberg's model, the average female scores were a full stage lower than the male average scores, implying that women were less morally developed than men. Concurrently, while teaching Kohlberg's course, Gilligan also became fascinated in how people respond to real-life situations of conflict and choice. She was interested in people's real-life moral struggles where people had the power to choose and have to live with the consequences of their decisions. It was the height of the Vietnam War, and male students were faced with the draft. Gilligan wanted to know how these young men would act when they had to make a choice about serving in a war that many believed was neither justifiable nor moral; hence, she began a study related to their choices. However, in 1973, President Nixon ended the draft, and that ended Gilligan's study. During this time, the Supreme Court had ruled that state antiabortion legislation was not legal in the case of *Roe v. Wade*. Realizing that *Roe v. Wade* would give "women the decisive voice in a real moment of choice with real consequences for their personal lives and for society" (Goldberg, 2000, p. 702), Gilligan shifted her study to women making this moral decision.

While sitting in her kitchen reviewing the transcripts of pregnant women considering abortion, Gilligan made a dramatic discovery. She recognized the emergence of a different pattern. There were differences between the public abortion debates over right to life or right to choice and the women's unease about acting responsibly in relationships because for many women their problems concerning abortion involved issues relating to relationships. For example, Gilligan noted that the women felt apprehensive, "If I bring my voice into my relationships, will I become a bad, selfish woman, and will I end my relationships" (Goldberg, 2000, p. 702)? Listening to these women, Gilligan heard a perception of self that differed from the theories of Freud, Piaget, Erikson, and Kohlberg. Moreover, she became conscious that the theories used to judge emotional health and typical experiences were embedded almost exclusively in studies of white male behavior. Subsequently, these theories were then applied to women. Gilligan shared this discovery with her friend Dora. Dora found this to be intriguing and suggested that Gilligan write about it (Wylie and Simon, 2003). Consequently, Gilligan wrote an essay published in the *Harvard Educational Review* in 1977 titled "In a Different Voice: Women's Conceptions of

Self and of Morality.” That article was the genesis of her book *In a Different Voice* (Gilligan, 1982).

In this book Gilligan presents a theory of moral development that maintains that women are more likely to think and speak in a way that is different from men when faced with ethical dilemmas. Gilligan draws a distinction between a feminine ethic of *care* and a masculine ethic of *justice*. Under an ethic of justice, men judge themselves guilty if they do something wrong. Accordingly, men tend to think in terms of rules, individual rights, and fair play. All of these goals can be pursued without personal ties to others; therefore, justice is impersonal. Under an ethic of care, women, who allow others to feel pain, hold themselves responsible for not doing something to prevent or allay the hurt. Hence, women are more inclined to think in terms of sensitivity to others, loyalty, responsibility, peacemaking, and self-sacrifice. Thus an ethic of care comes from connection, and necessitates interpersonal involvement. In addition, Gilligan believes that these differences of moral perspectives are the result of contrasting images of self. These identities are shaped during early childhood and adolescence by the primary people who provide physical and emotional care. Gilligan observes that both sexes have the capacity to develop either perspective. Hence, there are women who view moral dilemmas in terms of justice, and there are men who make moral decisions based on an ethic of care. Gilligan views it as two separate and noncompeting ways of thinking about moral problems.

Gilligan describes her stages of moral development, and like Kohlberg, Gilligan’s theory has three major divisions of moral maturity: preconventional, conventional, and postconventional. A major difference is that Gilligan’s stages happen due to changes in the sense of self whereas Kohlberg’s stages occur due to changes in cognitive capacity. In the first stage of preconventional morality, there is a selfish orientation to individual survival. Women lack a sense of connectedness. They are unable to see beyond their own self-interest as they look out for themselves. In the second stage of conventional morality, goodness is self-sacrifice, and morality is selfless. Women define their moral worth on the basis of their ability to care about others. They search for solutions where no one will get hurt, but realize they often face the hopeless task of choosing the injured party, that injured party is usually themselves. They feel a responsibility to give others what they need or want, especially when these others are considered defenseless or dependent. Finally, in the third stage, postconventional morality reflects the responsibility for consequences of choice. At the heart of moral decision making is the exercise of choice and the willingness to take responsibility for that choice. Women in this stage realize that there are no easy answers, and so they make an effort to take control of their lives by admitting the seriousness of the choice and consider the whole range of their conflicting responsibilities. Gilligan (1993) explains, there is a shift “from goodness to truth when the morality of action is assessed not on the basis of its appearance in the eyes of others, but in terms of the realities of its intention and consequence” (p. 83). Therefore, unlike conventional goodness, this view of truth requires that a woman extend nonviolence and care to herself as well as others.

For Gilligan, the different voice indicates a paradigm shift because it exposes a disconnection at the core of a patriarchal racist social order that is so deep and so critical. This disconnection obscures the experiences, thoughts, and feelings of

all people who are considered to be lesser, less developed, less human, and we all know who these people are women, people of colour, gays and lesbians, the poor and the disabled. It [is] everyone who [is] “different” and the only way you [can] be different within a hierarchical scheme [is], you [can] be higher or you [can] be lower, and all the people who [have] been lower turn out—surprise, surprise—to be the people who did not create the scheme. (Gilligan, 1998)

In a Different Voice has been both innovative and influential. The book strikes emotional chords in both women and men. Its impact has been compared to Betty Friedan’s *The Feminine Mystique*

(1963). Furthermore, Gilligan's *In a Different Voice* (1982) has enjoyed a worldwide audience. The book has been translated into seventeen different languages and has sold more than 750,000 copies, an amazing accomplishment for an academic book. Gilligan first realized that her book was going to make a statement when she picked up the retyped manuscript and the woman who typed it had given it to her cousin to read, and the cousin wanted to meet her. But initially, the book received a lukewarm response, so it was published in paperback fairly quickly at a low price allowing access early on to a wide audience. Unfamiliar people began talking to Gilligan about her book. One woman working in a local shop asked Gilligan if she was the woman who wrote that book and proceeded to tell her that she had explained her marriage. A *Globe* reporter said that Gilligan had described his divorce. After reading the book, many women felt heard and able to speak in a new way. The book also justified for men a voice that had been associated with what were seen as "women's weaknesses," but which Gilligan had acknowledged as human strengths (Wylie and Simon, 2003).

Just as many people connected with and praised Gilligan's book, others have strongly criticized it. Some people fear Gilligan's efforts to establish a different but equal voice merely reinforces the cultural stereotype that men act on reason while women respond to feeling. In addition, some social scientists attack the lean research used to support and validate her theory. They cite the small specialized sample in her abortion study, the fact that she used anecdotal evidence instead of providing empirical support, and that her data has not been published or peer-reviewed. However, Gilligan states that the "different voice I describe is identified not by gender but by theme" (Wylie and Simon, 2003, para. 13). Gilligan also claims that her data has been published in peer-reviewed journals, and that Freud, Piaget, and Erikson's theories were not rejected based on interpretive style of research (Vincent, 2000).

For the past 25 years, Gilligan has continued to engage in research in the areas of psychological theory and education including studies on women's, girls', and boys' developmental experiences. In addition, Gilligan has coauthored and edited a series of books on gender and development as well as initiating numerous programs and projects for advancing the healthful development of boys and girls. In 2002, following 35 years at Harvard, Gilligan moved back to New York to become a professor at New York University. She is associated with the law school, the graduate school of arts and sciences, and the school of education. Furthermore, that same year, Gilligan published her first book authored alone since *In a Different Voice* (1982).

In her book *The Birth of Pleasure*, Gilligan (2002) explains how the emotional truths and the ability to say what we see and say what we know is hidden in the interests of maintaining the long history of patriarchal order. For Gilligan, feminism is the movement to end the long-standing contradiction between democracy and patriarchy. This contradiction runs as deep and is as harmful as the contradiction between democracy and slavery. Patriarchy is not a battle between the sexes, but an arrangement that constrains both men and women. Patriarchy actually means a rule of fathers where men are separated from women, from other men, and from children; hence, Gilligan asserts that this system presents a hierarchy in the midst of our most intimate relationships between lovers and between parents and children. Furthermore, Gilligan stresses that the restrictions of patriarchy are passed on from generation to generation, and compromise our psychological development from early childhood, crippling love, making pleasure perilous, "and enforcing taboos against truth-telling" (Wylie and Simon, 2003).

Gilligan's *Birth of Pleasure* (2002) received hostile criticism for representing a type of feminism that lays all of society's ills at the feet of patriarchy. Her critics believe this is unnecessary because the patriarchal society has ended. Responding to her critics, Gilligan asks, if patriarchy has ended, then who is running the Fortune 500 companies and congress? She also observes that patriarchy is wreaking havoc citing Enron and WorldCom as examples as well as the scandal in the Catholic Church, the FBI, and the CIA (Wylie and Simon). However, Gilligan (2001) also believes that "the transformation from patriarchy toward a fuller realization of democracy will be one of

the most important historical events of the next 50 years" (para. 3). She observes that there are already signs, for example, there are more women in the U.S. Congress than 20 years ago, women are marrying other women and having children, and gay men are marrying other men and adopting children. The educational system, Gilligan reasons, will be at the center of this "historic transformation," especially gender studies programs because these programs provide the knowledge that can foster human freedom and possibilities.

Carol Gilligan and her life work embody the essence of a postformal thinker. As Joe Kincheloe and Shirley Steinberg (1999) explain, postformal thinkers are metacognitively aware and understand the way that power affects their own lives and the lives of others; therefore, they apply postformal analysis to the deep structures in order to expose insidious assumptions. As Carol Gilligan's groundbreaking research clearly demonstrates, when postformal analysis is applied to education and psychology, the implications are boundless. Gilligan's research has had major repercussions, and it has inspired a wealth of research and scholarship not only in education and psychology but also in ethics and law. Her work has led to a wide range of educational and cultural projects designed to encourage girls' voices and build on their psychological strengths. Primary and secondary schools across America have developed girl-friendly curriculums and teaching methods in order to resist the principles of femininity that were psychologically and intellectually damaging to girls for reasons that required them to be nice, to be silent, and to suppress vital part of themselves. Furthermore, her work motivated colleges to incorporate women's studies programs, women's campus centers, and sexual harassment policies as well as speech codes of conduct. Many popular psychology books such as Naomi Wolf's *The Beauty Myth* (1991), Mary Pipher's *Reviving Ophelia* (1994), and John Gray's *Men Are from Mars, Women Are from Venus* (1998) resulted from Gilligan's studies. It also was the impetus for the 1991 American Association of University Women's report "Shortchanging Girls, Shortchanging America." Moreover, Gilligan's research was one of the driving forces behind the 1994 Gender Equity Act in Education (Wylie and Simon, 2003).

In addition, postformal theorists use feminist theory in order to unify logic and emotion, unlike formalists who insist upon a separation of logic and emotion. Postformal thinkers recognize that emotions develop into "powerful thinking mechanisms that, when combined with logic, create a cognitive process that extends our ability to make sense of the universe" (Kincheloe and Steinberg, 1999, p. 76). This idea is at the heart of Gilligan's research, and accurately describes Gilligan's theory of moral development. Finally, postformal scholars know that history is not complete and democracy cannot survive without the inclusion of all voices, specifically the voices of people who have been outside the mainstream of the conversation. Carol Gilligan actively opens the conversation to "different voices" because she knows that the inclusion of all voices is an act of social justice that adds to the richness and depth of the story and promotes creativity and understanding for all because the world looks and sounds very different after suddenly seeing and hearing something that you've never seen or heard before.

REFERENCES

- Gilligan, C. (1982). *In a Different Voice: Psychological Theory and Women's Development*. 1st ed. Cambridge, MA: Harvard University Press.
- . (1993). *In a Different Voice: Psychological Theory and Women's Development*, 2nd ed. Cambridge, MA: Harvard University Press.
- . (1998, June 1). Remembering Larry. *Journal of Moral Education*, 27(2). Retrieved on December 12, 2005, from <http://sas.epnet.com/citation.asp?>
- Gilligan, C. (2001, October 1). From White Rats to Robots the Future of Human Development. *Ed. The Magazine of the Harvard Graduate School of Education*. Retrieved on December 10, 2005, from <http://www.gse.harvard.edu/news/features/gilligan10012001.html>.

- . (2002). *The Birth of Pleasure*. New York: Alfred A. Knopf.
- Goldberg, M. F. (2000, May 1). Restoring Lost Voices: An Interview with Carol Gilligan. *Phi Delta Kappan* [Electronic version], 81(9), 701–704.
- Kincheloe, J. L. and Steinberg, S. R. (1999). A Tentative Description of Post-formal Thinking: The Critical Confrontation with Cognitive Theory. In J. L. Kincheloe and S. R. Steinberg (Eds.), *The Post-formal Reader: Cognition and Education*, pp. 55–90. New York: Falmer Press.
- Vincent, N. (2000, June 7–13). Higher Ed Class War the Sommers–Gilligan Cat Fight. *The Village Voice*. Retrieved on December 11, 2005, from www.villagevoice.com/nyclife/0023,vincent,15447,15.html.
- Wylie, M. S. and Simon R. (2003). Carol Gilligan on Recapturing the Lost Voice of Pleasure. *Psychotherapy Networker* Retrieved on December 4, 2005, from <http://www.psychotherapynetworker.org/interviews.htm>.

CHAPTER 10

Emma Goldman

DANIEL RHODES

EMMA GOLDMAN

Emma Goldman is probably one of the most controversial figures in United States history and an obscure but important contributor to the field of education and educational psychology. She was instrumental in developing and promoting what was called the Modern School in the United States, a somewhat obscure but very progressive and groundbreaking philosophical educational system. The Modern School had its roots and development in Spain and was founded by the educator Francisco Ferrer y Guardia, but it was Emma Goldman and her connection to Anarchism and political activism, not to mention her own personal background, that lead her to support and promote the ideas of the Modern School in this country.

Emma Goldman herself was a product of a very suppressive and oppressive background. Born in Russia in 1869 where she and her family struggled with poverty for most of her tenure in that country her parents shipped her off to the United States to live with her half-sister when Goldman was twenty. This move to the United States foisted on Goldman by her parents was mainly a result of the ongoing conflicts between Emma and her father, but it was also these conflicts that eventually led to her philosophical beliefs and eventual support of the ideas put forth with the Modern School movement, which were very liberatory. Her home life in Russia was emotionally cold and aloof at best, with at times her father being extremely abusive, both physically and mentally. Goldman was very rebellious and defiant which lead her father to often beat her and rage at her with the intent of getting her to obey his authority. Her family attempted to marry her off at the age of 15, which she refused, and the conflicts between her and her father grew until the family finally decided to send her to the United States in 1889 at the age of 20.

Being a Jewish immigrant in the United States in the late nineteenth century Goldman had few employment opportunities afforded to her so she mainly toiled in sweatshops and as a seamstress. While she was working in these factories she started recognizing the abuses inflicted onto the working class and those in poverty around her by the owners of the factories and others in power, which she considered to be the capitalist class. Goldman herself struggled with the jobs where she worked, having to labor long hours in hot tortuous conditions. These were formative years for Emma Goldman, being in her twenties during the late nineteenth century, where she started

to develop a concern for women and children, the poor and the labor class. It was through these firsthand abuses and her studies of how the labor class would be suppressed for attempting to stand up for their rights that she was prompted to become more politically active. During this same period several political and labor groups were directly involved in fighting against the abuses that the working classes were subjected to and these groups garnered the attention of the politically sensitive Goldman.

Some of these groups identified themselves as Anarchists and were very involved in the labor movement of the time. The Anarchists held to the belief that any centralized authoritative power, whether it would be the government or capitalist class, would be corrupt. What the Anarchists were seeing at this time in the nineteenth century was the government using the police and military to defend factory and mine owners and would use these troops to attack strikers who were crusading for better working conditions and livable wages. These abuses and the rejection of overt forms of authority was the foundation of the psychology of Anarchism, which were also very libtatory, and encouraged self-determination in each individual. Since Emma Goldman had to work in these factories and under the same harsh conditions she understood firsthand the plight of these workers. It was her connection to these Anarchists and her rejection of overt forms of authority (including her past experiences with her abusive and oppressive father) that the groundwork for the psychology of the Modern School began to develop in Goldman's psyche.

Her popularity among Anarchist groups increased and over time she became more involved with these groups, touring the country giving speeches and eventually, along with fellow comrades in the Anarchist movement, she began publishing a magazine titled *Mother Earth*, where she wrote prolifically about the social issues that she spoke of during her lecture tours. It was in 1909, however, with the execution of the founder of the Modern School movement Francisco Ferrer y Guardia by the Spanish government that Emma Goldman became a staunch supporter and advocate of the Modern School philosophy. After Ferrer's execution Goldman helped to create the Modern School Movement in the United States and started the Modern School Association. She also promoted the Modern School movement through her speeches and writings in her journal *Mother Earth*. Emma Goldman's views of education can best be summarized in her autobiography *Living my Life*:

No one has yet fully realized the wealth of sympathy, kindness, and generosity hidden in the soul of the child. The effort of every true educator should be to unlock that treasure – to stimulate the child's impulses and call forth the best and noblest tendencies. What greater reward can there be for one whose life-work is to watch over the growth of the human plant than to see it unfold its petals and to observe it develop into a true individuality?

MODERN SCHOOL

Although Emma Goldman and Anarchists promoted the Modern School in this country, the philosophy and psychology of the school was actually founded by, as we mentioned earlier, a Spanish educator named Francisco Ferrer y Guardia and often his name is used synonymously with Modern School (i.e., Ferrer School) or specific schools would bear his name. Ferrer wanted to develop an educational environment that was to be more student centered and to take into account the rights and dignity of the child. Ferrer believed in a form of libtatory education that would promote independence in children and encourage them to grow and learn emotionally, psychologically, and physically in a more open environment instead of one typically oppressive and rigid. Manual pursuits as well as intellectual ones were strongly supported in students and they were allowed and encouraged to seek out projects that they were interested in.

Unfortunately Ferrer was promoting his ideas of education in Spain during a very tumultuous time and both the government and the church in Spain did not view them very favorably. Eventually Ferrer was accused of conspiring against the government and encouraging an uprising and was arrested, charged, and given a mock trial where no solid evidence of these activities could be brought forward. Regardless of this lack of evidence he was found guilty and executed in 1909. This created an enormous outcry in the rest of the Western world among social activists and educators and in many regions schools bearing his name sprang up in honor of him, specifically supporting and attempting to emulate his educational philosophy. It was in this country that Emma Goldman became such a strong supporter of Francisco Ferrer and his Modern School movement. Several Modern Schools were organized in the United States and some stayed relatively active up to the early 1950s.

The Modern School was not seen as just a school, but a community of learners that included teachers as well as students. The students were the central important aspect of the educational process, not standardized tests that are mandated by governmental figures. The students' rights were valued and their growth was highly regarded, with emphasis placed on the dignity of the child. One main aspect of the Modern School, and one of the reasons that Emma Goldman was so supportive of its philosophy, is its rejection of overt and centralized authority. It is this rejection of overt and centralized authority that signifies the psychology of the Modern School philosophy. Individual psychological growth was greatly encouraged in the Modern School. One's ability to learn was based on that individual's own personal developmental stage, not on a developmental stage that was mandated by the educational institution, teachers, or theories subscribed to by that institution. If a student was not doing well in a certain area or was not as interested in a certain subject, then emphasis was placed on the student's learning ability and what they were ready to learn. Students were not coerced or forced into learning something they were not ready to learn or not interested in. They were also not evaluated or labeled if they were not ready to learn a certain topic or subject. Students were however encouraged to develop individually and independently within a community of learners.

With the philosophy of developing individuality within each child there is also this sense of communalism; this is where students learn to work together in the educational environment as opposed to being so competitive. Grades, tests, and class rankings were all abolished in the Modern School and learning became a spontaneous event where one could learn from other students, teachers, and learn together in groups. It was through this process that educators of the Modern School felt that allowing the student to learn and grow in an open and free environment brought out the true and unique character of each child. Another important aspect of the Modern school was that learning did not end at a certain point in a person's life, that learning was an ongoing and lifelong process. So you may have a class at one of the Modern Schools where students and teachers were learning a subject together. It was also the belief in the Modern School setting to provide as much material as possible for students, not to limit or restrict them to just certain subjects, and to show the connections of those subjects to each other. Through the Modern School, learning became more than just internal or external. It became both—learning became experiential.

POSTFORMAL EDUCATION

The Modern School attempted to break away from formal education and tap into the essence of who the student was and this mirrors the ideas that Joe Kincheloe and others would call *postformal education*, or education that goes beyond the formal framework. Postformal thinking attempts to break away from this notion of using a developmental model and behavioral psychology as a reference for the educational process. When education is so inextricably connected with scientific

process, the most important aspect of what education should be about is completely lost, and that is the human element. Individuals learning in an educational environment are not test subjects that can be reduced to the most statistically appropriate teaching methods and evaluations. They are unique individuals who learn in different ways and have different experiences and aspects of themselves that they can bring to the educational environment. The postformal view of education is not so much focused on standardizations, evaluations, linear teaching methods, or rote memorizations, all of which place the educational process above education itself as the central point of learning. Postformal view focuses more on the student himself or herself, having the student as the center of the education and how each individual student learns and what their basic interests and ideas are.

Postformal educational setting becomes more democratic and focuses on probably one of the most important aspects of its value system, which is not seen in formal education at all, and that is the idea of critical thinking. In the postformal classroom emphasis is placed more on examining an issue or idea critically and it is through this critical process that students are encouraged to view things more holistically as opposed to the formal where learning is done in a more linear fashion. The formal view of education, with its strong developmental background, does not apply as much in the postformal setting where learning becomes more fluid and organic, which is what we are really dealing with in the school setting, unique and organic individuals. When students are encouraged to learn at their own pace and to pursue those ideas that are of interest to them, they become more mindful of themselves and those around them. The formal sense of hyper-individualism slowly begins to melt away and each student becomes a unique individual in relation to the community around him or her. Learning in the postformal setting is not rigid or heavily structured, the classroom and school becomes the students laboratory, and instead of the teacher being the head of the class, the students and teachers all become educators and learners and have something unique and different to bring to the class.

FORMAL EDUCATION

The Modern School greatly mirrored the ideas of the postformal thinking, and tried very specifically to break away from the formal ideas of education which were prevalent at the time and have been handed down since then. Formal education has a long history and tradition, especially in this country and is distinguished by what some would consider its rigidity. All one has to do is to look at the arrangement of the formal classroom even today to get an understanding of what the formal process of education is like. Classrooms are established on a very fixed pattern, with rows and isles arranged so that the students have to sit, in place, and face in one direction toward the educator. In the classroom itself interaction is discouraged among peers and all eyes must be forward, facing the authority figure that becomes the central focus of the class.

Desks and chairs in the formal classroom are not particularly comfortable but one is to maintain silence and stillness throughout the learning process. Students are allowed to speak, but only if specifically identified and authorized by the teacher. The educational process itself is performed in what the educator Paulo Freire called the “banking method.” This banking method is where the students are basically repositories to be filled by the teacher’s knowledge, much like a bank where the teacher deposits information into the suspected empty mind of the student. The student really does not have much to offer the class except what he or she can memorize from the lessons the teacher teaches them and from the textbook, and what they can regurgitate in a process known as testing. It is through testing that a student is evaluated on his or her ability to sit still, listen, take in information, memorize it, and repeat it back to the teacher. This testing becomes highly competitive and students are punished if they attempt to help each other or learn from each other during the testing process.

After testing, students are then ranked on their ability to acquire knowledge through rote memorization and recall this information in a standardized way by a process known as grading. Those students able to memorize large quantities of data, even if the information seems trivial to them, are rewarded by higher grades and higher rankings in class and those students that do not perform as well on these tests are given lower grades and lower rankings in class standing. Learning in this environment becomes very linear and concepts such as independence, creativity, being able to articulate and think in abstract ways or critically are strongly discouraged. The competitiveness of the testing, grading, and class ranking, coupled with the physical structure of the classroom itself, creates a hyper-individualized atmosphere where the thoughts and ideas of others are not valued. In this banking method the student really has nothing of value to offer to the teacher or the rest of the class, except obedience.

Formal education is also based on a more developmental psychological model, which was developed and tested by theorists that also looked at the behavioral aspects of learning. These ideas were greatly supported and promoted by two developmental psychologists, Erik Erickson and Jean Piaget. From the perspective of both of these theorists, they believed that individuals developed at certain stages and how they develop should closely mirror their age and at what stage they should be at that time, that learning is very linear and progresses on an upward pattern. Images such as a ladder or stairs are often invoked in demonstrating their theories. One would begin at the bottom of a ladder or steps, and as they grow and learn they should move upward and there is very little room for moving back and forth on this development model. Once one has “mastered” a certain skill, one should continue upward on their progress and should not go back or jump forward, but continue on the path, as one should behaviorally. The mind in this model is actually perceived of as a muscle and the best way that one can learn is in this formal educational setting by a process of rote memorization. One of the interesting aspects of this model is that little emphasis is placed on the learning process of adults, so once an individual has made it to a certain point in his or her life, one has mastered the basic skills needed to survive and not much more emphasis is placed on education.

One unfortunate but very important side effect of this style of learning in this formal educational environment is that it mainly establishes one's place in society, which is an obedient follower that does not question authority. Education today is based on the ideas of means and production, where one is to become a “productive” member of society, which basically means to produce and consume goods. Ideas such as individuality (being a unique self as opposed to the hyper-individuality of formal education which is to be competitive in the market economy), spirituality, concern for others and the environment are discouraged since these ideas pose a threat to the market economy. What tends to happen in the psychological aspect of this educational environment is that if one is unable to perform, accept, or adept appropriately to these standards then one has a tendency to be “labeled.” These labels can range from something as simple as just having a “learning disability” to a more severe label as one having a “behavioral problem,” but the main emphasis of the label is that the student is deficient in one way or another.

In the formal setting, students who have a tendency to reject forms of authority or attempt to express themselves individually are not meeting up to the standards and this in turn may require intervention by a professional or specialist. Very little emphasis is placed on the students learning ability, since standardized tests are considered the norm and the only appropriate way to evaluate one's progress in this formal setting. Interventions based on a psychological model that is to help students become more productive members of the educational process, or in other words are able to conform to the educational standards, are very valued in the formal educational setting. In too many cases alternatives such as medications that help students “focus” and stay still are utilized and these alternatives are on the increase even though there is very little research that has been conducted on the long-term effects of these medications on young developing minds. So the sense

of individuality and creativity are strongly discouraged in the formal setting and the psychological educational model is to help students conform to these formal educational standards.

This, needless to say, is one of the reason that Emma Goldman and the Anarchists were so supportive of the Modern School values, philosophy, and psychology, and why Ferrer was so disliked and distrusted in Spain during the time of his execution. The philosophy and psychology of the Anarchists was one of rejection of these forms of overt authority put forth in formal educational settings. The Modern School was also heavily influenced by the understanding of oppression toward the working class, women, and the poor by centralized authoritarian and power figures and held true to the Anarchist influences of Emma Goldman and other Anarchists who founded and promoted the movement in the United States and other Western countries. Another aspect of understanding the philosophy and psychology behind the Modern School movement is to look at what Anarchism is and how it influences the ideas of the Modern School.

ANARCHISM

Although Anarchism itself has a long and rich history, the word “Anarchy” has been greatly misunderstood, especially in our contemporary society. Most people connect Anarchy with the punk movement of the late 1970s and early 1980s, especially with the punk band The Sex Pistols and their anthem *Anarchy in the U.K.* Although some punk movements and punk songs do have a connection to the philosophy, especially rejection to overt authoritarianism, the ideas of contemporary Anarchy predate this movement by close to 150 years. The word Anarchy itself comes from the Greek word *anarkhia*, which loosely translated means without rule, or to a society without government. A French political philosopher Pierre-Joseph Proudhon, in an effort to express his own personal and political ideas, adopted this term in the mid-1800s and many of his followers and ideological descendants continued to use the term Anarchy to describe their beliefs.

The ideas and philosophy of Anarchy were a reaction to poverty and oppression, especially enforced by both the government and capitalist class, which at the time used the military to protect them from the laborers themselves. The belief behind Anarchism, sometimes invoking indigenous cultures, was that society could govern itself without a strong, powerful, and centralized leadership. The overall belief was that any centralized power, whether capitalist, communist, or other, would eventually abuse that power and oppresses its citizens and the same would go for any centralized power that is educating its citizens. That power, when it becomes centralized, is narrowed down to the hands of the few and this minority in turn will start to think that they know what is best for the overall society and will use that belief to justify laws and rules that really do not protect society, but enslaves it.

For Anarchists, the purpose of formal education is to create good citizens who will not question the authority of the centralized power structure. Emma Goldman and the Anarchists supported the Modern School because it allowed an individual to grow and develop independently, and yet still be highly aware of those around him or her and the connection that he or she has with the planet as a whole. Where formal schools encourage and promote this sense of hyper-individualism, it is not an individualism that encourages independent thinking. It is more of a hyper-individualism that supports a materialistic and consumer lifestyle, where ideas of freedom and democracy are closely related to the free market and not to actual engagement in society as a whole where informed citizens have direct knowledge of social concerns.

Anarchism feels a spiritual connection to the democratic, communal, and emancipatory ideas that we have laid out because it sees all things on the planet as symbiotic, and the educational psychology of the Modern School reflected those ideas in its educational philosophy. Students were encouraged to be independent and articulate thinkers. The educational process attempted to

move away from the formal process of education, where teaching and learning was very linear and rigid, to a more holistic form of education where students were not as much evaluated by grades and standards as they were encouraged to pursue those things that made them happy and encourage in them emotional growth. Teachers are not seen as authoritarian figures as they are more a part of the learning and growing experience and the distinction between authoritarian and having authority are very important in this setting.

Just because an educator is not seen as an authoritarian, does not mean they are not an authority in something; the difference is how they present themselves to the students. One can be an authority in something; such as a surgeon is an authority in the specific type of surgery they perform. This does not mean they are authoritarian in how they present themselves, this just means they have acquired certain skills and knowledge and have become an authority in their specific field. Authoritarian and authoritarianism comes when individuals abuse their skills, position, and power. An authoritarian educator is one who exerts his control over the students, feels that he or she knows what is best for the students, and punishes them for attempting to learn at their own pace or what is important to them. Rankings, tests, grades, psychological evaluations for students who don't perform up to standards, are all tools of an authoritarian system. Concepts related to evaluating a student's progress in relation to how others perform using such standard and formal tools as grades were concepts that were not allowed in the Modern School. Students were given the opportunity to grow and learn at their own pace and were not coerced or forced to memorize details in a rote manner that had no interest in a child's life. The basic foundation of the Modern school was libratory education and the freedom of the child's mind and spirit without the use of authoritarian methods.

A good way to present the differences between how a school operates in a formal educational framework and how the Modern School operated is to take a specific example of how both schools would approach the learning process. In this example we can see how the student's own learning process and connection to the material that they are attempting to learn come into play.

AN EXAMPLE OF FORMAL AND MODERN SCHOOL APPROACH

Given a standard text that is required in the formal setting, generally a novel, we use this as an example for both the formal setting and the Modern School. Both would read the book, the difference would be how both would approach it. In the formal setting the book would be assigned at a certain point in a person's educational process (e.g., eighth grade). All students in this grade would be close to the same age and academic level and the text would be assigned in a detailed and rigid manner where the students would read certain sections by a certain time. Specific questions may be posed to the students as they slog through the text with the pretense of having them look at the text "critically." But what they will actually be doing is not reflecting on the text critically, or looking at it holistically, but more than likely memorizing specific aspects of the text that they will be graded on and may eventually show up on a standardized, sanctioned test. The critical aspect of the text would be more in line of agreeing with the teacher about certain aspects of the book, which the teacher in turn is getting from a teachers guide.

In the Modern School setting the same book may be studied in a class that reflects on different types of literature. The class makeup would be more diverse (much like the characters in the book would probably be also). Students of different ages and academic levels may be in the class and bring in different skills, knowledge, and experiences. Instead of just reading the text verbatim over a period of time and then being tested on it, the teacher would work with the students on how to bring this particular book to life and one idea that may be considered would be to enact a play based on the book. With the concept of making this book into a performance, student's different levels and skills would come into play. Some students may have artistic talents and could help

design and create a set. Those students who are more adept to working with tools could help build a set that would reflect the story of the text and the creativity of the students themselves. Those students who are creative writers could help develop the text into a script. The possibilities are endless and what ultimately happens is this book slowly comes to life for the students.

Since the book itself would be acted out as a theatrical production, the process of actually critically looking at the text becomes important. Characters in the play would have to have personalities developed so the students would have to attempt to get into the minds of the individual that he or she would be playing. The abstract story in the book becomes more and more real and students start to look at it more holistically instead of linearly with the hope of making a “good grade” at the end of the class. Of course approaching a text in this manner would take a longer period of time than just reading it and memorizing certain details of the book that will be forgotten as soon as a test is over. What one should question is which example would be more appropriate in educating students? Do we want to teach our students to memorize a great deal of abstract data that will be forgotten as soon as they are out of school, or would we rather our students be able to approach things with a critical mind and view them holistically, developing skills and techniques that they can apply to everyday tasks?

CONCLUSION

Emma Goldman dedicated her life to being a voice for those oppressed, to speaking out for the rights of workers, women, and for children and to standing up against any form of authoritarianism. She was also instrumental bringing the ideas of the Modern School and its philosophy to this country. Because of her beliefs and determination in advocating her views she became very unpopular with those in power and the government which resulted in her being jailed numerous times and several death threats were made against her. It was with her support for the Russian Revolution of 1917, when the Communists and Bolsheviks took over power in that country that she was perceived as more of a threat to the United States. She was also very outspoken about the First World War and finally, during one of many Red Scares in the United States, she was deported back to Russia in 1920, even though she was a legal citizen and resident of the United States. She spent only a few years in Russia before she escaped that region, once again railing against overt authoritarianism of the Soviet government. She eventually settled in Canada and in 1940 at the age of 70 she died of a stroke and was brought back to this country and buried in Chicago.

The last Modern School in the United States that Emma Goldman worked so tirelessly to start in this country closed in the early 1950s, although students and educators of these Modern Schools started meeting again in the 1970s to continue to promote its ideas and philosophy. Though it made it through several Red Scares in the early twentieth century in the United States, the Modern School could not survive McCarthyism of the 1950s and several leftist groups such as the Communists and Anarchists were attacked for their philosophical and ideological beliefs. Since the Modern School in the United States were founded and supported by the Anarchists, they eventually became an ideological victim of those dark times.

The question that we should be asking is not what the Modern School provided to the landscape of contemporary education, but what it should have provided if the contemporary formal educational setting had listened. At the time of the Modern Schools, formal schools were very rigid and structured in their classroom setting, and testing, grades, and competitiveness were valued over students’ ability to learn and grow independently. What has happened now, however, is that the formal developmental and behavioral psychological model has become more and more pervasive in the contemporary school setting and standardized tests have become the only norm for evaluating a persons intelligence and ability to learn (even though research has demonstrated

that these tests are heavily biased toward more affluent, Caucasian male students and are not an accurate reflections of a persons intelligence). If we don't follow the Modern School example of education and start moving toward the postformal teaching method, we will slowly begin to develop in students not an ability to think holistically, independently, critically, and in abstract ways, but students that have been taught in such linear fashions that they will only be able to operate within a standardized box.

CHAPTER 11

Jurgen Habermas

IAN STEINBERG

Jurgen Habermas, the German social theorist and last surviving member of the Frankfurt School, has a lot to offer to the theory and practice of education. Though his project was not specifically about pedagogical theory or education systems, his work informs the philosophy of education in several grounding ways. First is his contribution to our understanding of epistemology and the nature of knowledge through his critique of positivism. Second, he provides valuable pedagogical insight through his theory of communicative action and the role of learning and language in the reproduction of society. Finally, through his experience of the European student movements of the 1960s, Habermas provides insight into the roles of institutions of learning, especially universities, in society. Habermas does not present a unified theory or philosophy of education, it is the other way around. To Habermas knowledge, learning, and the means of conveying and utilizing knowledge is social theory.

Paulo Freire describes the traditional model of education as a “banking” method of education (Freire, 2000). The banking method is a positivist paradigm that embodies subject–object duality on two levels. On one level, knowledge, to a banking educator, consists of an arsenal of discrete facts. These facts are considered objective truths, meaning that the fact is based on phenomena that exist outside of human interpretation. On another level, the teacher is the acting subject who presents the world of fact to the student. The student is the object of the teacher’s effort and passively receives the facts and stores them up, like a bank. The typical role of a teacher and educational system under the banking method is to bestow upon the student knowledge that will prepare the student for a vocation. Habermas’s critique of positivism and his identification of the role interest plays in the pursuit of knowledge provide a point of departure from traditional banking education.

In *Knowledge and Human Interests* (1971) Habermas discusses the origins of “value-free” knowledge, that is, positivist epistemology. He argues that ancient Greek philosophers claimed that the philosopher needed to be free of material interests in order to perceive the transcendent truths of the cosmos. If the philosopher was more concerned with pursuing personal interests, then the philosopher would not be able to perceive truths that reached beyond those personal interests. In this sense, Habermas argues, that the interest-free knowledge of the Greeks was not at all “value-free” or “ethically neutral.” Indeed, Greek philosophy was normative and very much

concerned with uncovering those truths that would guide Greek civilization toward an idealized state (pp. 301–303). Positivist knowledge descended and departed from the Greek theoretical tradition. Under the regime of scientific methodology the concept of “interest-free” knowledge that was normative truth became “value-free” objective truth. In other words, science took the notion of “pure theory” and ran with it (p. 315). The scientific process created a conceptual framework that hid the way knowledge and the interpretation of phenomena was not outside of human experience and in so doing, concealed the interests at play in the pursuit of knowledge. (pp. 304–306). Habermas’s critique of positivism is not only geared toward the so-called “hard sciences.” He also contends that historicism can fall into the positivist trap by claiming to be interest- or value-free (p. 309).

To demonstrate how interest and knowledge are inseparable, Habermas categorizes three broad methods of inquiry and their associative interests. These three “knowledge-constitutive interests” are: technical, practical, and emancipatory cognitive interests (p. 308). The technical cognitive interest refers to the knowledge of “empirical-analytical sciences.” This type of knowledge is typically generated through hypothesis testing and experimentation. The method of empirical analysis is to learn or create knowledge by assessing the results of some sort of process under controlled environments. The results of hypothesis testing are observations that are considered to be a natural and objective state of nature, and are considered truthful, or at least reliable, because they preclude human subjectivity. The purpose of this knowledge is to expand the ability of humans to essentially transform nature for social needs; “[t]his is the cognitive interest in the technical control over objectified processes” (pp. 308–309). Habermas does not reject this type of science, nor does he claim that it can’t create useful knowledge. Habermas rejects an epistemology that claims the correspondence of knowledge with truth that exists outside of human interpretation.

The “historical–hermeneutic sciences” create knowledge in a different manner than the empirical–analytical sciences. Historical–hermeneutic method is to create knowledge through the interpretation of texts. These sciences are concerned with understanding meaning, unlike the empirical–analytical sciences that are concerned with observation. This is the knowledge interest that Habermas designates as the “practical cognitive interest.” Habermas criticizes the positivism of historicism in a similar vein as his critique of scientism. When a historian claims to have revealed historical fact by interpreting the meaning of texts, that is, writes history, this knowledge “is always mediated through [the interpreter’s] pre-understanding, which is derived from the interpreter’s initial situation” (p. 309). Habermas claims that any “practical” knowledge is only as good as the interpreter’s ability to “expand the horizons of understanding” between the worlds of both the text and the interpreter in order to create an intersubjective understanding of the interpreter’s own world *in relation* to that of text’s world (pp. 309–310). The practical, intersubjective knowledge interest is important to an understanding of how separate individuals, with unique (but shared) experiences within a collectivity, can form a social reality (Pusey, 1987, p. 25).

Critical social sciences, certain philosophical traditions that seek normative social action, as well as psychotherapy, employ a method that is different from the previous two cognitive interests. The knowledge interest of these disciplines is the third cognitive interest: the emancipatory interest. This is a knowledge interest that emphasizes critical self-reflection. Habermas sees the role of the emancipatory interest as one that works in hand with the other two interests by helping to reveal the way in which the interests of the knower impacts the method and analysis of what is to be known. The purpose here is to transform the unreflective state of positivist thought to one of critical self-reflection through the articulation of the assumptions inherent to the method of analysis (Habermas, 1971, p. 310). The political point, to Habermas, is that ideological control (the rationalization accepted as common sense) is rooted in an empiricist

way of understanding laws of nature. Unreflective thought and type of knowledge it produces accepts a priori worldviews as “natural” and law-like. The emancipatory-interest is the initiation of reflection on why and how “natural” laws exist as well as an initiation in the understanding of how ideology conceals arbitrary power relations in society (Habermas, 1971, p. 315; Pusey, 1987, p. 26). By describing these knowledge-constitutive interests, Habermas describes the fundamental ways people understand and relate to reality (Habermas, 1971, p. 311). He then goes on to link knowledge with the organization of social life:

The specific viewpoints from which, with transcendental necessity, we apprehend reality ground three categories of possible knowledge: information that expands our power of technical control; interpretations that make possible the orientation of action within common traditions; and analyses that free consciousness from its dependence on hypostatized powers. These viewpoints originate in the interest structure of a species that is linked in its root to definite means of social organization: work, language, and power. (p. 313)

His thesis that “knowledge-constitutive interests take form in the medium of work, language, and power” is of direct relevance to a discussion about education. Schooling is a social institution that vitally links all these components in daily practice. When Habermas makes the normative claim that grounds his social theory as belief in the collective pursuit of “the good life” he places an important burden on the educational system. Therefore, to take Habermas’s lead, an educator and a student have a mutual responsibility to approach the task of gaining knowledge as a pursuit that goes beyond banking facts. Teachers and students need to incorporate a reflexive process that treats knowledge not objectively, but intersubjectively. How this is carried out in practice is difficult to conceive, but Habermas provides some clues through his theory of communicative rationality and communicative action.

Habermas details the theory of communicative action in 1,200 plus pages of a two-volume set published in 1984 and 1987. I will not go into specific details about the theory, since this will be beyond the scope of this essay, rather, I will discuss the theory of communicative action as a general concept that can inform pedagogical practice. The theory of communicative action posits an alternative type of rationality than instrumental, or purposive, rationality. Instrumental rationality is rationality toward a specific, technical end. Communicative rationality and communicative action are oriented toward a state of mutual understanding between communicating participants (Bernstein, 1985, pp. 18–20). This rationality is dialogical, that is, intersubjective. Instrumental rationality is object-oriented, the relationship between the acting subject and acted upon object is a one-way causal relationship. According to Habermas, the act of speaking inherently contains the intent of reaching understanding between the speaker and the hearer. Therefore, communicative rationality is an alternative rationality that builds upon this mutual relationship.

One of the primary concerns for Habermas, then, is the creation of the “ideal speech condition.” The ideal speech condition has several components:

(1) freedom to enter a discourse, check questionable claims, evaluate explanations, modify given conceptual structures, assess justifications, alter norms, interrogate political will, and employ speech acts; (2) orientation to mutual understanding between participants in discourses, and respect of their rights as equal and autonomous partners; (3) a concern to achieve in discussion a consensus which is based on the force of the argument alone, rather than the positional power of the participants, in particular that of dominating participants; (4) adherence to the speech-act validity claims of truth, legitimacy, sincerity, and comprehensibility. Democracy and equality, for Habermas, are rooted less in the operation of power and domination and more in a search for rational behaviour and a consensus that is based on the rational search for truth, and which is achieved discursively. (Morrison, 2001, p. 220)

This is an idealized situation, a normative goal that educators can strive to achieve in their classrooms. In the classroom, the teacher has a “more than equal” role and the authority of greater knowledge about the subject. In which case it is doubly important for the teacher to beware of becoming a “dominating participant.” Due to structural inequities in society, people will be able to engage in “critical rational discourse” at different levels and in different contexts. By striving for the ideal speech situation; the settlement of disagreements through communicative rationality; and a pedagogical practice informed by the goals, Habermas implicates all of society in a normative call to come up with solutions to structural inequity. This in turn reaffirms Habermas’s fundamental belief in the democratic process. Indeed, Pusey (1987) characterizes Habermas’s concept of democracy “as a process of shared learning” (p. 120).

What, then, is the role of a university, specifically, in a democracy? In *Toward a Rational Society* (1970) Habermas details the relationship of the university to democracy. The role of the university consists of four concurrent tasks that resonate with Habermas’s earlier conception of knowledge interests. First, research at a university pursues the technical mastery of nature and the production of new generations of scientists. Second, the university is a place where students learn practical knowledge, cultural knowledge, which prepares them for life in modern society as well as provide the “extracurricular” but necessary knowledge for a profession (like quick decision making skills for a future doctor). Third is to produce, interpret, and pass on the “cultural tradition of society.” And, finally, the university is a place of development of political consciousness (pp. 1–3).

Habermas claims that, in Germany during the 1960s, the university system faces a crisis. In his eyes, the university was pulled in different directions by the technical knowledge interest and emancipatory knowledge interests. On the one hand the university was increasingly stressing the importance of developing technical knowledge for industrial applications. On the other hand, the university was increasingly oriented to the politicization of students in the post-War era. However, the university, as an institution, remained unchanged in organization since the Middle Ages. Habermas presents this quandary as having two different solutions. The university could either retreat into depoliticized, factory-like knowledge production or else the university could “assert itself within the democratic tradition” (p. 6). Either way, the university has to change its structure. Habermas’s belief in the democratic tradition leads him to “substantiate [his] vote for this second possibility by trying to demonstrate the affinity and inner relation of the enterprise of knowledge on the university level to the democratic form of decision-making” (p. 6).

Habermas reinforces what he considers democracy. It isn’t the formal political apparatus of modern welfare states, instead he argues for political decision making that is in a “Kantian manner.” This means that “only reason should have force” and that consensus is arrived in a discussion free of coercion (p. 7). Kantian and Habermasian reason is not purpose-driven; it is based on reflection in the tradition of Enlightenment philosophy. In the context of the university, across all disciplines, Habermas call for a “philosophical enlightenment” that “illustrate[s] a self-reflection of the sciences in which the latter become critically aware of their own presuppositions” (p. 8). This self-reflection within research traditions and the pedagogical process will yield more critical and complex ways of understanding the relation between different subjects and courses of inquiry. This also brings new “continuity” to the university campus: “critical argument serves in the end only to disclose the commingling of basic methodological assumptions and action-orienting self-understanding. If this is so, then no matter how much the self-reflection of the sciences and the rational discussion of political decisions differ and must be carefully distinguished, they are still connected by the common form or critical inquiry” (p. 10). Further, Habermas argues that only through this reflection process can the university system achieve the three goals that transcend the technical or instrumental goal of advancing the science of industry. A university in a democracy, then, becomes a site for the rigorous advancement of critical

rationality based on self-reflection and democratic deliberation. There is a dialectical unity to the university and democracy in that the ability for the democratization of the university to take place is contingent on a greater pursuit of democracy in society. The democratic society will look to the university system for a source of critical rational debate about the important issues of the time, scientific and cultural changes, as well as the source of new generations of democratic deliberators in all professions, not just politics.

REFERENCES

- Bernstein, Richard (Ed.) (1985). *Habermas and Modernity*. Cambridge: MIT Press.
- Freire, Paulo (2000). *Pedagogy of the Oppressed* (30th Anniversary Edition). New York: Continuum.
- Habermas, Jürgen (1970). *Toward a Rational Society*. Boston: Beacon Press.
- Habermas, Jürgen (1971). *Knowledge and Human Interests*. Boston: Beacon Press.
- Morrison, Keith (2001). Jürgen Habermas. In Joy A. Palmer (Ed.), *Fifty Modern Thinkers on Education*. London: Routledge.
- Pusey, Michael (1987). *Jürgen Habermas*. London: Routledge.

CHAPTER 12

Granville Stanley Hall

LYNDA KENNEDY

Perhaps no one in the history of educational psychology embodies the phrase “he was a man of his time” more than Granville Stanley Hall. His life spanned a period of great change in the United States and the world. The economy was shifting from agriculture to manufacturing; slavery ended as the country rebuilt itself after the Civil War; women slowly forged their way toward full citizenship; the sciences and philosophies of the Enlightenment gained legitimacy as they established themselves in the academy and threatened the authority of religion; and immigrants poured in from non-Anglo Saxon countries, swelling the population and bringing new and alien languages and customs. This was Hall’s world, and he was a product of it.

Born in rural Ashfield, Massachusetts to a religious family in 1844, Hall originally focused on becoming a minister, then followed his interests into philosophy, physiology, natural sciences, and beyond, finally becoming the first American to be granted a PhD in Psychology. Like many of his generation, Hall attempted to reconcile his faith in religion with his interest and belief in science and reason, not least by writing *Jesus, the Christ, in the Light of Psychology* in 1917. A teacher of John Dewey, and a strong opponent to the Committee of Ten’s proposal for an academic curriculum for all, Hall advocated a child-centered approach to education, flying in the face of the then accepted notion of the universal benefits of academic subjects.

Though many credit Hall with facilitating the emergence of the field of educational psychology through his efforts to found the American Psychological Association, today Hall’s approach to education remains controversial. Hall’s advocacy of a completely child-centered, “natural” education and a focus on child study may be welcome in schools applying an approach to education which is still considered alternative, but is anathema to those who are proponents of State and national standards. His belief in the power of hereditary strengths and weaknesses—particularly those attributed to race and gender—should make us shudder, while the differentiated curricula that arose from this belief remain with us in career and technical and vocational education programs. Though the theory that ontogeny recapitulates phylogeny has long fallen out of fashion, Hall’s contribution to the development of the child study movement and his pioneering exploration of adolescence continue to be major influences on American educational psychology. Understanding the influence of Hall’s work on current psycho-educational practice and theory is essential for postformal students of the field, for, as Joe Kincheloe has pointed out in his

Getting Beyond the Facts: Teaching Social Studies/Social Sciences in the Twenty-First Century (2001), a postformal approach requires us to reach past the understandings that have come down to us as fact and examine their social construction.

BACKGROUND, INFLUENCES, AND ACHIEVEMENTS—A BRIEF SUMMARY

As mentioned above, Hall came of age during a time of great societal change, all which came to bear on his educational philosophies. Hall's first interest was the church. He attended Williston Seminary in Easthampton, Massachusetts, from 1862 to 1863, transferred to Williams College until 1867 (receiving his BA and MA), and then spent a year in New York at the Union Theological Seminary as a divinity student. While in New York he attended many of the meetings held at Cooper Union where he was exposed to radical thinkers of the day. He even went to a meeting at the house of the famous (some would say infamous) social reformer, Victoria Woodhull, and attended at least one séance. Hall was introduced to the well-known abolitionist and minister Henry Ward Beecher at Beecher's church in Brooklyn Heights. Beecher, on hearing that Hall wished to study philosophy in Europe but lacked the funds, in turn introduced him to lumber magnate, Henry Sage, who gave Hall a check for \$1,000 to finance his study.

Traveling abroad in July of 1868, Hall's European studies began with philosophy then turned toward psychology. Hall returned from Europe in 1871 and worked as a tutor to the children of a well-to-do Jewish family in New York. Through this family he was introduced to more social reformers and progressives who were concerned with children and education such as Felix Adler, the son of a Rabbi, who went on to found the Society for Ethical Culture and the Ethical Culture School. After a short teaching stint at Antioch College and then at Harvard, Hall returned to Europe in 1876, studying in Leipzig under philosopher and psychologist, Wilhelm Wundt, and experimental physiologist, Carl Ludwig. Upon his return from Germany, Hall studied at Harvard under William James and Henry Bowditch, and was granted the first PhD in psychology earned in the United States. He went on to an appointment as a professor of pedagogy and psychology at the Johns Hopkins University then served as the first president of Clark University in Worcester, Massachusetts, from 1889 until his death in 1924. Hall founded many professional journals, including the *American Journal of Psychology* (1887), the *Pedagogical Seminary* (1891) and the *Journal of Applied Psychology* (1915). He also served as the first president of the American Psychological Association.

THEORY

Ontogeny Recapitulates Phylogeny

As the theories of Darwin and other evolutionists swept the world, Hall's focus began to center around child development and its relation to evolutionary theory. Hall applied German zoologist Ernst Haeckel's theory that ontogeny recapitulates phylogeny—that the development of embryos mirrors the evolutionary stages of a species—and expanded it to mean that the psycho-educational development of the child followed the evolutionary path of human society. This is sometimes referred to as the *culture-epochs* theory. One must remember that for Hall, as well for many of those living in Hall's time, evolutionary belief was heavily colored by the bias toward Western society as being the highest level achieved in the history of mankind. Therefore, in Hall's view, the young child experiences the "animal" stage until about six or seven years of age, then progresses to the "savage" stage and so on until becoming a "civilized" adult. Hall did not believe that the child in his "animal" stage should be unduly pressured. Nature, he felt, was the best teacher. With this understanding, Hall recommended that reading not be taught until at least the age of 8,

if at all. He based his belief on the fact that great leaders in the past such as Charlemagne were illiterate, and other figures he considered important, such as the Virgin Mary, achieved great things without the need for literacy. In Hall's view, the true nature of the child—which owed itself completely to heredity—would lead the child to achieve as much as he or she would be able to, without the interference of education.

Hall's belief in the power of heredity over instruction greatly influenced those who became his students at Clark University, such as Henry Goddard, who was an advocate of eugenics, and Lewis Termin, who revised the Binet intelligence test into the Stanford-Binet test. Hall's work and recommendations in this area are at odds with those today who strive for a postformal understanding of cognition that allows for intelligences and knowledges that are not honored by such tests or that differ from knowledges legitimized by middle class, white culture.

Developmental Psychology and the Child Study Movement

Hall's developmentalist approach came out of the belief that the study of child development was the most *scientific* approach to determining instruction, and was directly influenced by his study of psychology. This perception of pedagogical theory emerging from "scientific" research appealed to the increasingly science-obsessed world of academia. When he became president of Clark University Hall he founded a pedagogical "seminary" for the scientific study of education, out of which came the journal *Pedagogical Seminary* that later became the *Journal of Genetic Psychology*. Even earlier in his career Hall encouraged his colleagues and students to collect "scientific" data about children, their innate knowledge, and their physical and psychological development. He felt it was of the utmost importance and the highest achievement of a scientific understanding of education to get to the point where the school system would be aligned with the child's "nature and needs" rather than trying to force the child into aligning with the needs of the school system. He advocated the use of questionnaires to find out everything from what children entered school knowing to their habits and their fears. By 1915 Hall and his colleagues had developed 194 questionnaires by his own count.

Many of the questions that Hall had about the knowledge of children in industrial cities stemmed from his own childhood which he describes in his 1927 autobiography, *Life and Confessions of a Psychologist*, as bucolic. He considered it his good fortune to be born on a farm removed from even the closest village by more than a mile and exposed to the influences of the natural world throughout his childhood. In his 1883 work, *The Contents of Children's Minds*, Hall showed that the children of Boston had no idea of the natural world due to their urban experience and he proposed that classroom teachers made too many assumptions about what the children arrived understanding. In response to the popularity of Hall's work—a popularity which he attributed in part to the increase in urbanization and the problems that were arising for children, families, and schools in that setting—the National Education Association founded a Department of Child Study in 1894.

Sexist Psychology, Hall and Women

Though in his written work Hall mentions with respect many woman colleagues and students, he held some of the typical beliefs of the nineteenth century regarding women. Hall, like many men of his era, believed that too much study interfered with a woman's reproductive system. He was also concerned about the potentially detrimental psychological effect of the overwhelming presence of women in schools both as teachers and students during a male's adolescent years and advocated separation of the sexes for the upper grades. He wrote of psychology identifying pathological traits in adolescent girls, such as a penchant for deceit, and declares the stereotypical belief that

women are more full of intuition and intense emotion than men, in his 1904 work *Adolescence: Its Psychology and Its Relation to Physiology, Anthropology, Sociology, Sex, Crime, Religion and Education*. In the same work, Hall also recommended that courses in maternity and domesticity be given to most adolescent girls and suggests that too much interest in books bodes ill for a girl's development. However, he did allow that—for a few, exceptional girls—an education more like that given to boys could be considered.

Hall and the Committee of Ten

Hall vehemently criticized the 1893 report from the Committee of Ten which suggested that all students—whether likely to attend university or not—should be exposed to a high quality liberal academic education. Though two of the major figures on the Committee—Harvard President, Charles Eliot and then U.S. Commissioner of Education, W. T. Harris—were considered liberal and reformers in the field of education at one time due to their advocacy of “modern” subjects (such as the modern languages Italian and German), the Committee's findings were viewed by Hall as elitist and old fashioned. Hall was so offended by the recommendations of the Committee that he was still harshly criticizing them in his 1923 autobiography. Hall deeply believed that all students were not created equal in capability and that those who were not intended for college should not be exposed to learning that was overly academic. He advocated instead a differentiated curriculum that allowed each student to fully realize his or her ability to contribute to society based on his or her innate, hereditarily determined abilities and interests. Hall felt that there was a real danger of a sort of psychic burnout for those who had been made to go through higher academic institutions in spite of their true natures. He felt it was cruel to teach those whom he considered lacking in intellectual strength and went so far as to suggest that some students would be better off not going to school at all.

LEGACY OF HALL

Considering the influence of Hall's child study work and the fact that at one point over half of the Doctoral degrees given in psychology in the United States were given to those who had studied with Hall, it would be impossible to ignore the impact of his theories on the field of educational psychology. As stated above—major contributors to the fields of educational and general psychology such as Goddard, Terman, Gesell, and Dewey all studied with Hall. Certainly, the study of children within their day-to-day environment was pioneered by Hall, and, though losing favor to laboratory studies in the psycho-educational practice of the mid-twentieth century, it has now returned as a favored methodology. Those involved in educational psychology today are also taking a page from Hall's book when it comes to respecting teachers enough to allow them to add their observations and opinions to the conversation.

On the negative side, the either/or division that followed the report of the Committee of Ten is another legacy of Hall that plagues us today. Educators who have trained in a child-development-focused teacher education program may see nothing wrong with tailoring the school curriculum to the child or accepting the sentiment behind Hall's exhortation that a teacher should learn more from his or her students than he or she teaches them. But, under the current call for Standards and academic rigor there are those who would argue that this approach will ultimately damage certain children by denying them exposure to content knowledge valued by wider society. In her *Left Back: A Century of Battles of School Reform* (2000), Diane Ravitch attributes the diminishment of the status of the academic curriculum in large part to Hall's child study movement and suggests that tendencies to romanticize and mysticize childhood and learning stem from Hall's views. For those educators on both sides of the “child-centered” fence as well as those who are committed

to finding a balance between academic rigor and the needs of the child, there is a shared concern of the legacy of Hall's plan for a differentiated curriculum—particularly how it has been applied on the basis of race or ethnicity, class or gender. The “scientific” tests so widely depended on by the psycho-educational community for so many years to determine the correct placement of the child in school are considered by many to be inherently biased. Unfortunately, in spite of criticisms in recent years which point out the disproportionate amount of children of color in special education classes or vocational schools, tracking according to perceived ability is still the norm and much of the criteria used by those involved in the study of children in education is still reliant on unexamined, tacit understandings of normal behavior, cognition, and psychological development.

CONCLUSION

We who are living and teaching in the early twenty-first century are facing many of the same issues that Hall and his colleagues faced a century ago. Once again we are faced with a changing economic base, causing a renewed discussion of the best way schools can contribute to student job readiness. Once again the increased volume of immigration is spawning discussions around citizenship education and the teaching of English and flooding schools with children who come with different knowledges and understandings. The field of educational psychology is perfectly placed to examine the new needs and developments that will arise under these conditions, but we must be vigilant against bias and uncritical assumptions. We must remember that Hall's ideas which today are viewed as misguided were taken by many as sound scientific approaches in Hall's time. Today, the science of genetics has replaced the “science” of eugenics, but questions of hereditary capabilities are reemerging in the psycho-educational discussion of performance gaps between students of different backgrounds. The fact that Hall's educational and psychological philosophies are so obviously influenced by his own background and the social and scientific beliefs of his time serves as a good reminder of the need to examine the epistemological and ontological underpinnings of any psycho-educational approach we adhere to, including ones of our own development.

REFERENCES

- Hall, G. S. (1883). *The contents of children's minds*. In *Princeton review, May 1883*, Vol. 11. pp. 249–272.
- Hall, G. S. (1994). *Adolescence: Its psychology, and its relations to physiology, anthropology, sociology, sex, crime, religion and education*. NY: D. Appleton and Co.
- Hall, G. S. (1917). *Jesus, the Christ, in the light of psychology*. NY: D. Doubleday, Page.
- Hall, G. S. (1927). *Life and confessions of a psychologist*. NY: D. Appleton and Co.
- Kincheloe, J. (2001). *Getting beyond the facts: Teaching social studies/socialsciences in the twenty-first century*. NY: Peter Lang
- Ravitch, D. (2000). *Left back: A century of battles over school reform*. NY: Touchstone-Simon and Schuster.

CHAPTER 13

Sandra Harding

FRANCES HELYAR

As should be obvious by examining the biographies of its leading theorists and practitioners for over a hundred years, the discourse of educational psychology is white, male, and European. This does not mean that in all that time, no one outside of the dominant discourse has had anything to say, but only that those voices have not been heard. Instead, ed psych has developed into one of the most monocultural and positivistic of all the sciences. The study of human beings in school has been reduced to a narrow range of questions within a closely guarded discipline. Differences have become deficiencies. Knowledges arising from indigenous cultures, women, working classes, homosexuals, nonwhites, and the Southern Hemisphere, among others, have not been permitted to impact research agendas. The research questions that are pursued tend to value particular ways of knowing while other epistemologies are marginalized and labeled as folk wisdom. The implications for marginalized groups is that their members become, by definition, “abnormal” and are then shut out of opportunities and privileges accorded to those who fit the definition of “normal.” Knowledges that are valued are called “the truth”; those determined to be lacking value are “false.” It does not have to be this way, however. Since World War II and more frequently since the 1970s, theorists have begun to identify the constructed nature of what is considered objective and rational in science, and the constructed nature of science itself. They are redefining “good” research methods and coming up with a new paradigm that allows previously silenced voices to be heard. They acknowledge the importance of complexity in arriving at an epistemology of ed psych that is useful and applicable to a broader range of populations than was previously possible under the old paradigm.

Sandra Harding is at the forefront of this redefinition of science. Harding is a professor of Social Sciences and Comparative Education at UCLA, and the director of the UCLA Center for the Study of Women. She received her PhD in philosophy from New York University, and specializes in feminist and postcolonial theory, epistemology, research methodology, and philosophy of science. Her work, in particular the book *Is Science Multicultural? Postcolonialisms, Feminisms and Epistemologies* (1998) offers a valuable example of a way to dismantle the assumptions and conventions of positivist science, a process that can be applied, by extension, to educational psychology. She examines the alterations in scientific method brought about by social change

since the 1970s and the resulting redefinition of objectivity and rationality. The implications for scientific study are great, and Harding argues that since World War II, a kind of new scientific revolution has occurred. Because educational psychology is so entrenched as a discipline, the impact of the revolution has been slow to materialize, but the chapters in this volume clearly aim to speed the process.

Harding, with her particular focus on feminism and postcolonial theory, uses a number of tools to accomplish her reconceptualization of science. These include historiography, an examination of the gaps between dominant and marginalized epistemologies, an interrogation of the power structures inherent within a discipline, identification of the assumptions behind given epistemologies, and identification of the structures and organizations of the original conceptualization. Harding's intention is to create a strategic map of the terrain of science and technology, but not *the* map, in order to encourage dialogue where formerly there was no room for discussion. This is the caveat Harding places on her work: "I do not claim truth for the narratives and claims that follow, but rather that they can prove useful in opening up conceptual spaces for reflections, encounters and dialogues for which many seem to yearn" (Harding, 1998, p. 1). This assertion alone places her outside of the realm of the positivists, providing an antidote to the "one truth" notion of science that tends to shut down rather than encourage discussion. The dialogue is what is important. If, as Harding writes, "Some knowledge claims are more powerful than others" (p. x), then the goal is to shift the balance to bring the marginalized knowledge claims closer to the center, not necessarily to usurp, but at the very least, to share the power.

It must be acknowledged that discussions about issues of race, class, gender, or postcolonialism cannot treat each as a discrete entity; class always impacts race, postcolonialism has a gendered aspect, and so on. This complexity is a hallmark of any epistemology, although the positivistic sciences would have it otherwise.

STANDPOINT THEORY AND BORDERLANDS EPISTEMOLOGY

A central feature of Harding's reconceptualization of science is her adaptation of standpoint theory, which she defines as "an objective position in social relations as articulated through one or another theory or discourse" (Harding, 1998, p. 150). She is careful to explain that she is not talking about biases, and standpoint is not the same as viewpoint or perspective, because with these, the paradigms of science remain unchanged and the lens of difference is merely superimposed. Identifying the presence of women in the research laboratory, an emancipatory event does not represent a change if the research the women do follows the old paradigm. Rather, standpoint theory uses assumptions associated with particular ways of thinking as the point of origin for inquiry. Both science and political struggle are involved, because it is necessary to examine the structures of social life. Educational psychology assumes a Western structure. Its practices, definition of problems to be solved, identification of normal, abnormal, and acceptable tools and solutions, all fall within a strict paradigm. The question in moving beyond that paradigm, then, becomes not, for example, "What effect does adding a postcolonial feminist perspective have on ed psych?" but "What does ed psych look like if it begins within a postcolonial feminist epistemology?" An additional question is, "How has the dominance of the monocultural, positivistic standpoint impacted ed psych?" Research projects that have as their starting points issues in the lives of marginalized groups look very different from those springing from the standpoint of a dominant group, and definitions of knowledge and ignorance are similarly diverse. Standpoint theory is meant "to help move people toward liberatory standpoints, whether one is in a marginalized or dominant social location. It is an achievement, not a 'natural property,' of women to develop a feminist standpoint, or a standpoint of women, no less than it is for a man to do so" (Harding, 1998, p. 161).

The achievement of a standpoint, by Harding's definition, involves moving away from the center of traditional thought to the borderlands. Kincheloe (2001) describes the way Piagetian accommodation (the restructuring of one's cognitive maps to deal with an unanticipated event), when combined with the Frankfurt School's negation involving criticism and reorganizing of knowledge, creates a new epistemology. He uses the example of teachers who reach new definitions of intelligence by observing the sophisticated thinking displayed in other contexts by children who score low on intelligence tests. "Picking up on these concerns, teachers would critically accommodate nontraditional expressions of intelligence that would free them from the privileged, racially and class-biased definitions used to exclude cognitive styles that transcended the official codes" (Kincheloe, 2001, pp. 246–247). This represents a move toward the borderlands to which Harding refers.

HISTORIOGRAPHY

The origins of educational psychology as a discipline separate from the main branch of psychology can be traced back to the mid to late nineteenth century. Its development and fragmentation from the Herbartian model, through pragmatism, behaviorism, cognitivism, and a host of other "isms" reflects the dynamic nature of the study of teaching and learning. The dominance of a theory at any given time, however, can be directly traced to the societal preoccupations of that time, illustrating the constructed nature of the field. The Herbartians gained a foothold at a time in the nineteenth century when scientific study and the notion of objective, rational thinking was gaining ascendancy. Thorndike's ideas about intelligence and the possibility of its measurement nicely dovetailed with an increasingly industrialized society in which the early classification of workers would create smooth-running factories. Intelligence testing also eased the process of military recruitment during World War I, creating identifiable officer and militia corps. Behaviorism dominated ed psych for many years, and its impact is still felt in the twenty-first century in the continued reliance on testing and measurement to determine students' aptitude and achievement. The recessive branches of ed psych including pragmatism, constructivism, and humanism, while gaining some cachet during the twentieth century, suffered from being labeled unscientific, or subjective.

In her historiography, Harding cites cases where scientific research was clearly not intended to benefit the general population, but was instead a means of rewarding an elite. This is exemplified in ed psych where the purpose of study is to identify deficiencies instead of differences, creating normal and abnormal groups. Benefits then accrue to the normal, while the abnormal are problematized. For example, not everyone benefits from the notion of measurable IQ. Generally, those who benefit are those who are deemed by the test to be intelligent, and they don't need to think about the consequences of being judged deficient. The debate as to why this question and not that one is contained in the test, and questions as to how achievement and learning are defined, are not part of the discussion. Feminist and postcolonial discourse thus point to holes in this dominant strain of ed psych. Harding asks if social progress for humanity is social progress for women, or even for all men (Harding 1998). If the purpose of testing is to assign individuals to their "proper place" in society, how progressive is it to relegate them to a place where they cannot earn a living wage or afford decent housing?

GAPS BETWEEN DOMINANT AND MARGINALIZED EPISTEMOLOGIES

Harding refers to postcolonial feminisms, not feminism. The distinction is important, because use of the plural recognizes that gender, class, and race are all intertwined. The issues faced by a middle-class white girl in a North American suburb are different from those encountered by a

poor lower-caste girl in an Indian city, and are different from those of a nomadic girl in sub-Saharan Africa. In addition, Harding describes the inherently masculine nature of eurocentric science. Her point is not that science failed to address women's issues, but that objectivity and rationality were inherently identified as positive and masculine, and then idealized as human, whereas women's ways of knowing were pathologized as subjective, irrational, negative, and subhuman. The antidote, according to Harding, is creative postcolonial feminisms that utilize a diverse set of approaches and tools, thus broadening scientific inquiry to include multiple cultures and practices. A postcolonial feminist ed psych also questions the universality of knowledge derived from narrowly structured investigations, preferring to address "the embodied knowledge that develops through daily activities" (Harding, 1998, p. 115).

It is important, Harding says, not to think of postcolonialism as monolithic. It is not one thing, but rather it is a way of opening up discursive space in which to examine the changes, both social and historical, in science and technology. The result is a "strong objectivity" that recognizes the historical and societal origins of knowledge claims, and recognizes that all claims are not equally valid. By examining knowledge claims for their usefulness to all peoples' lives, and not just those who benefit from the knowledge, a "robust reflexivity" offering plausible evidence for claims is possible.

ASSUMPTIONS

The assumptions of traditional educational psychology are closely connected to Cartesian–Newtonian–Baconian epistemology. Educational psychology is a grandchild of the Enlightenment, and the dominant stream of ed psych draws heavily on Cartesian, Newtonian, and Baconian thought. René Descartes separated the physical world from the internal world of the mind. Sir Isaac Newton upped the ante by further establishing the predictability of cause and effect, regardless of context. Completing the trio, Sir Francis Bacon identified the supremacy of reason over imagination. The influence of these three philosophers is evident throughout the development of ed psych. A child's physical hunger is presumed to have no impact on cognition. The study of phonetics is presented as the only way a child will learn to read, which is later replaced by whole language as the only way to go. Wait a few years and a new theory will dominate.

STRUCTURES AND ORGANIZATIONS

The structure of educational psychology is inherently Western. The "expert" psychologist identifies a "problem" to be solved, and uses a limited kit of tools to work this magic. The behaviorist and the cognitivist, for example, work within a narrow range of beliefs and assumptions that inform the methods used and the results anticipated. This compartmentalization precludes the recognition of complexity; in fact complexity is seen as an impediment to achieving valid results. These psychologists avoid the use of the classroom as a laboratory; the results are simply too messy, and not quantifiable.

The "cult of the expert" in ed psych is characterized by simple informational flows: once the problem is defined, the data is drawn from the student; the psychologist develops the interpretation, comes up with a possible solution, and this information is then fed back to the teacher and the parents. Clear distinctions are drawn between the researcher and the researched. The results of the research may be published in scholarly journals, shared with administrators and policy makers, or discussed between experts, but rarely are the teachers, the parents, or students themselves invited to respond to or question the findings in which they were so intimately and critically involved. The data assumes a sacred quality that is not to be questioned. Research in this paradigm is not a partnership, it is a one-way street, and the result is not necessarily improvement in the life of those

studied, but only in the life of the psychologist whose career is advanced. In contrast, a postcolonial feminist approach develops out of questions identified not by the expert, but by the teacher, the parent, or the student. Thus in keeping with standpoint theory, the origin of the research is in the community, not with the researcher (Smith, 2004). The form that the research takes is negotiated, not imposed.

Harding delineates internalist and externalist scientific epistemologies, and others that represent a move beyond the first two. Internalism is the dominant epistemology, and it assumes that there is only one science, reflecting a nature that is “out there” and reproducible. Proponents of internalist science believe that attempting to achieve such a perfect reproduction, the pursuit of “one truth,” is a valuable goal for scientific inquiry. Creators of tests who assume that they can identify an individual’s intelligence and that this measurement is fixed for life represent an internalist epistemology. Externalism rejects this position as reductionist, particularly in its adherence to the notion that scientific method is the only method of obtaining knowledge. Social politics is what creates scientific claims, they say, and nature plays no part. Harding identifies reduction in externalism, however, and describes an even broader epistemology that includes science and culture continuously evolving together, with an emphasis on the way that “systematic knowledge-seeking is always just one element in any culture, society or social formation in its local environment, shifting and transforming other elements” (Harding, 1998, p. 4).

Related to this coevolution is Harding’s assertion that it is too simplistic to identify European and non-European science as distinct from each other, or that in a colonial context, knowledge flowed only one way. The knowledge of each has informed the other, she says, since the time of first contact, and a postcolonial science should reject the association of rationality with Western thought, and bias and irrationality with the non-Western.

Harding outlines five types of eurocentrism saying, “good intentions and tolerant behaviors are not enough to guarantee that one is in fact supporting anti-eurocentric beliefs and practices” (Harding, 1998, p. 13). The overt eurocentric, for example, rejects outright as illogical a definition of intelligence that includes intuition. The covert eurocentric, in contrast, cites studies about intelligence in dismissing the inclusion of intuition. Harding also describes institutional, societal, and civilizational or philosophical eurocentrism. Institutional eurocentrism results, for instance, when departments of ed psych reject epistemologies outside of the traditional paradigm, and discourage students from investigating those epistemologies. Societal eurocentrism is the consequence when institutional practices become part of social assumptions. Civilizational or philosophical eurocentrism, according to Harding, is the most difficult to identify because “they structure and give meaning to such apparently seamless expanses of history, common sense, and daily life that it is hard for members of such ‘civilizations’ even to imagine taking a position that is outside them” (Harding, 1998, p. 14). Contrary positions, which may examine issues that are central to the lives of women or non-Europeans, are seen as irrelevant.

Different researchers have different questions about how children learn, but who gets funding and who gets published depends on the prevailing notion of what is interesting and what is important. The post-Sputnik scramble to improve American achievement in math and science as represented by the National Defense Education Act of 1957 is just one example of this tendency. The size of the educational testing industry is another. What are presented as the ways children learn will depend upon whatever theory of ed psych is prevalent at any given time, be it behavioral, cognitive, progressive, humanist, or other. Harding points out that while observations about the way social interests shape scientific questions are not controversial, what is controversial is “to claim that science, real science, includes the choice of scientific problems; to point out that the cognitive content of science is shaped by and has its characteristic patterns of knowledge and ignorance precisely because of problem choices” (Harding, 1998, p. 66). To the skeptic looking for one true science, Harding responds that science is not a jigsaw puzzle for which there is

only one correct arrangement of pieces. Data or theories may have multiple explanations that are reasonable, and this is what provides science with its potential for growth. In conventional Cartesian epistemology, however, the possibility of multiple explanations is equated with error and relativism. The idea that truth is not absolute and may depend on context is anathema.

CONCLUSION

If we come, as always, to the dilemma of whether the baby should be thrown out with the bathwater, Harding responds with a no. The epistemology of modern science, she says, should be an important part of a new science.

The question should be not how to preserve as if carved in stone or else to completely reject the European legacy, but rather how to update it so that it, like many other 'local knowledge systems,' can be perceived to provide valuable resources for a world in important respects different from the one for which it was designed. (Harding, 1998, p. 125)

A "new 'objectivity question' " recognizes that whether the observer knows it or not, observations are always accompanied by the baggage of theory. Where in the past the question was "Objectivity or relativism? Which side are you on?" (Harding, 1998, p. 127), a new paradigm examines the epistemology in which that question is posed, and asks which definitions of objectivity among many are preferred. The choice is political because science, like education, is always political. There is no such stance as neutral. A scientific procedure that is identified as "normal" serves to define "the objections of its victims and any criticisms of its institutions, practices, or conceptual world as agitation by special interests that threatens to damage the neutrality of science and its promotion of social progress" (Harding, 1998, p. 133). New objectivity examines the assumptions and interpretive dimensions of research methods, recognizing that science is a socially, not individually constructed activity.

Educational psychology, like all of science, is a work in progress. For its practitioners to assume that it will not change is at best, naïve, and at worst, harmful. But it's not a question of all or nothing, the old paradigm or the new. As Harding makes clear, science does not and has never existed in a vacuum. It cannot help but be impacted by its contact with feminist, postcolonial thought; in fact the history and development of science shows its hybridity. The same is true of ed psych. As the discipline interacts with non-Western, non-Northern epistemologies, the resulting new paradigms represent a change for the better, a change that will benefit those who were previously merely labeled deficient.

REFERENCES

- Harding, S. (1998). *Is Science Multicultural? Postcolonialism, Feminism, and Epistemologies*. Bloomington, IN: Indiana University Press.
- Harding, S. (1991). *Whose Science? Whose knowledge? Thinking from Women's Lives*. Ithaca, N.Y.: Cornell University Press.
- Kincheloe, J. L. (2001). *Getting Beyond the Facts: Teaching Social Studies/Social Sciences in the Twenty-first Century* (2nd ed.). New York: Peter Lang.
- Kliebard, H. M. (1995). *The Struggle for the American Curriculum: 1893–1958* (2nd ed.). New York: Routledge.
- Smith, L. T. (1999). *Decolonizing Methodologies: Research and Indigenous peoples*. London: Zed Books.
- Spring, J. (2005). *The American School: 1642–2004* (6th ed.). New York: McGraw-Hill.
- Webb, L. D. (2006). *The History of American Education*. Upper Saddle River, N. J.: Pearson.

CHAPTER 14

bell hooks

DANNY WALSH

My most passionate engagement with bell hooks came to light during a reading of *All About Love: New Visions* (hooks, 2001), a text not usually associated with schooling. In this work, hooks challenges what we are taught about love and how to love in a cultural milieu founded upon patriarchal, sexist, and racist ideologies. I read *All About Love* at a time when I doubted my ability to connect with others on any meaningful level, at a time when I recognized that I used silence and withdrawal as a weapon just as it had been used in the patriarchal, psychologically and physically violent home of my youth. hooks's alternative vision of love—a love rooted in a combination of care, commitment, knowledge, responsibility, respect, and trust—and her critique of a white, supremacist, capitalist patriarchy that creates and sustains lovelessness enabled me to see that although I was cared for in many ways and felt I would not be abandoned, I could neither offer nor receive authentic love. I wondered about my personal experiences with patriarchy and my subsequent inability to give and receive love and how such experiences reflected a society in which disconnection, domination, competition, and individualism ruled the day. Moreover, I questioned how such a history of domination reared its head in my teaching and learning. I associate this text with schooling and education because it is inextricably linked to the notion of cultural pedagogy—a recognition of the learning processes that occur in a myriad of locations, both in and outside of school buildings. Perhaps more important, hooks's alternative vision of love forces educators to confront the role of love in schooling, pedagogy, and our culture at large.

As a cultural critic and radical educator, hooks relentlessly challenges and presents alternative visions of a society grounded in white, supremacist, capitalistic patriarchy. I feel that my way of teaching and being in the world is profoundly connected to bell hooks and her role in the radicalization of my thinking. In essence, she has provided me with much of the intellectual sustenance needed to challenge the racist, classist, sexist, heterosexist, capitalistic, and patriarchal foundations of schools, classrooms, and society. I believe that she has done the same for many people and therefore the implications of her work for the reconceptualization of educational psychology are profound.

hooks often recounts her transition from segregated to integrated schools in the apartheid South to juxtapose two vastly different experiences with education. Born into a poor rural community in Kentucky in 1952, she remembers the segregated schools of her childhood as a place where black

teachers taught black students through life in the black community—a practice that necessarily incorporated antiracist and liberation struggle pedagogy. However, with desegregation into white schools, “knowledge was suddenly about information only,” teaching was disassociated from “respect and care for the souls of students,” and learning was distanced from knowledge of “how to live in the world” (hooks, 1994). This disjunction between lived experiences and schooling and disjunctions among the mind, body, and soul would follow her, with exceptions, to her undergraduate days at Stanford and graduate school at the University of Wisconsin, Madison, and the University of California, Santa Cruz. Many of her transgressive acts—being “bad” in the academy by challenging dominant cultural constructions and conventionally approved ways of thinking and knowing—as both student and teacher emanate from her visions for democracy, equity, and justice. She has been “inspired by those teachers who have had the courage to transgress those boundaries that would confine each pupil to a rote, assembly-line approach to learning” (hooks, 1994). It is this courage that she carries into her own teaching, first as a graduate student, then as an assistant/associate professor at Yale University and Oberlin College, and finally to her resignation from the academy as a distinguished professor at The City College of the City University of New York. With the radical notions that teachers should care for their students’ souls and that theoretical knowledge should be inextricably linked to knowledge of how to live in the world, hooks argues for a pedagogy and an educational psychology that is engaged, transformative, liberatory, and culturally responsive.

Reintegrating body, mind, and soul and reconnecting theory to practice in schooling are transgressive, counterhegemonic acts that deeply challenge formalistic thinking. “The erasure of the body encourages us to think that we are listening to neutral, objective facts, facts that are not particular to who is sharing the information” (hooks, 1994). The reverence of neutrality, objectivity, and rationalism upon which Western science rests demands that components be isolated from the systems that they comprise: the mind can therefore be separated from the body; social structures can be removed from schooling; and race, class, gender, language, and sexual orientation have nothing to do with how learners perceive the world. Knowledge is a stable, predictable, “out there” thing waiting to be discovered and teachers facilitate its discovery through information giving. In *The Stigma of Genius: Einstein, Consciousness, and Education*, Joe Kincheloe, Shirley Steinberg, and Deborah Tippins (1999) contend that reductionistic Western science asserts that all aspects of complex phenomena can best be understood through a process that essentially centrifuges constituent parts and then pieces them back together according to causal laws. Just as Newton separated time, space, matter, and motion, formalistic thinking in schooling separates the social, the political, and the economic from the mind, intelligence, and performance in school. Applying scientific, formalistic processes such as these to education results in nothing short of disengagement by teachers and students, reinforcement of the status quo, and subjecting all students to predetermined, ahistoricized, and purified (whitened) knowledge. Has this scientific approach to education—one that reduces knowledge to memorizable factoids, one that distances teachers and students from each other and the curriculum, one that isolates school from society—been maintained in order to prevent schooling from becoming dangerous, from becoming a place where transgressive and counterhegemonic acts are allowed to occur?

Classrooms and schools are always and already inscribed with power: they are politicized and contested spaces that reflect a struggle for culture production, which includes the production of knowledge. In these contested educational spaces, sanctioned ways of being and knowing (those that reflect the dominator) render some students more visible and more easily heard than others. hooks calls for a radical pedagogy grounded in presence through which classrooms become spaces that acknowledge teacher and student positionality, require shared personal experiences that are linked to theory, and demand inclusion. This is a particular type of multiculturalism, one that “compels educators to acknowledge the narrow boundaries that have shaped the way

knowledge is shared in the classroom. It forces us all to recognize our complicity in accepting and perpetuating biases of any kind" (hooks, 1994). Through an exploration of the origins of knowledge, whose knowledge is shared, as well as the manner in which knowledge is presented, it becomes more possible and more probable that the voices of those who have historically been excluded and subjugated will emerge. However, "many teachers are disturbed by the political implications of a multicultural education because they fear losing control in a classroom where there is no one way to approach a subject—only multiple ways and multiple references" (hooks, 1994). It is not difficult to detect Western science's imprint on this desire for a certainty and predictability that create less contentious spaces.

A search for certainty necessarily eliminates diverse perspectives related to students' experiences. Often personal talk in the classroom, particularly in higher education, is viewed as distraction from the theoretical tasks at hand. Or, the theoretical is viewed as having no place in students' lived experiences. There is a disconnect. If from many teachers' perspectives, myself included, narrative and autobiography appear to have a powerful impact on academic and emotional growth, that is, they not only contribute to the cognitive complexity of a topic but also increase a sense of belonging and community that is so crucial to many students' success, why has the experiential been resisted so strongly? In the most simplistic term, I believe this returns us to the notion of fear—fear of knowing others and being known by others; fear of the passion that diverse, contradictory perspectives might incite; and fear of changing an entrenched way of teaching. While such fears cannot be completely eliminated (this may not even be desirable), they dissipate somewhat with an engaged pedagogical practice that encourages community building in the classroom as a way to recognize the value of individual voices. "Any radical pedagogy must insist that everyone's presence is acknowledged," yet "that insistence cannot be simply stated. It has to be demonstrated through pedagogical practices" (hooks, 1994). Another component of the fear of knowing and being known is that the sense of belonging that it can potentially create might lead teaching and learning to become pleasurable and loving acts. "Pleasure in the classroom is feared. If there is laughter, a reciprocal exchange may be taking place" (hooks, 1994) and such reciprocity, pleasure, and enjoyment might lead to an atmosphere of love, an avoided and somewhat dangerous topic in education because loving students and being loved by them is suspect.

hooks's engaged pedagogy "is rooted in the assumption that we all bring to the classroom experiential knowledge, that this knowledge can indeed enhance our learning experience" (hooks, 1994). It affirms presence, the right to a voice, and value of difference. "It's as though many people know that the focus on difference has the potential to revolutionize the classroom and they do not want the revolution to take place" (hooks, 1994). Difference entails the acknowledgment of the race, class, gender, sexual orientation, and ideological positions that we occupy because this positionality determines the consciousness that defines our experiences. Consciousness is a cultural, social, and political construct that cannot be separated from power. "The unwillingness to approach teaching from a standpoint that includes awareness of race, sex, and class is often rooted in fear that classrooms will be uncontrollable, that emotion will not be contained" (hooks, 1994). Again, we fear what we cannot control, what we cannot quantify, what requires us to engage in a true dialogue in which we are open to mutual change.

Willingness to engage with others in the difficult work of transforming a culture based upon white supremacy, domination, and patriarchy becomes more possible when we create a community dedicated to dialogue and change. "We need to generate greater cultural awareness of the way white-supremacist thinking operates in our daily lives. We need to hear from the individuals who know, because they have lived anti-racist lives, what everyone can do to decolonize their minds, to maintain awareness, change behavior, and create beloved community" (hooks, 2003). Classroom communities that reflect counterhegemonic content and processes have the potential to link body,

mind, and soul as well as theory and practice, and to create a place “that is life-sustaining and mind-expanding, a place of liberating mutuality where teacher and student together work in partnership” (hooks, 2003). Such communities traverse the secure territory of what is to arrive at, what could be, a place of potentiality. Border crossing is possible because these classrooms challenge the status quo and create spaces of hope in which a culture of domination is not the norm.

“Teachers are often among that group most reluctant to acknowledge the extent to which white-supremacist thinking informs every aspect of our culture including the way we learn, the content of what we learn, and the manner in which we are taught” (hooks, 2003). We are entrenched in the hegemonic processes that discourage us from becoming radical educators and engaged pedagogues who see what could be over what is. Through our own experiences with schooling rooted in Western scientism and rationality, we see mind, body, and soul as separate entities and the theoretical disconnected from the practical. Often unbeknownst to us, we collude with the existing system, “even those among us who see ourselves as anti-racist radicals. This collusion happens simply because we are all products of the culture we live within and have all been subjected to the forms of socialization and acculturation that are deemed normal in our society. Through the cultivation of awareness, through the decolonization of our minds, we have the tools to break with the dominator model of human social engagement and the will to imagine new and different ways that people might come together” (hooks, 2003). Acknowledging the different ways of knowing and being in the world that result from the uniqueness of our racial, gendered, social, political, economic, linguistic, and sexual viewpoints allows for the creation of a radical type of community where “when we stop thinking and evaluating along the lines of hierarchy and can value rightly all members of a community we are breaking a culture of domination” (hooks, 2003). As alluded to above, redefining love also allows us to sever our ties with a dominator culture. hooks writes, “To be guided by love is to live in community with all life. However, a culture of domination, like ours, does not strive to teach us how to live in community” (hooks, 2003). Divisiveness and disconnection—students from each other, teachers from students, students and teachers from the curriculum and knowledge production, and *even from themselves*—better serve a capitalist patriarchy founded upon white supremacy, because such a disconnect removes contestation from schools and classrooms; teachers are simply presenting predetermined knowledge to be consumed unquestioningly, thereby rendering classrooms safe, secure, and whitewashed spaces.

Indeed our culture teaches us that disconnections such as those listed above are necessary for academic excellence. “Many of our students come to our classrooms believing that real brilliance is revealed by the will to disconnect and disassociate. They see this state as crucial to the maintenance of objectivism. They fear wholeness will lead them to be considered less ‘brilliant.’ . . . The assumption seems to be that if the heart is closed, the mind will open even wider. In actuality, it is the failure to achieve harmony of mind, body and spirit that has furthered anti-intellectualism in our culture and made of our schools mere factories” (hooks, 2003). The factory metaphor conjures up images of repetitive, lifeless mass production in which workers are sorted, lined up, and do not deviate from their prescribed roles so that profit is maximized and resistant behavior minimized. Moreover, workers are separated from conceptual development and creativity as they perform isolated tasks devoid of the contextualization reserved for the managerial class. Once again we can decipher Western scientism’s influence. The factory model as applied in both business and school sanctions the optimal amount of control and predictability so that the contestation and subsequent negotiation inherent in any community might be eliminated. Ultimately attempts at such control result in antidemocratic practices because true democracy requires recognition of power differentials that exist in a society enculturated with hierarchy and domination.

Despite such deep-rooted structures, many students and teachers defy the culture of domination through transgressive, hopeful acts that promote counterhegemonic ways of being and knowing that willingly surrender to complexity and diversity of a beloved community. hooks states, "To me the classroom continues to be a place where paradise can be realized, a place where all that we learn and know leads us into greater connection, into greater understanding of life lived in community" (hooks, 2003). Her prophetic imagination reminds us "that what we cannot imagine we cannot bring into being" and that "what must be takes priority over what is" (hooks, 2003). This imagination has the potential to reconnect what has long been severed and to force us to confront what we fear. "Dominant culture has tried to keep us all afraid, to make us choose safety instead of risk, sameness instead of diversity. Moving through that fear, finding out what connects us, reveling in our difference; this is the process that brings us closer, that gives us a world of shared values, of meaningful community" (hooks, 2003).

As Joe Kincheloe writes in the introduction to this text, "Cognitive activity, knowledge production, and the construction of reality are simply too complex to be accomplished by following prescribed formulae. The reductionistic, obvious, and safe answers produced by formalist ways of thinking and researching are unacceptable to postformalists." In this light, hooks's scholarly contributions to postformalist educational psychology are clear and profound. Her call for engaged and transformative pedagogy, new conceptions of love, and the creation of beloved, hopeful community demand connections between the knower and known and compel ways of knowing to change our ways of being in the world. Prescribed, formulaic approaches to teaching, learning, and knowledge have created chasms among all aspects of education and schooling and seek to disguise the impact of power on what has been sold as objectivity. Above all, I contend that it is hooks's delving into the critical ontological realm that has contributed to postformalism. Again, from the introduction to this text, "In a postformalist critical ontology we are concerned with understanding the sociopolitical construction of the self in order to conceptualize and enact new ways of being human." For hooks, new ways of being human are inextricably linked to transgressive, counterhegemonic, countercultural acts that offset white supremacy and patriarchy. Construction of the self occurs in a complex dance with others. "Living on the borderline between self and external system and self and other, learning never takes place outside of these relationships." hooks dares to imagine a psychological world in which relationships are crucial and in which challenge to the external system is critical for change. Without an excavation of the processes of knowledge production, knowledge loses its eroticism and passion, becoming sterile and fixed. Developing beloved community reintroduces the connectedness necessary for education psychology to become both life affirming and sustaining.

REFERENCES

- hooks, b. (1994). *Teaching to Transgress: Education as the Practice of Freedom*. New York: Routledge.
- . (2001). *All About Love: New Visions*. New York: Harper Paperbacks.
- . (2003). *Teaching Community: A Pedagogy of Hope*. New York: Routledge.
- Kincheloe, J., Steinberg, S., and Tippins, D. (1999). *The Stigma of Genius: Einstein, Consciousness, and Education*. New York: Peter Lang.

CHAPTER 15

William James

FRANCES HELYAR

William James's career may best be conceptualized as a bridge. His many biographers point out the way his work serves to link the nineteenth and the twentieth centuries, Europe and the United States, Darwin and Freud, the ancient realm of philosophy and the new world of psychology, and professional and popular audiences. There are a number of ways to gauge the importance of his work, including the "firsts" he accomplished, the dominance in the field of educational psychology of several of his students, and the influence he still exerts on his theoretical descendents. He lived in the company of the well-known and the yet-to-be famous thinkers of his lifetime: the novelist Henry James was one of his brothers; their father counted among his acquaintances Thomas Carlyle, Ralph Waldo Emerson, and Henry David Thoreau; among James's friends were Charles Peirce and Oliver Wendell Holmes; his sometime dinner companions included Carl Jung, Sigmund Freud, and John Dewey; and among his students were G. Stanley Hall, Edward Thorndike, and W.E.B. Dubois. William James's major works are still in print over a hundred years after their first publication and while in some ways his work represents a narrow view of the world, reflecting his privileged upbringing and professorial career, his writings are examined and interpreted to this day. It is a mark of the complexity of his contribution to educational psychology that direct lines may be drawn at the same time from James to the behaviorism of Thorndike, and the phenomenology of Husserl (Feinstein, 1984; Edie, 1987; Cotkin, 1990). In this way, James stands both in opposition to and as a precursor of postformalism.

THE LIFE

William James was born in 1842 to a wealthy New York family with recent roots in Ireland. James's father had strong views on education and mysticism (James's biographer Howard Feinstein calls the elder James a "renegade theologian" [p. 15]). The main result seems to have been that between 1855 and 1858, and again in 1859–1860, Henry Sr. removed the entire family of five children to Europe in order to give them an education in the senses. This trans-Atlantic journey was one William would take repeatedly during his lifetime. Family biographer F. O. Matthiessen says William resented his self-perceived "lack of exact discipline" (p. 73), a consequence of

attending so many different schools as a child. James's first career choice was artist, with Eugene Delacroix his favorite painter. He suffered from depression for most of his life, and by the age of nineteen he had abandoned his artistic ambitions to enroll in the Lawrence Scientific School at Harvard. While Charles William Eliot was his chemistry teacher and mentor, the scientist Louis Agassiz made an even greater impression on the young man. After James enrolled in Harvard Medical School, he accompanied Agassiz on a research voyage to Brazil, and it was this experience that led to his decision to abandon natural science for the study of philosophy. James graduated with an MD in 1869; it was the only degree he ever earned (Matthiessen, 1961).

At the invitation of Eliot, by then the president of Harvard, James began a long career at that institution by becoming an instructor in anatomy and physiology in 1872. James's biographer Gerald Myers (1986) says the combination of those two streams of science served the young professor well in preparation for his future work, since in those early days, the field was known as "physiological psychology" (p. 5). Meanwhile, biographer Paul Woodring describes James's 1876 offering of a course by that name, the first of its kind in the United States and one of the first in the world (p. 10). In 1878, James was contracted to write his *Principles of Psychology*. The work was delivered in installments to the publishers, and finally published in 1890. It became a seminal text, with the full edition known to generations of students as "The James" and the shorter version as "The Jimmy." James gave a series of talks to a group of teachers in Cambridge, Massachusetts, in 1892, and the text of those lectures was published as *Talks to Teachers* (1899/1958), arguably the first educational psychology textbook. During his lifetime, James was elected president of both the American Philosophical Association and the American Psychological Association, and in addition to his professional presentations, he gave numerous public lectures. Toward the end of his life, he became increasingly interested in mysticism and spiritualism. William James married Alice Howe Gibbens in 1878, and biographer Daniel Bjork says the influence of Alice on James's career is underrated, while that of Henry James Sr. is overstated (1988, p. xv). Together, the couple had five children. William James resigned from Harvard in 1907 and died in 1910. The headline of his August 27th *New York Times* (1910) obituary reads "Virtual Founder of Modern American Psychology, and Exponent of Pragmatism and Dabbled in Spooks," the latter referring to James's enthusiasm for séances.

William James gained a wide audience during his lifetime, partly due to the fact that he spent his career at Harvard, and partly due to the illustrious company he kept. His broad reception may also be attributed in part to his travels, whether to Europe or across America (he experienced the San Francisco earthquake of 1906), as well as his fluency in many languages resulting from his youthful education. While his popular reputation today may be overshadowed by the greater fame of his brother Henry, and it is true that literary critics often identify Henry's presence in William's writing, psychologists just as often see the influence of William's thought in Henry's novels. The full texts of James's major works are available on the Internet, as are countless quotations and references to his ideas.

CONTRIBUTIONS TO EDUCATIONAL PSYCHOLOGY

William James's contributions to the field of educational psychology are numerous. Biographer Daniel Bjork calls James a critical link in a large sense between Darwin and Freud, bringing the ideas of the former into philosophy and psychology and anticipating the latter's depth psychology (1983, p. 2). In fact, it was William James who first introduced the writings of Freud to North America. At the same time, Bjork says, James also bridged the nineteenth-century transcendentalism of Emerson with the twentieth-century instrumentalism of Dewey (1983, p. 2). William James's publications alone are notable because they were central in creating a field

of inquiry distinct within psychology. In particular, *Principles of Psychology* (1890) and *Talks to Teachers* (1899/1958) were pioneering works. Other writings that delineate James's thinking are *The Will to Believe* (1896/1967) and the later work *Pragmatism* (1907), and the posthumous *Essays in Radical Empiricism* (1912). In all, the combined legacy of James's writing is complex.

Principles of Psychology (1890) is a two-volume work that helped to establish psychology as a discipline apart from philosophy. In addition, it served to refute faculty psychology, which had been the dominant learning theory for much of the century and which divided the mind into discrete parts such as intelligence, creativity, and morality. At the same time, James is scathing in his reference to the brand of education advocated by Rousseau, whom he accuses of "inflaming all the mothers of France, by his eloquence, to follow Nature and nurse their babies themselves, while he sends his own children to the foundling hospital" (p. 125). Early in the first volume of *Principles*, James defines psychology, calling it "the Science of Mental Life, both of its phenomena and of their conditions. The phenomena are such things as we call feelings, desires, cognitions, reasonings, decisions, and the like" (p. 1). The two volumes also lay the groundwork on which James's student Edward Thorndike would later build behaviorism. This lineage is particularly clear in the passages in which James describes the function of habit, the origins of which he illustrates with the example of a young child who burns his hand with a candle and thus learns to avoid putting his hand in a flame. James calls habit "the enormous fly-wheel of society, its most precious conservative agent" (p. 121), and the foundation upon which society is set. James uses a series of class-based illustrations to promote the notion that everyone has a place in the social order, but those places are not the same, saying that habit "saves the children of fortune from the envious uprisings of the poor" (p. 121). He also describes a supposedly liberating aspect of habit saying, "The more of the details of our daily life we can hand over to the effortless custody of automatism, the more our higher powers of mind will be set free for their own proper work" (p. 122). In addition to presenting an essentially behaviorist theory of learning, James rejects the compartmentalization of the mind, describing the way an actor memorizes a part "by better *thinking*."

Similarly when schoolboys improve by practice in ease of learning by heart, the improvement will, I am sure, be always found to reside in the *mode of study of the particular piece* (due to the greater interest, the greater suggestiveness, the generic similarity with other pieces, the more sustained attention, etc., etc.), and not at all to any enhancement of the brute retentive power. [James's emphasis] (pp. 664–665)

In this passage, James also anticipates Dewey and progressivism, as he does when he urges teachers to capture children's attention: "Induct him therefore in such a way as to knit each new thing on to some acquisition already there; and if possible awaken curiosity, so that the new thing shall seem to come as an answer, or part of an answer, to a question pre-existing in his mind" (p. 424).

With *Talks to Teachers on Psychology: And to Students on Some of Life's Ideals* (1899/1958), James created the first psychology text addressed directly to teachers. In part, the book continues the emphasis on the role of habit in learning, defining education as "the organization of acquired habits of conduct and tendencies to behavior" [James's emphasis] (p. 37). Thus James reinforces the conceptualization of education as a means of social control. He stresses that an understanding of psychology is important to the classroom teacher in all grades, and his definition of education has clear deterministic qualities, for example, when he calls character "an organized set of habits of reaction" (p. 125). As with *Principles*, the book also presages some of the tenets of the progressive education movement, particularly in its emphasis on real-world applications. James

warns that just because teachers are familiar with psychology, they are not necessarily good teachers, saying famously,

you make a great, a very great mistake, if you think that psychology, being the science of the mind's laws, is something from which you can deduce definite programmes and schemes and methods of instruction for immediate schoolroom use. Psychology is a science, and teaching is an art; and sciences never generate arts directly out of themselves. (pp. 23–24)

James recognizes the importance of the teachable moment, and recommends that the talented instructor, rather than simply lecturing, will seize the occasion and induce children “to think, to feel, and to do. The strokes of *behavior* are what give the new set to the character, and work the good habits into its organic tissue” (pp. 60–61).

The Will to Believe (1896/1967) was a response to *The Ethics of Belief* by William Clifford. Here, James marks the beginning of a shift in his writing to the concerns that, because of his embrace of spiritualism, the *New York Times* at his death labels dabbling “in spooks.” In this essay he introduces his topic as a justification of religious faith “in spite of the fact that our merely logical intellect may not have been coerced” (p. 717). The two great laws, according to James, are that we know truth and shun error. Greater emphasis should be on the former, he says, because the potential positive consequences of belief are greater than the potential negative consequences of error (pp. 726–727). In the same year *The Will to Believe* was published, according to Emory University's Web site chronology of his life, James gave a lecture in California titled “Philosophical Conceptions and Practical Results,” and in it, he outlined for the first time the theory with which he would have his greatest association during his lifetime, pragmatism. Perhaps his most enduring legacy, however, is his later work, particularly in radical empiricism.

PRAGMATISM AND RADICAL EMPIRICISM

Like his friend John Dewey, James believed in education that was rooted in the lived world. He adapted the ideas of another friend, Charles Peirce, and what he called pragmatism, in which theory and practice are intimately connected and combined with an ethical and moral sensibility. Simply put, as Joel Spring (2005) outlines in *The American School*, pragmatism in its conception rejects the divine origin of ideas, values, and social institutions, locating their origin instead in the situations of everyday life (p. 273). There is no final truth, because the truth of an idea is found in its consequences. In 1906 and 1907, James lectured at the Lowell Institute in Boston, and the transcript of those talks was published as *Pragmatism: A New Name for Some Old Ways of Thinking* (1907). The preface contains the warning that there is no connection between pragmatism and radical empiricism, saying that one may reject the latter and still be called a pragmatist (p. viii). In this work, James defines *pragmatism* as a method by which one determines whether it would make any practical difference if a notion were true; if the answer is no, then “all dispute is idle” (p. 18). He somewhat defensively explains that, in contrast to the social Darwinism of Herbert Spencer, his definition of pragmatism is not at odds with religion. He addresses truth by saying that it is not an inert, static relation; instead, he says, “*True ideas are those that we can assimilate, validate, corroborate and verify. False ideas are those that we cannot*” [James's emphasis] (p. 77).

In a 1904 essay published in the *Journal of Philosophy, Psychology, and Scientific Methods* titled “A World of Pure Experience,” James distinguishes between rationalism, which he says

begins with the universal and then moves to the parts of the whole, and empiricism, which he says starts in an explanation of the parts. He continues,

To be radical, an empiricism must neither admit into its constructions any element that is not directly experienced, nor exclude from them any element that is directly experienced. For such a philosophy, *the relations that connect experiences must themselves be experienced relations, and any kind of relation experienced must be accounted as “real” as any thing else in the system.* [James’s emphasis] (p. 533)

James’s major explanation of his theory was published in *Essays in Radical Empiricism* (1912). In the editor’s preface of this posthumous collection, Ralph Barton Perry says James valued radical empiricism more than pragmatism (pp. xvi–xvii). Perry adds that the term itself first appeared in print in *The Will to Believe* (1896/1967), and James defined it as a philosophic attitude (p. xix). James goes even further in *The Meaning of Truth* (1911), specifying that “Radical empiricism consists (1) first of a postulate, (2) next of a statement of fact, (3) and finally of a generalized conclusion” (p. xvi). Radical empiricism may also be defined as pure experience, or the inseparability of the knower and the known. He ends *Essays in Radical Empiricism* saying, “all philosophies are hypotheses, to which all our faculties, emotional as well as logical, help us . . .” (p. 279).

JAMES THE POSTFORMALIST

William James foreshadows twenty-first-century postformalism in three ways: in his conceptualization of truth, in his acknowledgement of complexity, and in his phenomenological, or as it may more properly be called, his proto-phenomenological writing, which in interpretations by theorists such as Husserl has been reduced to a positivist version bearing only partial similarity to the original. James alludes to the uneasy reception given to pragmatism when he writes in *The Meaning of Truth* (1911) about “warfare” (p. xv) between the pragmatists and the nonpragmatists. But he is firm in his notion that truth is ever-changing, saying,

“Truth” is thus in process of formation like all other things. It consists not in conformity or correspondence with an externally fixed archetype or model. Such a thing would be irrelevant even if we knew it to exist. (p. xv)

He is even less prosaic in *The Will to Believe* (1896/1967) when he writes, “Objective evidence and certitude are doubtless very fine ideals to play with, but where on this moonlit and dream-visited planet are they found?” (p. 725). James recognizes human beings for their complexity, writing in *Talks to Teachers* (1899/1958), “Man is too complex a being for light to be thrown on his real efficiency by measuring any one mental faculty taken apart from its consensus in the working whole” (p. 96). He continues by arguing that any attempt to quantify human understanding is reductive and suspect, saying, “There are as many types of apperception as there are possible ways in which an incoming experience may be reacted on by an individual mind” (p. 112). James is describing a truly human science. His intellectual descendent, Husserl, in contrast, takes the notion of lived world and attempts to make of it a phenomenology that is positivistic in its conceptualization. Philosopher G.B. Madison, in *The Hermeneutics of Postmodernity* (1988), describes Husserl’s obsession with the idea of a unified science, and his construction of science as a hierarchy with phenomenology at the top (p. 43). Ironically, James’s conceptualization is closer to the postformal model than is Husserl’s, although James does not invoke issues of power and social justice. As Madison puts it in reference to James, “Pioneers, like Moses, do not always make it to the Promised Land” (p. 192, n27).

CONCLUSION

William James was a man both of his time and ahead of his time. He had the good fortune to be born into wealth and the equal good fortune during his life to come into contact with many of the major thinkers of his day. James was an insider, and at the same time the progression of his thinking toward the spiritual led him to the role of an outsider during his lifetime. His ideas have, since his death, been adapted, altered, and interpreted to support major positivists and postformalists alike. It is a mark of his importance that his intellectual and theoretical legacies are so complex and influential.

REFERENCES

- Biography, Chronology and Photographs of William James. William James Web site. F. Pajares (Ed.). Emory University. Retrieved April 3, 2005, from <http://www.emory.edu/EDUCATION/mfp/jphotos.html>.
- Bjork, D. W. (1983). *The Compromised Scientist: William James in the Development of American Psychology*. New York: Columbia University Press.
- . (1988). *William James: The Center of His Vision*. New York: Columbia University Press.
- Cotkin, G. (1990). *William James, Public Philosopher*. Baltimore, MD: Johns Hopkins University Press.
- Edie, J. M. (1987). *William James and Phenomenology*. Bloomington, IN: Indiana University Press.
- Feinstein, H. M. (1984). *Becoming William James*. Ithaca, NY: Cornell University Press.
- James, W. (1890). *Principles of Psychology* (2 vols). Retrieved April 3, 2005, from <http://psychclassics.yorku.ca/James/Principles/index.htm>.
- . (1896/1967). The Will to Believe. In J. McDermott (Ed.), *The Writings of William James: A Comprehensive Edition*. New York: Random House.
- . (1899/1958). *Talks to Teachers on Psychology: And to Students on Some of Life's Ideals*. Introduction by Paul Woodring. New York: W.W. Norton and Company Inc.
- . (1904). A World of Pure Experience. *Journal of Philosophy, Psychology, and Scientific Methods*. 1, 533–543, 561–570. Retrieved April 2, 2005, from <http://psychclassics.yorku.ca/James/experience.htm>.
- . (1907). *Pragmatism: A New Name for Some Old Ways of Thinking*. New York: Longmans, Green and Co. Retrieved April 3, 2005, from http://spartan.ac.brocku.ca/~lward/James/James_1907/James_1907_toc.html.
- . (1911). *The Meaning of Truth*. New York: Longmans, Green and Co. Retrieved April 2, 2005, from http://spartan.ac.brocku.ca/~lward/James/James_1911/James_1911_toc.html.
- . (1912). *Essays in Radical Empiricism*. New York: Longmans, Green and Co. Retrieved April 3, 2005, from http://spartan.ac.brocku.ca/~lward/James/James_1912/James_1912_toc.html.
- Madison, G. B. (1988). *The Hermeneutics of Postmodernity: Figures and Themes*. Bloomington, IN: Indiana University Press.
- Matthiessen, F. O. (1961). *The James Family: A Group Biography together with selections from the writings of Henry James, Senior, William, Henry, and Alice James*. New York: Alfred A. Knopf.
- Myers, G. E. (1986). *William James: His Life and Thought*. New Haven, CT: Yale University Press.
- Spring, J. (2005). *The American School: 1642–2004* (6th ed.). Boston, MA: McGraw-Hill.
- William James Dies: Great Psychologist. *New York Times*, August 27, 1910. Retrieved April 3, 2005, from <http://www.nytimes.com/learning/general/onthisday/bday/0111.html>.

CHAPTER 16

Lawrence Kohlberg

ERIC D. TORRES

BIOGRAPHY

Kohlberg was born in 1927 into a wealthy family and grew up in Bronxville, New York. He attended Phillips Academy, where, as he recalled later, he was known more for his sense of mischief and forays to nearby girls' schools than for his interest in academic theories. He supported the Zionist cause as a young man, and participated in the smuggling of Jewish refugees past the British blockade of Palestine right after World War II.

In 1948 Kohlberg enrolled at the University of Chicago and earned his bachelor's degree in only one year owing to his high scores on admissions tests. Staying on to do graduate work in psychology, Kohlberg's plans were to become a clinical psychologist. But Jean Piaget's theories of moral development in children and adolescents fascinated him. Kohlberg shifted gears and found himself interviewing and analyzing interviews to children and adolescents on moral issues. The researcher was born, but it was not until his doctoral dissertation, published in 1958, that his reputation as the new psychology star began. In this dissertation he uncovered six stages of moral development—in contrast with Piaget's two stages—based upon the interviews of 72 white boys in Chicago about the dilemma of Heinz. Kohlberg's concept of “the child as a moral philosopher” broke radically with earlier psychological approaches to morality. He insisted on using empirical data and thus not only created a framework for looking for universal qualities of moral judgement, but managed to revive a field of inquiry.

In 1968 he went to Harvard. At that time he was married and had two children. The era's events—civil rights and the women's movement, Kent State and Vietnam—shaped Kohlberg in indelible ways. In 1969, conducting a study of the morality of adolescents living in an Israeli kibbutz, Kohlberg found that these poor, urban youths had achieved much higher stages of moral reasoning than similar youths who were not part of the kibbutz. Contrasting his new results with those obtained in the United States, soon he was convinced that he could never derive a model for moral education from psychological theory alone.

Meanwhile, in 1970, upon Harvard's request, he taught a course on moral and political choice. His energy in the following years was invested in bridging and he also became an advocate and activist. As of 1974, he began spending time building connections to high school faculties

and students while implementing his ideas of “just communities”: a democratic school where each person—whether student or staff member—had one vote in deciding school policies. Just communities differ from conventional American high schools and classrooms by providing students with a sense of belonging to a group that is responsive to individual concerns, while also having clearly defined group goals and commitments.

Scholars from around the country and the world converged around Kohlberg, and he was able to generate both great excitement and controversy. He strongly opposed the claim that psychology was a value-neutral social science and his determination to talk about moral values never ceased.

While doing cross-cultural work in Belize in 1971, Kohlberg contracted a parasitic infection, which made him live with increasing pain during the last 16 years of his life. While on a day pass from a local hospital on January 19, 1987, Kohlberg drove to Winthrop, parked his car on a dead-end street, and plunged into the cold winter sea. He was 59 years old.

HEINZ’S DILEMMA

Imagine the following situation as we begin to reflect on Kohlberg’s contributions to psychology and how they relate to postformal thinking:

A woman was near death from a unique kind of cancer. There is a drug that might save her. The drug costs \$4,000 per dosage. The sick woman’s husband, Heinz, went to everyone he knew to borrow the money and tried every legal means, but he could only get together about \$2,000. He asked the doctor-scientist who discovered the drug for a discount or let him pay later. But the doctor-scientist refused. Should Heinz break into the laboratory to steal the drug for his wife? Why or why not?

To steal or not to steal, what a dilemma! Let us approach to this fictitious scenario and try to articulate a line of thought. The first idea that might come to your mind is that Mr. Heinz should not steal because, if he is caught, he will be sent to prison. But, after some careful consideration, you may also arrive to the conclusions that if he doesn’t, maybe his wife would die, and that that would really make him feel sad and guilty. So, maybe you want to reconsider your initial position and admit the possibility that, perhaps, he should steal.

Even more, let’s assume that, as is natural, his wife really wants to live, so you are thinking that he should do something to get that medicine, that is, to steal it. But, again, doubt assaults you and makes you think that, perhaps, it is not what he should do. After all, stealing is against the law, and you and Mr. Heinz know that that is true regardless of what all of you might be feeling, needing, and wanting.

But, as you walk back and forth through the scenario, you have probably realized that what Mr. and Mrs. Heinz need and really want is not a drug, but to preserve Mrs. Heinz’s right to live. So, now you might be backing up again and thinking that he should steal. Without doubt, her right to live should be considered the most important thing at this moment. Nevertheless, again, like a pendulum, you might be reconsidering your thoughts because you have also come to the realization that the scientist also has a right to be compensated. So you are again concluding that he should not steal.

In the back of your mind resounds the scientist-doctor’s refusal to accept Mr. Heinz’s partial payment and promise to pay the balance. So, you could be thinking that he should steal because saving a human life is more important than preserving the scientist’s right to private property. But almost at the same time, you can already see that pendulum coming back and knocking down your thoughts because honesty, respect, and the dignity that comes with them are as important to you. So maybe your conclusion at this point is that he should not steal.

Table 16.1
Stages of Moral Development

Level III Postconventional <i>Morality of Self-Accepted Principles</i>	Stage 6 <i>Morality of Individual Principles of Conscience</i> Stage 5 <i>Morality of Social Contract</i>
Level II Conventional <i>Morality of Conventional Role Conformity</i>	Stage 4 <i>Morality of “Law and Order”</i> Stage 3 <i>Morality of Good Relationships</i>
Level I Preconventional <i>Premoral</i>	Stage 2 <i>Instrumental and Hedonistic Orientation</i> Stage 1 <i>Punishment and Obedience Orientation</i>

Finally, after quiet meditation, you may have reached more transcendental levels of thought and considered that he should not steal because you are accepting what Mr. Heinz and his wife apparently are denying, the fact that sickness and death are natural to the human condition, and maybe they just need to enjoy the time left together.

Or perhaps you have already come to the realization that this is not a dilemma but a paradox because one of the premises is false as it makes you think that the moral realm is the same as the legal realm. When the truth is that the former is only an imperfect effort to mirror the latter in an attempt to legitimize itself. So, at this point you are possibly thinking, “Go ahead Mr. Heinz, and steal. It might still be illegal, but surely is the right thing to do.”

KOHLBERG’S MORAL STAGES

Using Piaget’s concept of different stages of cognitive structures and applying them to the study of moral development, Kohlberg elaborated a theory of stages of moral development to explain the development of moral reasoning. He argued that human beings develop morally in stages as they mature, and the steps from stage 1 to stage 6 is learning. Persons at a more advanced stage reject the failed cognitive structures of the previous stage and reorganize their cognitive structure creatively in a new way.

A linearized interpretation of Kohlberg’s Levels and Stages of Morality is shown in Table 16.1.

Stage 1. Punishment and Obedience Orientation

In this stage the reasoning is very elemental. The immediate consequences, especially on the negative side, and the consequent submission to authority are evaluated as constitutive of reasons of good and bad, without any reflection on what might justify the punishment, reward, or obedience to authority.

Stage 2. Instrumental and Hedonistic Orientation

In this stage the individual is still concerned with actions; however, these are justified by the goodwill of the subjects, providing the criteria for good and bad. Relations begin to appear in

the formation of moral judgment, but in a pragmatic way, rather than as a matter of justice or loyalty.

Stage 3. Morality of Good Relations

The opinion of the group is important. This attitude is not just a matter of convenience or to avoid punishment, but one of identification and loyalty: one's intention is noted and valued.

Stage 4. Morality of "Law and Order"

Inclusion in the group is expanded to cover a broader society; moral judgments are based in the social order, which is based on ethical values.

Stage 5. Morality of Social Contract

The goodness of the actions is defined in terms of individual rights recognized by society through its laws. There is more emphasis on legal value, moral strength, and obedience to the laws.

Stage 6. Morality of Individual Principles of Conscience

Here the good is defined by one's conscience based upon ethical principles chosen by one. These are universal principles of justice, equality, human rights, and respect for the dignity of the person.

As you understand these stages better, you may also understand better why you have made certain moral decisions in the past. Also, you will realize that you and everyone else may operate on several levels at the same time. Recent thinking suggests a different image might be more appropriate to describe development, and one possibility is a cyclist moving over a varied terrain. Depending on the demands of the moment, the cyclist will shift gears. That is, as one moves through the complex world of experience, one develops a wider repertoire of strategies.

KOHLBERG'S LEGACY

Instead of seeing morality as a concept that adults impose on children (which is the psychoanalytic explanation), or as something based solely on avoiding bad feelings like anxiety and guilt (which is the behaviorist explanation), Kohlberg believed that children generate their own moral judgments. Moved by social relationships and by a variety of emotions—including love, respect, empathy, and attachment—Kohlberg saw children becoming moral agents. This new perspective constitutes his first great contribution.

Once the inquiry was done, regardless of the sense in which each participant morally responded to the fictitious case, Kohlberg explored the reasoning behind the answers. He tried to identify what different people had in common when they make a moral decision, rather than focusing in their differences. This was also new. His focus on the process of reasoning, rather than on the content, constitutes another great contribution.

Finally, although the just communities with which Kohlberg had been involved during his life did not endure long after his death, his intellectual ideas were instrumental in the design of a Risk and Prevention Program at the School of Education at Harvard, which deals with policies. Precisely the kind of policies he was so committed to develop and nurture in his just communities. In this sense, his greatest contribution would be his opening to the arena of policy, polity,

and politics involved in promoting an educational environment nurtured by justice as supreme value.

As educational psychology is reconceptualized, it is important to look closely at these three contributions. Kohlberg's perspective of the child as a moral decision maker needs to be assumed in the context of the signs of our time: 90 percent of the Ritalin used on children in the world is used here in this country; the child suicide rate has gone up over the last decade with increasing acceleration, mainly among adolescent boys; our teen pregnancy rates are among the highest in the industrial world, and last but not the least, in the United States, more of our children per capita get arrested for crimes than in any other country, and the legislative trend toward criminalizing childhood is continuing at a fast pace, resulting in more children—with a high concentration of boys and young men—incarcerated in juvenile detention, prison, and psychiatric hospitals than in any other nation in the world.

Kohlberg's focus in the process of reasoning and his analysis of the language to identify a moral stage reveals an interesting psychological approach combined with linguistics, sociology, and anthropology. Nowadays, it is often asserted that perception is entirely determined by cultural circumstance. And language, in particular, is seen as selecting what is and what is not perceptible. In other words, the belief is that what is named can be noticed; what is not named is unlikely to be seen. In this sense, Kohlberg's approach offered concrete possibilities to discuss issues related to how we perceive what we perceive, how we learn to make distinctions, the relevance of what is being distinguished, and, most important, what is the morality behind formal education attempts that prompt their learners to notice certain aspects of their worlds and to interpret those elements in particular ways.

Finally, Kohlberg's practice of democracy and openness to the ideas of others in order to live justice as a pedagogical experience in the school setting not only represented a challenge to the academy concentrated in theoretical models, but the assumption into practice that teaching is an attempt to effect perception, in addition to involving a study of perspectives, positioning, and points of view.

KOHLBERG'S PARADOX

Some would argue that Kohlberg's attempt to go to practice weakened his academic work, but, without doubt, nobody could argue that he was not productive in his late years. Taking a look to the social context that supports moral development is a major endeavor; especially when there is a crisis of paradigms. From the perspective of postformal thinking then, it may be suggested that he was in a time of transition. Following this idea, there are at least five different ways in which his work can be related to it.

From a Critical Theory perspective, his praxis may reveal three important avenues to be explored: first, his belief that moral thought and power relations are linked; second, that justice is a necessary condition to counteract oppressive social arrangements; and third, that language is an important element in the formation of moral consciousness, identity, and subjectivity.

If Kohlberg resisted the idea of moral knowledge as a simple artifact to be transmitted uncritically, and linked democracy and politics to social ethics for the value of justice to reign supreme, then there is a postmodern perspective that needs to be acknowledged.

From a liberating perspective, something similar takes place. Kohlberg adopted a problem-posing concept in his research and practice where people were viewed as conscious beings in relation to the world. If he wanted to focus in the process of moral reasoning as an act of cognition, then there is a liberating educational approach that needs to be appreciated as a tool to develop a new awareness of the self.

From a postmodern point of view it is evident that his late day's practices were not context-free and value-neutral. On the contrary, they revealed more clearly than a written discourse, an emphasis in the need to understand the cultural, historical, political, and personal lives of those involved in the formal educational dynamics. Stated differently, there is clear evidence that he engaged in a broader conversation and expanded his framework, revealing a strong interest in creating an impact both in the human condition and the social structure.

Likewise, Kohlberg's just communities were based in a postcompetitive sense of relationship, where democracy played the most important role. And he also exhibited a postscientific belief that moral and religious intuitions contain a truth that need to be considered to develop a sense of self and a worldview.

Nevertheless, from a feminist perspective, it is important to say that during a certain period, Kohlberg's theory was considered "fossilized" and out of touch with a reality that includes the voices of women and nonwhite people. Carol Gilligan, a former student of Kohlberg, developed a different model of female moral development. She used interviews with 29 women who were considering whether to have an abortion or not, as the basis for her moral classification system.

She concluded that women moved through three levels of moral development, on the basis of what she called the female responsibility orientation, which emphasizes sensitivity toward others and compassion. Years later, she would assert that her questioning of Kohlberg's theory was nothing more and nothing less than one aspect of a "major cultural shift" taking place in society.

Although recent research has generally not found any gender differences in moral development, and men and women may come to this point of convergence from different perspectives, the fact is that, as morally mature adults, they learn to synthesize the competing needs of the individual and the community as they formulate key decisions and make difficult choices.

Undoubtedly, Kohlberg's theory and his practice need to be seen through many different lenses to really understand the evolution of his ideas and the revolution of his praxis. A mechanical application of his moral stages theory will not reveal anything more than the shadows of the status quo. It is when the context is observed, considered, and questioned that those shadowed areas can turn into new sources of light that, carefully considered, will create contrasts, provide textures, and reveal images of morality not perceived before.

Owing to his illness, Kohlberg saw himself on a dead-end road. Ironically, it was on such a road that he left his car parked before taking his own life. But, as we reconceptualize educational psychology, we cannot see his praxis less than academically challenging and paradoxically promising.

CHAPTER 17

Jacques Lacan

DONYELL L. ROSEBORO

When Jacques Lacan died at the age of 80 in 1981, he left behind avid followers in the field of psychoanalysis and staunch critics. His writings and seminars attracted those who were genuinely drawn to his explanations of the human psyche, but others were simultaneously convinced that psychoanalysis was nonsense. Whatever your feelings toward psychoanalytical theory, Jacques Lacan undeniably influenced the way we conceive of identity as socially constructed through/within/across language. When he first introduced his theories, Lacan stimulated countless discussions about the connectedness of language to cognitive development. His work, therefore, has enormous potential for any reconceptualizations of identity. Indeed, his fascination with the human ability to *identify* led him to various explanations about cognitive development, all of which are rooted in his understanding of the theories of Sigmund Freud (1856–1939). To discuss Lacan as critical to future understandings of educational psychology, we must first situate him theoretically and historically. Not only the times he lived in but the social and political context as well shaped his thinking and writing.

Born in Paris in 1901 to an upper-class Catholic family, Lacan entered the world at a time when anti-Semitism was on the rise in France and Jewish people found themselves caught in the middle of a national debate between those who wanted the Catholic church involved in government and those who favored a more strict separation of church and state. Lacan would go on to attend a Jesuit (Catholic) school, where he studied Latin and philosophy (among other subjects). Later he would attend medical school and would begin studying psychoanalysis in the 1920s at the Faculté de Médecine in Paris. He was particularly interested in patients who suffered from “automatism,” a condition that pushed the individual to feel they were being manipulated by a force outside of themselves, a force that was all-powerful and all-knowing. When he completed his clinical training in 1927, he worked at psychiatric institutions and, in 1932 (10 years after Benito Mussolini took over Italy and 1 year before Hitler’s rise to power in Germany), he completed his doctoral thesis on paranoid psychosis. By the time of its completion, the nations of Europe were embroiled in a series of continental conflicts, which would eventually lead to the second World War.

Intellectually and theoretically, Lacan grounds his theory in the psychoanalytic work of Freud and the structural linguistics of Claude Levi-Strauss. As a Freudian, he elaborates on several basic principles of human development. He uses Freud’s explanation of the id (the pleasure-seeking,

instinctive drive), ego (the rational self), and superego (the moral/ethical drive) to construct a theory of the decentered subject—a subject that identifies itself as Other and in relation to that which it is not. This initial identification is what Lacan calls the “mirror stage” and is one that we will discuss in detail later. Equally important, Lacan grounds his work in structural linguistics. He believes that we *identify* our selves only as we come to accept and understand the rules of our primary language. In a basic sense, Lacan believes that language, as a structure that precedes our bodily existence, defines us; this is the crux of structural linguistics.

LACAN AND IDENTITY FORMATION

In 1936, Lacan published an article entitled, “On the Mirror Stage as Formative of the I.” It received little attention until its re-publication in 1949, and since then it has become one of his most widely discussed theories. To explain this theory, we need to begin with a visual image. Picture an infant, between the ages of 6 and 18 months, sitting in front of a mirror. With the infant, there is a parental figure. At some point, the infant comes to realize that the baby in the mirror is herself or himself. The moment at which the infant identifies the image in the mirror as herself or himself is crucial, according to Lacan. But it is significant not only because the child recognizes herself or himself, but because it is at this point that the child “Others” or decenters herself or himself. In a sense, the child sees herself or himself as outside of its actual body.

At this moment, the child also understands herself or himself as a whole being, one that can then be called an “I.” This “I” or ego, from the moment of identification in the mirror, is a projected identity—a reflected “I.” Lacan argues that this projected identity is artificial because it gives the illusion of a unified subject or self. Where and how the child is positioned in relation to others in the mirror is also important. The child, upon recognition of herself or himself in the mirror, simultaneously perceives of herself or himself *in relation* to others. Whoever is in the mirror with the child becomes an immediate object of comparison. The child begins to determine how she or he is or is not like the other object in the mirror. The important point here is that very young children develop a concept of the self in relation to others and this category of “others” includes the child’s image of itself in the mirror. And because this image is unified/whole, the child begins to think of herself or himself as a singular and coherent “I.”

Perhaps what makes Lacan’s mirror concept so intriguing is his implication that a child’s learning to identify herself or himself as an “I” does not begin as an internal understanding. Instead, Lacan argues, the child must first recognize herself or himself externally (in the mirror) *before* she or he can construct an internal identity. In this way, the child’s identity is decentered—it identifies first as an external observation. To put it more simply, the child is first an “Other” to herself or himself. Only when the child recognizes itself in the mirror can she or he internally claim to be an “I.” If the child had been able to identify as an “I” without recognizing herself or himself in the mirror, then the child’s identity would be centered. Lacan, however, believes such an internal identification is impossible without the mirror stage. Thus, the identity of the self *always* begins as decentered—as the child recognizing itself as an “I” only through a projected image.

When the child comes to understand that the image in the mirror is herself or himself *and* a reflection, identical to yet not the same as herself or himself, then the child becomes a subject. As a subject, the child is a social being and thus more than the sum of its biological parts. She or he creates the reflection in the mirror and constructs the self that is the reflection. How strange is that? My body creates the reflection of the object in the mirror, but *it is only when I understand that the reflection is me that I can identify as a self*. At the moment the child understands this paradox, she or he enters the world as a subject, one who affects the world as she or he is simultaneously defined by it. It is this question of subjectivity that compels Lacan to further investigate language

and its effect on the construction of identity. Key here is the intersection of recognition and naming. When the child recognizes herself or himself as the object in the mirror and identifies as “I,” the child has named itself in relation to the other objects in the mirror. With this initial naming, she or he enters the world of language, a world that Lacan believes defines the child.

LANGUAGE, SUBJECTIVITY, AND SELF-DEFINITION

Lacan begins his theory of language in what may seem like a strange place—the id or pleasure-seeking part of the unconscious. Like Freud, Lacan connected our unconscious desires to the sexual. The desires of the subject are tied to her or his sexual relationships (or perhaps a better way to phrase this is “relations between the sexes”). Lacan differs from Freud in that he does not think the unconscious is a container for repressed memories. Rather than say we discover or uncover memories, Lacan believes that we reconstruct them. The unconscious speaks and forces the “self” to interpret through language. So, the desires that we can identify are identified through words. There is no way to distinguish the desire as separate from language; it is defined within and by language.

So, how does the child come into language? In his explanation, Lacan returns to and builds upon Freud’s explanation of the Oedipal complex that, in its most basic sense, is about our unconscious need to satisfy sexual desires. Lacan argues that all infants’ early desires are structured in relationship to the primary parental figure (which, according to him, is usually the mother). From birth on, the child attempts to decipher what it is the mother wants. According to Lacan, the mother wants the father, and the symbol for the father is the phallus. The phallus is, ultimately, the object that the mother believes can satisfy her desires. When the child attempts to determine the mother’s desires and fulfill them for her, she or he is engaged in the Oedipal complex. In a “normal” Oedipal cycle, the father permanently forestalls the child’s sexual desire for the mother. Once the child accepts that she or he cannot serve as the phallus (sexually satisfying object) for the mother, the Oedipal cycle is resolved—Lacan terms this castration. Before the resolution of the Oedipal complex, the child (whether male or female) perceives the father figure as a threat and engages in a battle with the father that she or he will eventually lose.

How then is the Oedipal complex important to Lacan’s theory of language? At the moment of resolution, the child understands herself or himself as bound by social law. For Lacan, the father is symbolic of a larger social order. As such, he represents the rules that the child must learn and obey in order to become a functioning and “normal” member of society. Thus, the child first recognizes that the father is the only fully satisfying object of desire for the mother. Because the father represents social law, the mother’s desire for the father indicates her acceptance of social law/order. So, ultimately, the child equates the mother’s desire for the father with her desire for social law/order. Equally important, the resolution of the Oedipal complex brings the child into language as a fully competent and participatory subject. She or he can thus begin to participate in the social order.

Once the Oedipal complex is resolved, the child (which has up until this point identified with the mother) has to find something else with which to identify. Lacan terms this *symbolic identification*—identification with a prescribed and intangible way of organizing the world. In simpler terms, the child learns to identify with cultural norms, practices that define the child’s existence but that cannot be seen or eliminated by the child. When the child identifies with the symbolic (i.e., cultural norms), she or he enters the world of language. Once in this world, the child becomes a subject, one who speaks its existence in words that others can understand. Prior to this moment, the child has been in the process of becoming a subject. Thus from the mirror stage, when the child begins to see itself as an Other in relation to objects, to just before the resolution of the Oedipal complex, the child is not a speaking subject. Without having mastered

the language of the dominant social order, she or he cannot communicate in the world as a fully capable and competent being.

When the child accepts the resolution of the Oedipal complex and becomes a speaking subject, she or he experiences life bound by language. Language mediates between the “I” and the rest of the world. When the child masters language, she or he can fully experience the world as a place of meaningful possibilities. In becoming a competent language speaker, the child comes to more fully understand the social rules of the society in which she or he lives. In this process, the child comes to believe that the world is definable in concrete terms. For Lacan, believing is a fundamental part of the child’s transformation into a speaking subject. By accepting language as the way to identify the world, the child participates in and acknowledges an unseen social order.

Ultimately, the child’s actions reflect unconscious desires. To explain, Lacan believes that we can compare the unconscious to language because “it speaks.” Although it does not possess grammatical structure, the unconscious (as a language) connects the body to structured and patterned language. Physical symptoms are then enacted through and defined by language. The child may begin to act, speak, or behave in a way that reflects an unconscious desire. Here, Lacan brings in the concept of metonymy, using a part of an object to refer to the whole. In this instance, the unconscious uses any available language that is known by the subject. By doing so, the unconscious brings out the desires of the subject in various linguistic ways.

Language, as a system with rules and standards, thus serves as the road by which unconscious desires enter the world as a part of the established social order. Lacan speaks more specifically to how this entrance is accomplished when he discusses the signifier. Borrowing from the work of Ferdinand de Saussure and other structural linguists, Lacan believes that language represents meaning and that this meaning comes out through the interplay of signs. Signs are interpretations, the combination of form and representation. Signs are created by signifiers and signifieds. A signifier is the form taken by a sign while the signified is the concept that is being introduced. Here, an example is necessary. Let’s use the word *down*. The word *down* is a signifier. It is in the “form” of a word. If the word *down* were next to an escalator, it becomes a signified—a concept.

Together, we interpret the *signifier* (word) and the *signified* (concept). When the signifier and signified are interpreted together, they are called a *sign*. When we see the word *down* next to an escalator, we know what it means. All signs have a signifier and a signified (word + representation). And, the meaning of the sign can change if the context changes. For example, if we encounter the word *down* in a restaurant, the meaning may change slightly. It could mean that there is additional seating on a lower level. All of this is important to Lacan. He argues that the meaning of a signifier is never fixed until a sentence is completed. Until the sentence is completed, the signifiers are “floating.” So, for Lacan, the sentence is the basic unit of meaning making; it is how we make sense of the world.

But why is all of this important to Lacan and cognitive development? It is critical because language, the speaking of it, is central to identity formation. If unconscious desires enter the world through language, we are faced with the daunting possibility of facing these desires in public space. As unconscious desires, they are feared by us in many ways. When they do come forward, they do so as we interact with others. Lacan’s psychoanalytical foundation is important here. Because he is always interested in the mind and in how we engage with our unconscious desires, he sees language as a way to cope with the surfacing of the unconscious. Simply stated, his hypothesis is that the unconscious appears first as a symptom. When we experience the symptom, we go to an analyst (doctor, practitioner of some sort). Through the conversation with the analyst, the cause of the symptom is identified and the symptom vanishes. In short, we are able to identify the desire in conversation and, by doing so, satisfy the desire.

This hypothesis has profound implications for our understanding of identity. Lacan suggests that meaning (and, hence, identity) is formed through communication with others. As we engage

with others in dialogue, we interpret our unconscious desires and then claim those interpretations. Once we claim those interpretations, they are embedded in our self-understanding; they become an integral part of what we identify as “I.” For Lacan, this interpretive act is a psychoanalytic act, one which assumes that there is an analyst out there who can interpret the “truth” of symptoms or hidden desires. Equally important, Lacan claims that the emergence of our hidden desires into the spoken world/language is an attempt to integrate them into the social order. Once we integrate them in a way that corresponds to how we understand the world, they become part of our identity. Integrating our hidden desires into a conscious identity does not mean that we have constructed a new self; rather, it means that we can now reinterpret ourselves.

Finally, with regard to language, Lacan speaks to the importance of “master signifiers” and the construction of identity. Basically, these are the major categories we use to identify ourselves and give meaning to the world. When we claim a national, racial, or gender identity, we are using a master signifier. What makes these signifiers so important is our unwillingness to challenge their meaning. We are often afraid to do so because, if we did, we would have to completely reconstruct our identities. Master signifiers come laced with values and beliefs that ground our understanding of our selves and the world. The way we privilege some master signifiers over others also determines how we order the world. For example, if you were to identify as a Chicana woman, your life would center on this particular interpretation and all other signifiers will have meaning in relation to the primary one with which you identify.

Lacan believes that the psychoanalytic process enables subjects to question and rethink their master signifiers. In doing so, they reinterpret fundamental beliefs and perceptions of the self. If a person’s master signifiers are leading to some type of neurosis or inability to function in the world, psychoanalysis can help the person reorder their master signifiers and reidentify in different ways. She or he can then engage with the world in ways that do not result in traumatic experiences. It is important to reemphasize that this reordering does not lead to a new identity. Instead, it brings to the forefront different master signifiers that allow the individual to navigate the world with different primary beliefs and/or values.

With his emphasis on language and identity, Lacan’s theories are particularly relevant to any continued studies in educational psychology. His critics have challenged many nuances of his theory—the Oedipal complex and the symbolic phallus in particular—but the crux of his arguments pushes us to reconsider how each of us becomes a subject capable of daily existence within the dominant social order. Through his mirror image and language theories, Lacan stresses the subject as decentered and in relationship. In a basic sense, we develop our self-perceptions in relation to others and we use language to give meaning to experience. Lacan’s theories serve as a starting point, one from which we can pose questions that will help us reconceptualize the importance of educational psychology today.

Some of these questions are as follows: How is a blind child’s development of self different (if at all) from a seeing child? How do children learn the language of the dominant social order and then refute that language? Is it even possible for children to reconceive/rework/reenact language? Or are their base language patterns (even in the use of slang) always dependent on the language of the dominant group? How do children learn to enact different selves? And how are these selves protected, nurtured, subsumed, or contested by the dominant social order? Are we to assume that since language is so critical to the development of self, children who do not ever master language have no cohesive sense of self? And, finally, can we ever really reorder our master signifiers or are the ones we claim all held together by similar value systems? If so, are we not simply changing what we call our primary identity and maintaining the same key beliefs?

These questions are just a beginning, but they illuminate the continued relevance of Lacan to educational psychology. Any theory that generates more questions than answers gives a base from which to reconceptualize. If the theory failed to generate questions and, instead, provided all of the answers, how could it possibly help us rethink and re-create? Theoretically, Lacan’s

ideas remind us that identity building is interactive; it demands that we attune ourselves to the world around us. His claim that we are formed by and within language remains a persistent debate; to agree with him on this point challenges the notion that we create our selves, that we are the authors of our own identities. Perhaps the final question that begs discussion is, How do we author our lives *without* language? If we disagree with Lacan's structural linguistics, what is our answer to the question of authorship?

LACAN AND POSTFORMALISM

Postformal thinking requires that we discard the kind of rationality that limits us to linear ways of viewing the world. To think postformally, we must acknowledge multiple perspectives and concern ourselves with what is socially just. We cannot assume that there is some universal knowledge "out there" that will equally serve people across the globe. Instead, we must account for the various ways people construct identities in different contexts and we must consider how we are simultaneously constructed by context. In this regard, postformal thinking demands that we pay attention to identity and power relationships. Unlike formalists, who seek resolutions for all problems, postformalists recognize the importance of ambiguity and contradiction.

If we rethink Lacan using postformalism, we can connect his theories to more current research on identity politics and cognitive development. First, let's consider the implications of his language theory. Lacan says that we identify with and through language. Our unconscious desires come forward as symptoms that are then interpreted through language. If we are indeed defined by language, postformal thinking would force us to acknowledge the significance of the cultural context of language. What happens if a child's primary language is not the language of the dominant culture? How is his language, and by implication his identity, either affirmed or subsumed by the forced learning of the dominant language? How does the child come to understand the power relations of her or his community from the language experience? How does the child learn social responsibility through language? And how does she or he react if the social lessons of the dominant group are in contradiction to her or his racial, ethnic, or religious group?

We must further consider how the child manages to navigate multiple social orders simultaneously. How does she or he come to understand the rules of different groups and how does she or he learn when to switch languages (i.e., code switch)? Lacan claims that the child, in the mirror stage, learns to identify as an "I." If we rethink this statement postformally, we would need to ask, How does the child come to identify as multiple "I's"? And, how does she or he identify in multiple ways without being labeled schizophrenic? With Lacan, however, we do have a preliminary understanding of early childhood development, which, at the very least, does not deny the possibility of plural identity. His focus on the child's development as one that occurs in relation to others is important. Here, he allows for the possibility of children developing different self-perceptions in relation to the other objects of comparison. Equally as important, he contends that we learn to identify with master signifiers (i.e., race, gender, nationality). We can reorder these signifiers through reinterpretation and in conversation with what he calls an analyst. If we broaden his terminology, this means that we can re-create different identities as we engage with different people and in different social contexts. This is not to suggest that the changing of behavior from classroom setting to cocktail party is a re-creating of identity. But it does suggest that we have the potential to identify in different ways when we change social systems.

CONCLUSIONS

Critics of Lacan have argued that his theories are patriarchal, sexist, and narrow. But there is much to be learned from Lacan if we align his theories with different theoretical paradigms. In considering him within a postformal paradigm, we can stretch, deepen, and revisit his work

in cognitive development. His emphasis on identity occurring in relationship has tremendous relevance to educational psychologists today who are attempting to unravel the notion that we create identities in isolation, that we are individuals divorced from the larger society. From his theories, we come to understand the contradictions inherent in identity building—we are creating and being created by language at the same time. Any reconceptualization of educational psychology must continue to grapple with this paradox and, by doing so, we may inject new possibilities into future theories.

FURTHER READING

- The European Graduate School. *Jacques Lacan biography*. Retrieved June 28, 2005, from <http://www.egs.edu/resources/lacan.html>.
- The Internet Encyclopedia of Philosophy. *Jacques Lacan*. Retrieved June 28, 2005, from <http://www.iep.utm.edu/lacweb.htm>.
- Kincheloe, J. L., and Steinberg, S. R. (1993, Fall). A Tentative Description of Post-formal Thinking: The Critical Confrontation with Cognitive Theory. *Harvard Educational Review*, 63(3), 296–320.
- Lacan, J. (1999). *ECRITS: A Major New Translation* (B. Fink, H. Fink, & R. Grigg, Trans.). New York: W. W. Norton & Company.
- Pitt, A. (2001). The Dreamwork of Autobiography: Felman, Freud, and Lacan (pp. 89–107). In Weiler, K. (Ed.), *Feminist Engagements: Reading, Resisting, and Revisioning Male Theorists in Education and Cultural Studies*. New York: Routledge.

CHAPTER 18

Gloria Ladson-Billings

ROMY M. ALLEN

A hallmark of the culturally relevant notion of knowledge is that it is something that each student brings to the classroom. Students are not seen as empty vessels to be filled by all-knowing teachers. What they know is acknowledged, valued, and incorporated into their classroom.

—The Dreamkeepers, 1994, p. 84

This quote by Gloria Ladson-Billings is a signature to her decades of enriching work focused on addressing the pervasive achievement gaps between children of color, in particular African American children, and the mainstream Anglo children of the status quo. Many articles, books, and conferences have framed their research around multiculturalism, learning styles, school readiness, and teacher preparation in an effort to concentrate on the perplexity of diversity issues within school settings. However, Ladson-Billings went a step further and attached a name to all of the inter-tangling of the aforementioned topics. Hence, the emergence of a radical educational philosophy entitled culturally relevant pedagogy; an approach to teaching diverse learners that authorizes students to convey knowledge, skills, and abilities through and/or from their own cultural location and identity.

Gloria Ladson-Billings began her journey of defining culturally relevant pedagogy many years ago after receiving her PhD in 1984 from Stanford University in curriculum and teacher education. Her research interests have also investigated areas of racial identity, psychological testing and assessment, and racial/cultural counseling. Besides expertise in culturally relevant pedagogy, Dr. Ladson-Billings broadens her scholarship to include critical race theory and education, social studies, and multicultural education, in which she was a major contributor to the *Dictionary of Multicultural Education*.

Ladson-Billings has been the author of numerous publications. One of her most notable research studies, which spanned a course of several years in the early 1990s, profiled eight successful teachers of African American children. This research culminated into the “impactful” book *The Dreamkeepers* in 1994. The information specifically gleaned from this research prompted Dr. Ladson-Billings to author “Toward a Theory of Culturally Relevant Pedagogy,” published in the *American Education Research Journal* the following year.

Along with her publications, Dr. Ladson-Billings is currently serving as a Professor in the Department of Curriculum and Instruction at the University of Wisconsin–Madison and has been the recipient of several teaching awards: the 1995 AERA (American Education Research Association) Committee on the Role of Minorities Early Career Award, the 1995 Division K Teaching and Teacher Education Outstanding Research Award, the 1995 National Association of Multicultural Education Multicultural Research Award, the 1996 Research Focus Black Education Outstanding Black Scholar Award, and the 1997 Society of Professors of Education Mary Ann Raywid Award, just to name a few. She has been invited to make presentations at national and international conferences and seminars, and has served on numerous boards. She has also been a reviewer of at least six educational journals, including the *American Education Research Journal*, one of the official journals of the American Education Research Association, of which Ladson-Billings is currently serving a term as president. These distinguished career accomplishments are only a few of the reasons she should be embraced as a viable contributor in the field of educational psychology.

According to the Division of Educational Psychology of the American Psychology Association, educational psychologists are concerned with conducting research to advance theory, developing educational materials and programs, and addressing issues related to how people learn, teach, and differ from one another. Ladson-Billings continues to refine her research and address components of educational psychology by turning her attention to the issue of the achievement gap between African American and other children of color from disenfranchised ethnic groups and their White counterparts from mainstream America. Her research has culminated into a body of respected works and publications that has promoted proactive teaching methods in diverse settings, or what she terms as culturally relevant pedagogy.

Culturally relevant pedagogy has been one of the most prolific topics of interest that Ladson-Billings has pursued in her research and writing over the years. By addressing her concerns of the growing achievement gap between African American students and their Caucasian counterparts, Ladson-Billings has developed a theory that focuses on the teaching practices of educators who teach African American children. The basis of her theory can also be applied to other disenfranchised, non-mainstream children.

Several tenets are connected to culturally relevant pedagogy that differentiates the theory from other models of teaching practices. In her research with eight teachers of African American students in the early 1990s, Ladson-Billings discovered one of the most powerful components that the “successful” teachers possessed. “Successful” meant those educators who provided instruction to African American children within the child’s own cultural contexts, which allowed these children to process the prerequisite skills necessary to move to the next level of their educational career. Each educator embraced their student’s diversity and celebrated those differences in a positive way, making success possible for a group of children who otherwise might have been dismissed away by institutional standards. Oftentimes, our society today adheres to preconceived attitudes about African American children. Perhaps these are latent leftovers from a country still reeling from slavery, racial hatred, and oppression of groups not from the mainstream status quo, but preconceptions nonetheless.

Although slavery is more than a century and a half behind us, the political and economical scars of elitism, born out of the post–Civil War era and Southern clout, still exist. Moving forward to the 1960s, approximately 100 years later, an era erupted of civil unrest and the Civil Rights Movement clashed violently with that Southern clout in the form of the “Good Ole Boy” system. Many white Southerners felt threatened by their own perception of insurgency by a group of people they felt should have been grateful just to be allowed to subsist—even though their sustenance was at the level of second-class citizenry. Segregation, Jim Crow Laws, and lynchings of African Americans by this country’s Caucasian citizens have not been so far removed that

latent memories of these lived experiences are still lingering into the consciousness of many groups today, including the oppressed and the oppressor. Fears and reprisals of past history are not easily forgotten and influence the practices, policies, and even governmental climates. These historical references have been imprinted upon the various cultural identities of our society.

As this country attempts to recover from these horrors of the past upon minority residents, the political and economic climate, traditionally established to benefit one group of residents, permeates through our laws, institutions, and society to favor a power base of affluent Caucasian men. This imbalance resulted in prejudicial ideas and misconceptions about children of color and their families. The educational institutions have evolved into setting expectations that assume each child learns in a uniform style. Teachers, specifically, have been trained to use a deficit approach when teaching African American children and other children of color. This approach came to the forefront of societal attitude after the Moynihan Report of the 1960s, requested by President Lyndon Johnson for justifying his War on Poverty Program. This controversial report highlighted a perceived pathology of African American families such as absent fathers, unstable family structure, households headed by poorly educated, single females, and joblessness. It emphasized the achievement of Anglo Middle America and implied that the “Negro” family needed assistance in the socialization of their children to attain an acceptable level of functional family structure. In sharp contrast, Ladson-Billings, in her research, found that successful teachers of African American children used the strengths approach. Teachers using this approach were observed as truly caring about the children they taught, they were dedicated to their students, they embraced their students’ diversity positively, and, most important, they expected their students to strive to achieve at the highest level that their personal capabilities allowed.

A component of culturally relevant pedagogy is that it empowers students to achieve socially, intellectually, and emotionally by utilizing students’ cultural contexts, or what Ladson-Billings calls “cultural referents,” to make connections with the world around them. Ladson-Billings discovered that successful teachers of African American children extended their teaching beyond the classroom. These teachers designed learning activities that incorporated the community. Referencing the acquisition of knowledge to preexisting, relevant political and social issues made learning meaningful, exciting, and attainable. Engaging the students directly with issues of society, and then looping it back to their own cultural contexts or referents, made the lessons relevant to the students. Eventually, the students embraced their own knowledge, developed their own confidence to learn, and with the teacher’s assistance began to understand the inherent power they possessed to conquer misguided expectations and make a difference in their lives and the lives of others.

Ladson-Billings has also been interested in preparing teachers to teach in a diverse society. Walking into a classroom unprepared to teach in a culturally explosive setting can be potentially devastating for the educator and potentially incomplete for the student. In her Teach for Diversity (TFD) project in the mid- to late 1990s, Ladson-Billings and her colleagues realized there was disparity between the way pre-teacher programs prepared novice teachers and the preconceived expectations of being placed in an urban setting of students with various racial, ethnic, and socioeconomic backgrounds blended together. The Teaching for Diversity program addressed these issues by guiding the pre-service teachers to understand three fundamental principles: (a) human diversity, (b) equity, and (c) social justice, and then applying these principles in settings during their field experiences, where the gap between theory and practice could be bridged. In a subsequent publication based on this 15-month project, *Crossing Over to Canaan* (2001), Ladson-Billings reflected on her own teaching experiences in her early years in Philadelphia to account for the necessity to prepare novice teachers for the challenges of teaching in diverse settings. She then offers practical models for teaching in these highly diverse environments by implementing those principles.

Bridging the gap between theory and practice and assisting educators in teaching diverse learners involve comprehending how to embrace the theoretical tenets of culturally relevant pedagogy based on several propositions: academic achievement, cultural competence, and sociopolitical consciousness. While most pre-service teachers may be thinking of assessing the academic achievement of their students, they typically do not give equal thought about which cultural context their students' learning might be attained. While most pre-service teachers may be able to categorize different cultures of their students, they do not typically and/or traditionally think of whether they themselves are competent in the nuances of various cultures to make relevant connections with their students. While most pre-service teachers may think about whether they will be assigned to a school of poverty or affluence, they do not usually think about how these socioeconomic factors specifically influence their students' ability to learn, or how the bias of the educational institution favors children from mainstream America. The theory of culturally relevant pedagogy addresses all these issues, and Ladson-Billings, by developing this theory, gives us a method of practice that transcends the traditional approach of teaching children. Successful learners are recipients in a culturally relevant learning environment, and are not quantified by culturally irrelevant standardized scores.

Culture is dynamic, and cannot be categorized neatly into formal operational stages such as Jean Piaget's four stages of cognitive development. Children are not static, nor do they necessarily fit into predesigned educational boundaries. Therefore, they need instructional practices that will allow and acknowledge their individual growth, and the array of components in their lives that influence or contribute to that growth, such as primary language/dialect, race, culture, ethnicity, and child-rearing practices. Postformal thinking pursues those influences as well as integrates other forms of knowing with caring, perceiving, reasoning/thinking, feeling, dialectical discourse, and transcendence. Ladson-Billings' theory of culturally relevant pedagogy aligns with the realm of postformal thinking because it approaches teaching as a dynamic process. Embracing children in their cultural context, involving them actively in their own learning process, providing meaningful learning experiences, and introducing them to community issues to help them become aware of their own power of agency—the ability to write their own script and create changes—are integral parts of postformal thinking. Unlike the stages of operations inherent in formal thinking, postformal thinking embraces forms or ways to elicit changes—changes that are necessary to keep abreast of the multiculturalism that is prevalent all around us. Furthermore, this cultural sensitivity assists each of us in developing the critical thinking skills that are necessary to create a difference.

To better understand postformal thought, a child's set of nesting cups might be an appropriate metaphor. When the child pulls out the nesting cups, there are several sizes of cups stacked within each other until they all fit together in harmony. If any one of the cups is placed out of order, or it is not understood how relevant that single or individual cup is to the whole piece (or total group), the cups cannot be properly arranged to complete the nesting order or the continuity of the nesting pattern. A child is part of a family, a community, a society, and ultimately a world. However, the child begins with the family unit and all the different components that make that family unique. Just like the nesting cups and all their parts needed to accomplish the whole product, families join together to create a community, a society, a country and intermingle together to create a world. Postformal consciousness recognizes that the influences upon each child affect their development within the context of their unique or specific cultural identity. In concert with culturally relevant pedagogy, the individual teacher and the individual child collaborate to construct a healthy, successful, nurturing learning environment that allows children from diverse backgrounds to thrive. If any part of that child's world is dismissed, the child will not be complete, just like the imagery of incomplete nesting cups implied. There will be part of that child absent

in the learning process, creating an atmosphere of disconnection. Is it any wonder that children from diverse backgrounds are struggling so much in mainstream schools?

Gloria Ladson-Billings has been a contributor to the field of curriculum and instruction with her many rich research interests. Addressing the troublesome achievement gaps between black and white students has spurred her interest to develop a practical theory, a culturally relevant pedagogy, that can be implemented by instructors of pre-service teachers; as well as those teachers who have integrated alternatives in their instructional practices that embrace the whole child, a child with all of her or his culturally diverse components intact.

REFERENCES

- Ladson-Billings, G. (1994). *The Dreamkeepers: Successful Teachers of African American Children*. San Francisco, CA: Jossey Bass.
- . (1995). Toward a Theory of Culturally Relevant Pedagogy. *American Education Research Journal*, 32(3), 465–491.
- . (2001). *Crossing Over to Canaan: The Journey of New Teachers in Diverse Classrooms*. San Francisco, CA: Jossey Bass.

CHAPTER 19

Jean Lave

VALERIE HILL-JACKSON

INTRODUCTION

Does knowledge occur in isolation—disconnected from the environment and social interactions? Can knowledge be stored away, in discrete packages, and retrieved later in life and applied to certain behaviors and practices? Jean Lave is a social anthropologist with a strong interest in social theory at the University of California, Berkeley, whose work seeks to address these questions. Much of her work has focused on the importance of culture and context and reimagining the study of learning, learners, and educational institutions in terms of social practice. In this way Lave pursues a social, rather than psychological, theory of learning. Lave argues that learning is a function of the activity, context (environment and world), and culture (ways of being) in which it occurs; in other words, it is situated.

This idea is remarkably different from nearly all classroom learning activities and knowledge that is abstract and out of context. *Situated learning*, or situated cognition, is a general theory of how knowledge is acquired. Situated learning has made a significant impact on educational psychology since it was first introduced by Lave, whose work has been instrumental in providing the research base for several related theories. In addition, *community of practice*, the belief that learning involves a deepening process of participation in a community, has also become an important focus within situated learning theory.

Lave is a formidable author with several books and articles to her credit. But three of them, *Cognition in Practice* (1988), *Situated Learning: Legitimate Peripheral Participation* (with Wenger, 1991), and *Understanding Practice* (with Chaiklin, 1993), stand out as her most influential texts that have helped develop a new direction in knowledge acquisition.

In this chapter I examine the impact of Lave's work on educational psychology by comparing it to other learning theories in education. To better understand Lave's work, it is best to review the competing theories in knowledge acquisition that it challenges. Next, I outline the phases of the sociocultural theory that helped to shape the broad and interdisciplinary situated learning theory. Third, I inspect Lave's situated learning theory more closely. And finally I briefly review the implications on organizational practice and instructional design.

BEHAVIORISM, CONSTRUCTIVISM, AND THE SOCIOCULTURAL LEARNING THEORIES

There are several perspectives on knowledge acquisition, or learning, in the discipline of educational psychology. Cognitive psychologists like B. F. Skinner represent the *associationist* perspective, in which skills and knowledge are acquired by way of associations and reinforcement. Such associations or “habits” become strengthened or weakened by the nature and frequency of the stimulus–response pairings. For example, if a learner is given increased opportunity to learn a math concept, then that concept will become learned over time through sheer trial and error. The hallmark of behaviorism is that learning could be adequately explained without referring to any observable internal states. The ideas of Edward Thorndike represent the original framework of behavioral psychology: learning is the result of associations forming between stimuli and responses. Likewise, contemporary psychologist John Anderson maintains that facts are stored and organized, then retrieved to produce intelligent behavior; learning goes from the abstract of facts or “what,” to skills in which the learner knows “how.” These educators believed that the mind could be trained with mental exercise, much like a muscle. The assumption being that if the mind were properly trained, knowledge and skills would automatically be applied when needed.

The constructivist philosophy maintains that learning is achieved by doing. The major theoretical framework of constructivism is provided by Jean Piaget and Jerome Bruner—in which learners construct new ideas or concepts based upon their current and past knowledge. Constructivism asserts that there can be an observable change in learning when the learner is involved in productive and meaningful activity. The learner selects and transforms information, formulates hypotheses, and draws conclusions, relying on cognitive structure, or mental models, to do so. Cognitive structure provides the meaning and organization to experiences and allows the learner to build knowledge for advanced forms of knowledge acquisition.

Lave’s situated learning perspective comes out of the sociocultural theory on learning. It is a relatively new and emerging theory that takes its lead from Lev Vygotsky’s notion that social interaction plays a fundamental role in the development of cognition and James Gibson’s theory of information pickup in which perception requires an active organism. The problem with educational research in cognition, Lave suggests, is that it has two problems. First, the associationist or behaviorist theory has the tendency to see knowledge acquisition as an isolated, decontextualized phenomenon. In other words, it fails to consider the activity of learning in relation to the context (social environment of the world). Second, the constructivist theory restricts learning by “acting” or doing tasks in their environments. For Lave, contexts create and reflect different forms of mental functioning and problem solving. In addition, Lave proposes that learners do more than act in their environments; in fact, they help to create and maintain those task environments. Lave’s work not only reinforces the sociocultural theory, but has provided a new way of perceiving cultural thinking in educational psychology.

THREE PHASES OF THE SOCIOCULTURAL THEORY

According to Rogoff and Chavajay (1995) there are three claims of the sociocultural approach to human cognition: (1) cognition is culturally mediated by material and semantic (meaning-making) artifacts such as tools and signs; (2) it is founded in purposeful activity; and (3) it develops historically as changes at the sociocultural level impact psychological organization. Lave concurs and suggests that learning is not independent of context, activity, and culture.

Rogoff and Chavajay (1995) distinguish three phases in the history of the sociocultural framework. The first, in the 1960s to 1970s, was one of cross-cultural research. Many researchers took up the task of translating cognitive tasks for populations in other cultures, and discovered

that the tasks did not transfer well. It became apparent, to some at least, that the tasks were in some ways culture-bound, and also that the cognitive skills that researchers had presumed were universal in their form were actually linked to the practices and institutions of formal schooling in Western society. These tasks were artificial in nature, and examined skills like memory, logic, and classification within laboratory spaces. Lave broke tradition during this time and began to study cognition in everyday life.

The second phase was one of transition in the late seventies and into the eighties, as the theoretical underpinnings of cross-cultural research were rethought and researchers moved away from artificial tasks and into real-life contexts. The writing of Lev Vygotsky provided a new theoretical basis for this work. *Thought and Language* had been translated in 1962. *Mind in Society* was published in 1978, translated by Michael Cole and Sylvia Scribner. Vygotsky's work provided a language for talking about culture and cognition as dynamic processes that cannot be separated; of culture as localized in some sense; and of culture as no longer an independent variable. Blending the traditions of anthropology with Vygotskian sociocultural theory, the situative perspective focuses on the fundamentally social nature of learning that is intimately tied to the situation in which it occurs. It was during this time that Lave took learning from the psychological to the social—emphasizing the social nature of learning. Lave asserts that social interaction is a critical component of learning and that learning is dependent upon activity, context, and culture.

The 1990s welcomed a third phase of sociocultural theories of development in which this perspective has been stabilized. Rogoff and Chavajay identify a critical mass of scholars whose members include Michael Cole, Silvia Scribner, Jacqueline Goodnow, Urie Bronfenbrenner, Pierre Dasen, Robert Serpell, Patricia Greenfield, and, of course, Jean Lave. Lave's situated learning theory is broad and the characteristics have interdisciplinary appeal. The situated learning theory has set the stage for a new movement in the sociocultural perspective in educational psychology.

SITUATED LEARNING: AN EMERGING SOCIOCULTURAL PERSPECTIVE

To reiterate, Lave argues that learning is a product of the activity, context (environment and world), and culture (ways of being) in which it occurs; in other words it is situated. Most classroom activities involve learning that is abstract in nature and out of the context in which they might be used naturally. For many math educators of Algebra, for example, it is not uncommon to have students ask, "Why do I need to know this?" It is a credible question for learners because the concepts for learning Algebra occur out of the context (i.e., in the classroom), and out of its future use. In addition, early work in knowledge acquisition identified the essential elements as specific facts and skills that were unique across situations, and the specific condition was practice, lots of practice. These ideas of decontextualized learning and transfer of knowledge can still be found in current learning theories to a certain extent. These ideas make sense when discussing the transference of basic skills, but complex skills, such as problem solving, often do not transfer, even when the elements of the situations are similar.

Cognition in Practice makes the case that learning is not an individual enterprise, but a social activity in which the activity, culture, and context must be considered. Lave addresses and challenges the concept of "learning transfer"; how abstract learning is applied across contexts—from the formal to everyday life.

For Lave, social interaction is a critical component of situated learning and calls much of the foregoing cognitive theory into question. Lave's work also takes traditional learning theories out of formal (schools and organizations) to informal (everyday situations) settings. Lave's (1977) work with mathematics in everyday life spawned a new era in knowledge acquisition. Her work

with tailors' apprentices and Japanese abacus experts found that there are no "general" skills. "The specifics of each practice (whether schooling, tailoring, or candy selling) are inseparable from the cognitive processes of the users of the system" (Lave, 1977, p. 865). Lave (1988) gave us new ideas of thinking about learning through her situated learning model because it provided a language for transfer that extends beyond the acquisition of basic skills in formal settings.

According to Lave and Wenger (1991), the two principles of situated learning maintain that (1) knowledge needs to be presented in an authentic context and (2) learning requires social interaction and collaboration. Since social interaction is a critical component of situated learning, learners become involved in a community of practice. Lave and Wenger (1991) illustrate their theory on community of practice by observations of different apprenticeships involving Yucatec midwives, U.S. Navy quartermasters, meat-cutters, nondrinking alcoholics in Alcoholics Anonymous, and tailors in an African community. At the beginning, people have to join communities and learn at the edge or periphery. As they become more experienced, they move from the periphery to the center of the particular community. Learning is therefore not seen as the gaining of knowledge by individuals so much as a process of *social* participation. The nature of the *situation* impacts significantly on the process.

Lave and Wenger propose that communities of practice are everywhere and that we are generally involved in a number of them at any given time—whether that is at school, home, place of employment, or in our personal and private lives. In some communities of practice we are key or central members, and in others we are more at the periphery. Over time, this collective learning results in practices that reflect both the goals of the group and the social relations of the group members. These practices are thus the property of a kind of community created over time by the sustained pursuit of a shared activity. It would follow, then, that these kinds of collaborating groups are called *communities of practice*. Members are brought together by joining in common activities and by what they have learned through their shared interactions in these activities. The concept of practice is a combination of the activity and the shared interactions as the learner is an apprentice to the practices of the group. Learning is therefore construed as an apprenticeship, or legitimate peripheral participation in communities of practice. In this respect, a community of practice, formal or informal, is different from a community of interest or a geographical community in that it involves a shared practice.

Lave and Chaiklin (1993) support both of Lave's earlier works and develop notions of practice by focusing on issues of context and, again, provide rich descriptions of everyday practices, including navigation, psychotherapy, artificial intelligence, and being a blacksmith. Cumulatively, these books have ushered in a new perspective in educational psychology, one that connects the fields of education and psychology to anthropology, with many connotations for teaching and learning.

SITUATED LEARNING AND IMPLICATIONS ON TEACHING

The implications on learning are many and growing due to situated learning's broad and interdisciplinary appeal. To begin, Lave and Wenger's work on learning as apprenticeship in communities of practice has been augmented by other researchers, and educators can now draw some conclusions about when the transfer of learning from context to context is most likely to occur. It appears that the main characteristics of transferable learning experiences occur in an environment characterized by meaningful learning experiences, expert guidance, and knowledge-building collaboration. These criteria for transfer are having huge impacts on instructional design and learning.

As practitioners, we all have seen the effects of communities of practice in our own classrooms. Research and textbooks are strongly pushing the concept of project-based learning, as the learning

becomes an apprenticeship of the community of practice. In this way, project based learning is a learning model because learning is a part of active participation and satisfies the conditions of meaningful activity, expert guidance, and knowledge building. Project-based learning is an instructional technique that is heavily influenced by the situated learning theory.

In addition, ideas on community of practice have been adopted most strongly within organizational development circles. The apprenticeship model, explored in the research of situated cognition and communities of practice, was an attractive theory for those traditions of thinking whose work centered upon training and development within organizations. In the 1990s, there was an increasing interest in the learning organization for those concerned with organizational development. Lave's and Wenger's work around communities of practice offered a valuable complement to organizational thinking. It permitted supporters to argue that communities of practice needed to be recognized as important resources for the growth of organizations. The model gave those concerned with organizational development a way of thinking about how rewards could grow to the organization itself, and how worth did not necessarily lie primarily with the individual members of a community of practice.

Other theorists have also further developed the theory of situated learning and learning as apprenticeship. *Cognitive apprenticeship* is a term derived by Brown, Collins, and Duguid in their work *Situated Cognition and the Culture of Learning*. This research proposes cognitive apprenticeships with multimedia (videos, interactive computer programs, etc.), as opposed to Lave and Wenger's traditional apprenticeships for learning formal theories in a specific kind of community of practice. The computer enables learners to use a resource-intensive mode of education. Cognitive apprenticeships employ the characteristics of other traditional formal communities of practice, but with an emphasis on cognitive rather than physical skills.

CONCLUSION

In the introduction of this chapter I posed the question, Does knowledge occur in isolation—disconnected from the environment and social interactions? And, can knowledge be stored away, in discrete packages, and retrieved later in life and applied to certain behaviors and practices? Certainly the assumption underlying our educational system is that knowledge gained in school is decontextualized and focuses on the individual and will be available in the future to be applied to new problems as they arise both in school and in real-life situations. Lave's introduction of the situated learning theory disrupted these prevailing thoughts and took learning from the individual and psychological to the collective and social.

In this chapter, I explored the impact of Lave's work on educational psychology by comparing it to other learning theories in education. The associationist or behaviorist theory has the tendency to see knowledge acquisition as an isolated, decontextualized phenomenon. In other words, it fails to consider the activity of learning in relation to the context (social environment of the world). Second, the constructivist theory restricts learning by "acting" or doing tasks in their environments. Neither is aligned with what the sociocultural theory of learning asserts—that learning is essentially social in nature.

Next, I reviewed the three phases of the sociocultural theory: the first phase entailed cross-cultural research of the sixties and seventies; the second was the transition phase of translation and re-centering of the cultural work; and the third was one of consolidation of ideas and legitimacy of the theoretical perspective. Lave's work was extremely instrumental for building the foundations of the new sociocultural perspective—situated learning.

Upon closer review of Lave's *Cognition in Practice* (1988), *Situated Learning: Legitimate Peripheral Participation* (with Wenger, 1991), and *Understanding Practice* (with Chaiklin, 1993),

situated learning emerges from the sociocultural learning theory as a new perspective that has provided a new direction to the field of educational psychology.

Recent learning models such as project-based learning, learning communities, and cognitive apprenticeships have adopted the techniques of communities of practice and apprenticeship in their research agendas as well. The situated learning perspective is quite broad and appeals to a variety of research and educational arenas.

To answer the questions posed in this chapter, Lave tells us that learning does not occur in isolation, but that it is social in nature. Lave would also assert that we cannot go back to our storehouses of knowledge to retrieve it across contexts, because knowledge is socially constructed and mediated in contextually specific ways.

REFERENCES

- Lave, J. (1988). *Cognition in Practice: Mind, Mathematics, and Culture in Everyday Life*. Cambridge, UK: Cambridge University Press.
- Lave, J., and Chaiklin, S. (Eds.). (1993). *Understanding Practice: Perspectives on Activity and Context*, Cambridge, UK: Cambridge University Press.
- Lave, J., and Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge, UK: Cambridge University Press.
- Rogoff, B., and Chavajay, P. (1995). What's Become of Research on the Cultural Basis of Cognitive Development. *American Psychologist*, 50(10), 859–877.

CHAPTER 20

Alexander R. Luria

WARREN SCHEIDEMAN

Alexander Luria contributes to the historical identification and understanding of new spaces for learning. To contextualize Luria one needs to locate his thinking in a biographic relationship to the ethnic, linguistic, and geographical complexity of Russia, and to relate him to the work of Lev Vygotsky, which centers on historical materialism. Historical materialism interprets history as the contextualizing agent, or determinant, for human thought and intellectual creation. Luria essentially focuses on the space inhabited by learners in time (across time, transhistorically) and how they can think, grow, and develop within that space, thus making it transformative, given the opportunity of language, values, cultural setting, and the intellectual capital available to their minds.

Alexander Luria's field was psychology. He was born in Kazan, Russia, near Moscow in 1902. Throughout his career he linked development and functioning of inner human mental process with outer environment, society, and culture. One way of phrasing this is that Luria's focus is on the activity transforming the inner and the outer self and the dynamic interactivity between mind and culture. He saw culture as mediating psychological processes. He viewed intelligence in relationship to historical and social environment. He regarded language as the "tool of tools." During the Second World War, Luria developed neuropsychology, the study of brain and thought.

To define Luria's significance, he connects intelligence and brain through activity with the social and cultural environment, context, particularly with mediation of language as a learning tool for making tools with which to learn. He puts an interesting metaphor to work, language as tooling up, to make tools to learn. An imaginary diagram is important: visualize the brain, which is inside the person, while the environment surrounds the person from the outside, and activity and language mediate back and forth. Luria's focus is on how the circuits are connected. Intellectual and cultural dynamics are at play in the dynamic process mediating brain and culture.

As an entry generalization to the study of Luria, with some oversimplification, Luria related the psychological process of thought with the linguistic and social, the historical context, the cultural milieu. He vividly connects, rather than separate, intelligence and environment. He extends instead of narrowing and dead-ending the human capacity for growth through intelligence interactive with sustaining social and cultural context. Much of his dynamic is cued by the phrase "at play." Luria focuses on cultural and social fostering that occurs inherently within cultures, which is part of

the play, the life, of the culture. He elevates inherent learning, what only appear to be games, but are actually lessons in the sustaining culture of the community. And this has educational implications.

At a certain conference, a group of public school superintendents exploded in criticism of advocacy of individual attention for students. They wanted solutions to learning for large groups, not individuals, because of expense and complexity in implementation. The solution lay in Luria's approach of integrating social-cultural melding with individual self-efficacy. It indicates weaving seamless, but diverse, patterns of learning linking societies, groups, and cultures with individual growth. One might think of this interactivity as deep, complex intercultural transhistorical thinking, a globalization process, with links to postformalist thinking, that is based on human development and cognition, the way the human brain functions. It speaks to the concerns of the school superintendents, because Luria integrates large groups with individual learning. And it utilizes play, which means it can be fun.

Visualizing, however, the significance of his work requires, I believe, contextualizing A.R. Luria himself. To be well understood, he needs to be portrayed before a backdrop of the ethnic, linguistic, and geographical complexity of Russia. Imagine Luria in front of a map illustrating the hugeness of Russia, surging with a myriad of peoples and languages. This background needs to be then informed by the drama of Russian politics from the Revolution of 1917, through Stalinism, to the demise of the Soviet Union. Luria died in 1977. During his time, control of cultural politics and geography dominated twentieth-century Russian history. Luria's theories are far from abstract but relate to the historical and social realities of the development of modern Russian industrialization and political representation from conflicting minorities. To develop the trained minds needed to run a modern country, understanding had to be developed of the educational relationships between intelligence and culture, specifically about how people from traditional subcultures can be educated in advanced knowing.

Also, Luria is best understood relative to the work of Lev Vygotsky (1896–1934), which centers on historical materialism. Vygotsky, Luria, and A.N. Leontiev are seen as a troika of theorists in their use of prior work of Werner, Stern, the Buhlers, Kohler, Piaget, James, Thorndike. Luria was Vygotsky's student, colleague, and collaborator. Seen in a historic and political context, one can be aware of how understanding the manipulation of the historic and social environment can engineer and change social values and behaviors through socialization, conditioning, and as self-efficacy in learning. Transhistorical learning space can be productive of control—social engineering. However, this space can simultaneously be productive of self-efficacy, as in the case of Malcolm X, who uses his time in prison to transform and free himself as a thinker by raising his conscious understanding through practice and development in thought and language. Malcolm X intentionally uses language as the “tool of tools.” In considerable detail, he describes how he copies from a dictionary in order to master words, to learn more words, to learn strategies to learn and grow, as his values change. He masters self-discovery, which facilitates his strategic rediscovery/reconstruction of the world. Mastery of language is his key to learning how to learn.

Polarized views of Luria's work as applied to learning can be shown in the example of Malcolm X. Interaction between brain and environment can be used to place bars around an individual or people (puts a person behind bars), or it can be used to facilitate freedom (freedom from bars that Malcolm X discovers). Luria's thinking is a two-way street. It can be used to manipulate, control, or foster self-efficacy—autonomous action that creatively uses environmental influence. Malcolm X goes behind bars at least partially because of negative educational opportunities. But paradoxically, he finds freedom because he gives himself the connections between culture and learning that society denied him. Malcolm X's autobiographical account of his self-transformation is also very similar as regards his ideas about thinking and self-empowerment, to the self-creation and self-invention within the dynamic personal space of intelligence, activity,

culture, and language used by Benjamin Franklin. Malcolm X and Franklin each created zones for learning.

Positioning Luria in relationship to Vygotsky engages the latter's concept of Zones of Proximate Development, which deals with the relationship between where a learner is developmentally and his or her potential level of growth in problem solving through mature guidance or collaboration. Both Luria and Vygotsky see intelligence in a momentum between inner function and outer cultural environment and influence. And both see intervention in that momentum relative to historical, social forces. Quality of facilitating guidance in learning is important. Luria elevates coaching, particularly the quality of coaching inherent within the culture.

Nonexperts may be tempted to reduce Luria's connection of cognition and society. The inner processes of brain, mind, and behavior are daunting. But Luria can still engage nonexperts like us in the genesis process and signal the linkage between what we see and hear and what we create in mind and behavior. Becoming historically conscious, we can reroute (which is preferable to the mechanistic implications of "rewiring," but the notion is similar) the conduits for psychological creation of thoughts, ideas, skills, and abilities—changing activity. Or we can reroute through control. There is a tension in empowerment, which is signified by Luria's own background, the complexity of geography and language, and the milling, contesting social and political forces of modern Russia, including two World Wars and the Cold War.

Luria clarifies his position in *Language and Cognition* (1982, p. 27): "The basic difference between our approach and that of traditional psychology will be that we are not seeking the origins of human consciousness in the depths of the 'soul' or in the independently acting mechanism of the brain . . . rather, we are operating in an entirely different sphere—in humans' actual relationship with reality, in their social history, which is closely tied to labor and language." Interplay of forces in *actual reality*, within historical time, then becomes very meaningful.

A benchmark of the implications of Luria's thinking can be found in his 1931 expeditions in Soviet Central Asia with the Uzbeki and Kazaki peoples. Theirs was a feudal society whose means of production and culture were being radically restructured through the socialistic revolution, economic changes, and the introduction of literacy. Here was a historic transition at which to test the hypothesis that thought processes are not fixed or immutable but can change in relationship to social and cultural life alterations and the introduction of mediating systems such as critical thinking and writing. Analyses were made of subpopulations such as women living in traditional Islamic isolation, male illiterates, and female activists who have had Western influences. Their critical thinking skills were analyzed. He inferred that "semiotic mediation systems act as determinants of higher level mental process."

Such cross-cultural analysis is fraught with problems. Luria essentially deals with metacognition. He finds that traditional peoples respond in different ways than schooled peoples. He finds "direct graphical thinking" replaced by "theoretical thinking." A movement in thinking occurs from the specifically concrete to the abstract. These changes demonstrate new reasoning forms, new self-assessment and imagination. Luria, with P. Tulviste, analyzed schooled and nonschooled use of experience contrasted with abstract reasoning.

One can view the platform of the 1931 Uzbeki research as introducing Luria's developmental interpretation of how children learn. This interpretation is an interplay between the environment and the brain, between the experiential and the increasingly abstract, as mediated through activity and coaching. Luria defines the development of self-regulation, that is voluntary action, as an evolution in gaining equilibrium with the social environment. As a child enters this world, it is at first overwhelmed by the environment. Coaching by caregivers, through speech, helps direct the child's activity. Activity at first is shared between adult speech, guidance, and the child's activity. Luria argues that the child then develops, "learns to speak and can begin to give spoken commands to himself/herself" (1982). Malcolm X and Franklin autobiographically model

self-administered “spoken commands.” A child’s speech ultimately possesses the function of the adult and becomes internalized as its semantic properties are recognized. The child has internalized facilitating/coaching and learned to “talk to [itself]” through the steps of problem solving. The speech pattern emerges in response to a situation involving difficulties. Then it develops as a plan. There are, of course, individual differences in problem solving—in the internalization of reasoning skills.

Attention to the facilitating characteristics of coaching and the social environment become very important in education, particularly in education involving social change. This relates directly to concepts of scaffolding. Leontiev writes, “In society humans do not simply find external conditions to which they adapt their activity. Rather, these (external) social conditions convey within them the motives and goals of their activity, its means and needs. In a word, society produces the activity of the individuals that it forms” (1981). In a post-9/11 global society this relationship between society and the production of individuals becomes particularly poignant and intense.

Relatively little is known about cross-cultural transhistorical learning spaces. Emphasis was on differentiation between preliterate and industrialized people. Very important is to look for how different cultures organize learning experiences for their young people and how that organization facilitates or collides with schooling. This awareness would, for example, facilitate student, teacher, and parent collaboration in learning. The “play of culture” activity has a number of implications for educational psychology.

Historical changes in the social culture and environment influence what is important in the curriculum of schooling. Let us try some broad examples. There will be large differences of what one needs to sustain life in the “colonial household” as opposed to the “turn-of-the century 1900 household,” on television historical reality shows. In these dramatized cameos of social reality, labor and culture seen historically, the nature of labor, and survival skills vary dramatically between “then” and “now.” Thus the implications of language are quite different just as social culture continues to change. With an age of technology the educative function of popular culture increases. As social culture alters, attention needs to be directed to newer channels. The classroom then can become a cultural/psychological laboratory. Gender, class, and ethnic identity can be better understood within the spin of the historical dynamic of intelligence and social culture.

Examples of transhistoric learning space can be informative. For example 9/11 is transparently symptomatic of significant cultural collisions, which can be understood in terms of the past, present, and future. The status and role of women in Islamic countries can change the social configurations, the learning spaces, of numbers of people across the globe. China offers a similar example of global cultural collision and change. In a cartoon series in Hong Kong one of the most frequent subjects is the overorganization of education for very young children, giving them no time to be with their parents. At the time they are losing Chinese culture, they are struggling in Western culture and seeming to inherit loneliness and dislocation. Another example occurred in one of my film classes, where the outcomes of an African American woman were very higher in quality than in the other courses she was taking. The difference between her performance in my course and in the others was identifiable in the bantering ordinary-language conversations the two of us had. She was the first person from her family to attend college. She was from a very oral culture. She related to film, popular culture, in my course. But her performance also developed through casual coaching.

Our bantering conversation connected a somewhat familiar subject matter, film, with a new way of thinking, analytical criticism. Survival on the streets privileges “street smarts,” a canny ability to quickly evaluate people and situations, to read character and action. These social skills draw upon the same intellectual skills used for critical humanities interpretation like analytic criticism, but humane facilitating can define the activity and make connections between intellect and

environment, which otherwise might not be realized. Formal textbook approaches can intimidate and silence. Casual, ordinary-language conversation can mediate “new learning,” and bridge the inner self and the outer world: home–school–work culture. This bridging can become a transformative learning space, and over time, developmentally, a transhistorical learning space as, for example, the historic transformation of African American culture with definable evolving learning spaces.

Luria supports theoretically the way for postformal thinking. People and culture have richer, deeper interactions than traditional methods of learning that are textbook-centered. Emphasis in both Luria and postformalism is creatively on portals of self-reflection, cultural interactions on deep levels, innovation beyond fabricated constructs like tests and curriculums, understanding as distinct from memorization. Luria makes “the origins of knowledge” important. “Thinking about thinking”—exploring imagination—are integral to both. Finding patterns and problems, exploring assumptions, achieve significance as does the discovery of new relationships for metaphors. Relationship of mind with ecosystems and patterns of life, and reading the world as a book, making connections between logic and emotion, and expanding consciousness—these characteristics of postformal thinking can be sustained by Luria’s work and theory.

Complexities of neurophysiology aside, Luria creates pathways for teachers to make transformational connections between intellectual conduits for learning as they bridge minds, selves, and social and cultural environment in actual reality and create a larger, richer, ecological world consciousness and understanding.

REFERENCE

Luria, A. R. (1982). *Language and Cognition*. New York: Wiley.

CHAPTER 21

Herbert Marcuse

RICH TAPPER

Herbert Marcuse was a philosopher and teacher, an intellectual guru and “Father of the New Left,” an American by force of circumstance, and a most important figure in the radical social and progressive political movements throughout the late 1960s and 1970s, a period in which he experienced popular attention rare for an American intellectual. Combining psychological, sociological, and political analysis in a German philosophical tradition, and practically linking the academy with an evolution and revolution in society, Marcuse espoused an alternative view of society grounded in a free and happy life for all individuals, a possibility for mankind in terms of revolution. The revolution, in this case, is liberation—one in which our material conditions *and* the consciousness of the individual transform, from the repressive, alienated, inauthentic, and *one-dimensional* to the vitally creative. As Marcuse understood, the world is not in crisis solely because of material events and circumstances, relations of power, and character of economy; crises grow because of the ways that people think, the ways that they think of themselves, and the ways that they think about the world around them. For these major themes in his work, his tireless critique of advanced industrial society, and his enthusiastic embrace of the New Left and youth movements, Marcuse belongs in the front ranks of theorists, researchers, and practitioners who have contributed and are contributing to the development of a new era for educational psychology.

Although Marcuse has insisted that his family history had little to do with his mature work, it is clear that his childhood in Germany, at the end of the nineteenth century, was auspiciously fertile ground for such a philosophical spirit. He was born on July 19, 1898, in Berlin, the son of Carl Marcuse and his wife Gertrude, upper-middle-class Jews. His first significant political (and philosophical) experience came in 1916, when Marcuse was summoned to duty in the German army. He was eventually assigned to a reserve Zeppelin unit because of poor eyesight and, consequently, had the opportunity to attend lectures rather than fight in the first World War. During this time, he had contact with some of the foremost thinkers and thoughts of his day, and was undoubtedly influenced by the political protests against the war by radical socialists.

In 1917, Marcuse joined the Social Democratic Party (SDP) in opposing the war, and involved himself with the worker strikes in Berlin during a time of historic upheaval in Germany. For a time during the November Revolution, Marcuse was part of a civilian security force organized upon the urging by what was known as the soldiers’ councils as well as the communists,

defending the socialist revolution in Germany against the counterrevolutionary forces of the former establishment under the Kaiser. Soon after, in 1918, Marcuse was discharged from the army and soon quit the SDP as well, disillusioned with their policies and activities. By 1919, the SDP, in Marcuse's view, had capitulated to "bourgeois" establishment. Trying to maneuver politically, the president of the SDP only betrayed the spirit of the movement; trying to ally itself to the old powers, the SDP only succeeded in becoming reactionary, destructive, and repressive itself.

Although he was to ultimately leave the ground activity of political revolution for a vocation in the academy, this entire period of direct political experience marks the central themes in Marcuse's work—his characteristic intolerance for compromise and his loyalty to the philosophy of Karl Marx. What might have begun as the unsurprising protest of a relatively privileged young man against the society that would provide a fertile base for such a horrible war became the foundation for a life's work. It was during this period of political activity that Marcuse began to seriously study Marxism and begin an inquiry into the question of why, if the conditions were so ripe for Marxist social revolution in the world and his country, did the revolution fail. Marcuse was to remain a Marxist throughout his life, perhaps the most radical and committed Marxist of the Frankfurt Institute, consistently arguing that the foundation of Marxism was its need and even demand for periodic revision, for a concrete response to changing concrete historical conditions.

After receiving his PhD in literature (with minors in philosophy and political economy) in 1922, and a short career as a bookseller in Berlin, in 1928 Marcuse returned to Freiburg and the formal study of philosophy with Martin Heidegger. At the time, Heidegger was one of the most influential thinkers in Germany (and Marcuse, throughout his life, considered him his greatest teacher), leading Marcuse both to Hegelian dialectics and to the existential phenomenology of thinkers like Husserl. During this time, Marcuse had crucial and fundamental insights into the trends in technological society that rob people of freedom and individuality, insights that were to find their fullest expression in his later, and most famous, work, *One-Dimensional Man* (1964).

To put this into a philosophical context, where Heidegger, and students of his philosophy, believed that they could "choose" authentic existence, and by implication leave repressive social conditions intact, Marcuse understood that "authentic" existence as such required a radical new way of being in the world that transformed existing conditions, accomplishing a radical social and cultural revolution. Marcuse experienced this lesson early, when after the November Revolution in Berlin, the soldiers of the army reelected their old officers to their same positions of authority (paralleling current political circumstance as well, both in America and notably in Iraq). Marcuse's entire philosophy was grounded here, in analyzing the forces of repression that exist because the conditions in society and consciousness make them possible and even inevitable. Our culture, in this regard, is held in place and re-created continually through the patterns of our language and relations, how we "think" about the reality of our world, and how we move within it. Perhaps this is why Marcuse can be most difficult to read, as if he wrote so that the revolution of the reader's mind ought (and can) only come through the reader's deliberate struggle with text. To make concepts too easily digestible is to ensure their assimilation, and their *repressive desublimation*—a notion that had a central place in Marcuse's work, particularly since the publication of *One-Dimensional Man* in 1964, in which he makes the term explicit.

In this, perhaps his major philosophical work (the themes to which I will necessarily return in this chapter), Marcuse explores the dominating forces of "technological culture," which create a society of such conformity that all genuinely radical critique is subsumed in the integration of opposites. Marcuse argues that the real forces of consumer society are subtle rather than grossly fascistic (those elements of more recognizable fascism: material and often violent repression of people and restriction of their behavior to serve the interests of a narrow group or person), as rare to acknowledge as the air that we breathe. They are "counterrevolutionary," alienating individuals from a genuine critical consciousness and significant discourse in their public sphere with their

power to destroy anything truly subversive through absorption. The “radical act” is all but occluded by an increasingly hegemonic industrial society that inculcates “false” needs, which it then fills. Individuals are integrated into a cycle of production and consumption, laying consciousnesses flat—*one-dimensional*—and largely devoid of criticality or transcendent potentiality. People, in effect, are *domesticated* as needs are re-tooled according to the dictates of the technopoly and the market, refusals and negations rendered ideologically complicitous. Even sites of contention, such as authentic art, that might crack this *false consciousness* are only *allowed* to inhabit the margins of political (and psychological) discourse, and so help maintain the illusion of diversity of thought.

Key to this radically critical work is the notion that human beings are alienated, in industrial and (corporate) capitalist society, from their genuine and essential potential—so much so that genuine freedom is outside of our imagination, abstracted like most of the philosophies that deal with “freedom” and “existence.”

Marcuse struck this theme even in his first published essays in the late 1920s and early 1930s. Throughout his life, he sought to bridge the gap between philosophies that dealt with the great issues of society and those that addressed the difficulties of the existing individual. Marcuse broke radically from abstractions and the myths of “objectivity,” concerning himself instead with the concrete conditions of existing society. As a result, the emphases and ideas in his work have shifted considerably, but never veer far from his main themes except in terms of a progressive continuity. His work evolved, as his understanding developed through his life. If in his earlier work his writing sounds a number of existential themes (particularly in his first “Habilitation Dissertation” under the direction of Heidegger, on Hegel’s ontology, for entry into the academy as professor), in his more mature work, Marcuse broke nearly completely with the existentialist—particularly Heideggerian—a historical assumptions about the nature of being human. In other words, throughout his life, Marcuse became increasingly concerned with the subjective conditions of revolutionary change and the barriers to them, and the individual’s relation to the very real circumstances of existence. His fundamental question: How is authentic existence possible *today*? Marcuse confronted the problems in the real world; he sought the causes of suffering in the concrete, and tried to point a way beyond human misery, repression, and slavery. His life’s work was to liberate the individual from alienation and revolutionize society.

In the 1930s, Marcuse, with the Institute for Social Research, laid the groundwork for many of his later projects with analyses of fascism and authoritarianism. In 1933, a day following Heidegger’s public pronouncement of support for the National Socialist (Nazi) movement, Marcuse left Freiburg to join the Institute. Also known as the Frankfurt School of Critical Theory, the Institute was just in the process of shifting from Frankfurt owing to the political climate, the rise of Hitler and the National Socialists to power. Marcuse would never work in the Frankfurt offices, but instead in Geneva and then later at Columbia University after the exile of the Institute from Europe. Part of its “inner circle,” Marcuse (with Adorno and Horkheimer, most notably) investigated the psychosocial conditions in which so many people are so easily manipulated by irrational, aggressive leaders. Throughout the 1930s and 40s, Marcuse worked with the Institute at Columbia University, which had granted them offices and academic affiliation.

In 1940, Marcuse became a naturalized U.S. citizen, and remained in the United States for the rest of his life aside from excursions and lectures in Great Britain and Europe in the 1960s and 1970s. His first major work in English, *Reason and Revolution* (1941), introduced many in the English-speaking world—particularly in America—to both Hegel and Marx. Significantly, Marcuse (who is often vilified as representing hopeless critical pessimism) meant the volume optimistically (again, most particularly for America), showing the relationship between Hegel and Marx and the possibilities inherent in the dialectical method. His philosophical point was to introduce and expand themes that would run throughout his work; his social intention was to

catalyze a society against forces threatening to annihilate the possibility of freedom. He sought to free the masses of society from the slavery of totalitarianism, and restore an association of rational individuals in our modern world.

His commitment against fascism led to his work for the U.S. government from 1941 to the early 1950s, first in the OSS (Office of Secret Services) and then in the State Department. His particular duties included analyzing the German and Soviet cultures, to find the causes and weak links of fascism and communism. During this period, he wrote and published *Soviet Marxism*, a study quite critical of Soviet-style communism and the USSR. The study, like his *One-Dimensional Man* (Marcuse was never an uncontroversial thinker), understandably angered many on the left, unwilling or unable to see the distortions (and disruptions) of true Marxism in the Soviet Union, as well as reinforced the opinions of those on the right against the radical and Marxist Marcuse.

Most immediately relevant for educational psychology in this regard is Marcuse's related analysis in *Eros and Civilization* (1955) linking the seeming failure of the Marxist revolution to the psychological state of repressed people. While Freud theorized that man as a psychological being necessarily suffers in order to make civilization possible, Marcuse argued that so-called civilization has instead induced suffering to an unnecessary and extraordinary degree. In effect, Marcuse challenges Freud's basic assumptions about the nature of man and "civilization," even while accepting some of his central tenets (which also prompted a heated, and often polemical, series of arguments with his former colleague in the Institute, Erich Fromm).

Marcuse, in particular within the Institute, had explored the patriarchy of the family unit, which he understood (like other thinkers such as Wilhelm Reich) not as the natural order of things, but rather the unexamined basis of the existing social structure. Following his logic, the defense (like Freud's) of conservative family values is not a progressive and liberating tendency, nor even an objective and apolitical one, but a defense of the dominating capitalist economic structure. Family practices tend to legitimate authoritarian social ones.

In *Eros and Civilization*, he refutes Freud's basic argument that an unrepressive and unrepresed society is impossible. Happiness and pleasure, according to Marcuse, have *true* value in modern society—they must not be subordinated to the *false* value of the capitalist work ethic. In effect, and significant for his methods of *dialectic* and in particular the *negative dialectic*, Marcuse disagrees with Freud's basic dichotomization of "pleasure" and "reality" principles, and his emphasis on the latter as the principle of civilization. For Marcuse, the "reality" principle of modern capitalist society only enforces the totality of culture's demands on the alienated individual—and so Marcuse rather sets it in dialectical contrast to "pleasure."

In reconstructing Freud's theory (and particularly in critical contradistinction to *Civilization and Its Discontents*), Marcuse gives an account of how social forces condition our inner worlds. The forces of domination colonize the minds of people; Freud's "superego" is more properly the voice of repression, internalized. The superego as well as external authorities stand ready to punish those elements of society or individual judged to be perverse, or extraordinary; alienated labor has become a duty willingly performed as part of "reality." Domination in this sense applies whenever the individual's goals and purposes for his or her existence are prescribed, along with the means of striving for them. Domination is a process in which society comes to control both the inner and outer life of an individual: externalized, as organized wage-labor, exploitation, etc.; internalized, as the prohibitions, ideologies, ways of thinking, assumption of values and modes of being in the world. Domination takes the form of instrumental technical imperatives and mechanical behavior. It takes place through total administration (so important to note in an era in which "administrators" have unquestioned control of education)—its antidote is *true* education. Domination bounds our social and psychological dimensions, constituting our practical nature as human beings and "reality" as we know it. The specific "reality" principle that governs the

behavior of contemporary society is the *performance principle*: the “pleasure” of the individual is subordinated to “reality.”

One can see the far-ranging consequences of such a state in our concrete and common circumstances. Other than in exceptional circumstances, individuals are required (and require of themselves) to work long hours in unsatisfying occupations; “leisure” and “free” time have become rare quantities, to be privately hoarded; emotions repressed in private relationships cathect only through mass entertainment. *Human beings exist part-time*; “freedom” is had only in those intervals between being used as instruments on someone else’s behalf. But in our society, even “free” time is determined in its character by the performance principle, either in our utter abandon to animal tendencies otherwise repressed in our economic duties, or in an obsession with private projects and concerns. What so-called civilization offers is repression marking both the “progress” of the human being in general (phylogenically) and the individual in particular (ontogenically). Marcuse shows in *Eros and Civilization* how the conditions of the greater culture are the conditions of the individual; the cure for the one necessarily the cure for the other, or it is no cure at all.

Marcuse also offers a new “reality” principle, again making a concerted effort to imagine an alternative to contemporary repressive conditions, an effort that was to be such a consistent theme throughout his work. Such a principle would rely on a radically different aim to reason in our culture, and on the existence of an instinctual human drive toward happiness and freedom. Rather than the repression of our instinctual drives as integral to progress and civilization, he imagines a perspective in which these drives are instead integrated into a liberated state of being. In the old “reality,” human beings seldom (if ever) learn that our animal instincts are only the first part of a much greater story; that our innate drives are not meant to be burdens but sources of power.

Rather than positing a strict dichotomy between subject and object, individual and society, spirituality and animality, body and soul, the new rationality would instead encompass a subject transformed through reconciliation. The values inhered would be in practical opposition to the values of repression. The new values would include sensitivity and receptivity, nonviolence and compassion.

In effect, and turning back to Freud, Marcuse aims at reconciling the perceived opposition between the “pleasure” and “reality” principles in something like Freud’s “Nirvana” principle, aiming at peace and harmony in existence. The Nirvana principle represents, as Marcuse shows (quite idiosyncratically, and not without its difficulties) through the myths of Orpheus and Narcissus, the ideal of unalienated Eros; the embrace of vitality and creativity rather than necrophilia (in Erich Fromm’s term). Beauty, play, contemplation are the values Marcuse tries to incorporate in his imagination for a new “reality” principle. The conflict between reason and the senses would be overcome; new rationality is, in this way, prototypically postformal. Marcuse argues that liberated Eros would not only lead to greater, more complete sexual gratification, but to the transformation of human relations and creativity in general—here anticipating much of the counterculture of the 1960s, which would make him such an intellectual and political celebrity among the New Left, intolerant of the conservative (and repressive) social and political establishment.

Marcuse’s distinction of *repressive tolerance* (from the 1965 essay of the same name, dedicated to his students at Brandeis University) makes this central point for our society in general and the education of individuals specifically. It is notable that the essay appeared just as Marcuse was being relieved of his post at the University (he’d received a tenured position in 1958) over a then-famous dispute with the University president. (His expired contract was not renewed, and he left for a position at the University of California at San Diego until his retirement in the 1970s.) In “Repressive Tolerance,” Marcuse speaks from his experiences, which by then included not only the great, historical events of the German Revolution and the first World War, but

also the Cold War and McCarthyism in the United States, and the vigorous and often ruthless “counterrevolutionary” activities of conservative social forces during the waxing of the struggle over civil rights in the United States. Here he argues that there are forms of behavior, of belief, of action in society that ought not be tolerated by progressively conscious individuals—and deserve to be met with concerted, deliberate, and perhaps violent, protest. “False” tolerance refers to the toleration (and so legitimization) of areas in our culture that in fact are repressive, even though they argue for themselves as progressive in the name of pluralism (and often God) and relativity of opinion; these areas offend the telos of true tolerance, which supports diversity, inclusion, progression, and evolution.

But who has the capacity, and is qualified, to make such distinctions? Here is a central point for educational psychology: everyone in the maturity of his or her faculties. The distinction between repression and progress appears to be a value judgment to the alienated mind, repressively tolerant, but in contrast is empirically rational and verifiable to the mature human being. The answer to the dictatorship, to the fascism of indoctrinating ideology and repressive superego, is the mature human consciousness, intolerant of repressive factors and contradictions masked by propaganda and Orwellian manipulation. The real crisis we face in the modern era is that of a closed society in which such maturity exists only as abstract possibility. If there were lasting human developments to issue from the Age of Enlightenment, they grow from the presumption that persons are rational, with access to universal truths and their own, direct experience of their conditions of existence. If society renders this presumption false, then “Enlightenment” is at best a lie.

Marcuse argued in “Repressive Tolerance” that we must be *intolerant* of the words, images, and processes that feed *false consciousness*. Education cannot be value-free, except through a repressive sleight of hand. Previously “neutral” aspects of learning must be understood as crucial and political in both style and substance. The liberating education is, again, empirically rational; it is radically critical. The student, Marcuse believes, must be able to think in the “opposite” direction of repressive forces; the student must be able to truly inquire into his or her concrete circumstances and the reality of his or her struggle. Education in general—and philosophy in particular—plays the progressive role in Marcuse’s social theory by developing concepts that are subversive of prevailing ideologies, helping to develop imagination and the language of critique and possibility. Without such language, imagination, or critique, the real autonomous subject remains bound by abstractions, ideals, and representations, divorced from its true needs.

In his earlier work from the mid-1960s, *One-Dimensional Man*, Marcuse addressed most specifically (and what some criticize as pessimistically) the terms of this occlusion. Here he also addressed the two main historical predictions of inevitability in orthodox Marxism—that now seemed to be concrete improbabilities: the rise of the proletariat to power and the fatal crisis of capitalism. As he argues, explaining how Marxist thought must grow to include contemporary conditions: *one-dimensionally*, all thought conforms to the preexisting patterns of the dominant culture. “Bidimensional” thought, in contradistinction, represents “what could be”; it signifies human capacity and realization of critical subjecthood, the possibility for transcendence, subject as distinct from the dominating object. *One-dimensional* thought smoothes over differences and distinction, it quells radicalism and subversion through enclosing the possibilities for thought. History is relieved of its contentious concrete character, replaced by myths. *One-dimensional* persons have short and opaque memories, for both history and their own true needs. Both have been falsely administered by a totalizing society. Authentic individuality itself has become a myth, rather than a fact of existence. Human beings have largely lost touch with their capacities to look beyond current conditions and conditioned “reality,” and to perceive alternative dimensions of possibility.

But rather than deeply pessimistic, *One-Dimensional Man* might instead (and has been) read as a critical manifesto. It set the stage for a series of Marcuse’s articles and books—including

An Essay on Liberation (1969) and *Counterrevolution and Revolt* (1972)—helping to articulate a politics for the New Left emphasizing the power of the outcast and disenfranchised in general. His case is not for the working party per se to gain power, but that the decisive factor is the discontent, the *great refusal* of the nonintegrated individual. The radical intellectual is again key to the opening of the social imagination, just as the radical act is requisite for the liberation of the individual, the opening to true needs.

This concern with needs was to characterize Marcuse's later philosophy, particularly in *An Essay on Liberation*. In Marcuse's view, happiness is not ancillary, but central, to freedom. Freedom, in turn, necessarily involves the meeting of our *true* needs. Without such freedom, real happiness is impossible for human beings. Still, it is necessary to note, particularly for those who would like to see, and have seen, Marcuse as an apologist for "free" sexuality and the "me" generation, that Marcuse is arguing *against* a purely subjective and selfish happiness in his argument for the meeting of human needs. He argues that happiness is inherently connected to the transformation of social conditions and individual consciousness, that there is a clear distinction between "higher" and "lower" pleasures obscured (and inverted to a great extent) by contemporary culture: more and more, we recognize ourselves in our commodities; we define ourselves by what we own, what we have, and what we need to get. True needs are essential to human survival and development; false needs are superimposed on us and serve the interests of repressive social forces. Technology, in Marcuse's philosophy, plays a crucial role here: rather than being directed toward the maximization of profit (in all its forms), technology could (and perhaps ought) to be directed toward the satisfaction of true needs.

Like very few others thinkers, Marcuse was willing to embrace a notion of social transformation that includes the sensual, sensuous, and receptive as the foundation for our society, morality, rationality. It is again necessary to note as a response to vocal (though ultimately misinformed) critics that Marcuse's vision involves not the unbridled genital expression of our libido, but a *nonrepressive sublimation* of the sex instincts, the "eroticization of the entire personality," the freedom to truly *play*. Sexuality is, Marcuse argues (again similar to Wilhelm Reich in this), transformative and vital. Its free expression leads not to a progression of lewd, lascivious acts, but rather their minimization. Opening taboo to the light would incorporate these impulses (now only *allowed* "neurotic" expression in general society) into constructive society; it would transform so-called perversion into creativity. Marcuse did not advocate orgasmic expression (like Reich) as the key to liberation and social transformation, but rather the liberated Eros that would ultimately express across the levels of our human existence. In a rational world, sexuality, in Marcuse's terms, would cease to be a threat to culture and instead lead to culture-building; the human organism ought to exist not as an instrument of alienated labor, but as the subject of self-realization and social transformation together in the meeting of true needs.

What opens the space for this new imagination was a major focus in Marcuse's last book, *The Aesthetic Dimension: A Critique of Marxist Aesthetics* (1978). In a turn back to the beginnings of his writing and work (his 1922 dissertation on the German artist-novel), he argues for authentic art (as literature, primarily) as the authentic radical act. Similarly to the way he treats fantasy in *Eros and Civilization*, Marcuse argues for authentic art as integral to the Marxist social revolution; art (and again, literature especially) provides and catalyzes the imagination and consciousness for true revolution. True, authentic art breaks through *mystification*, through solidified reality. In effect, authentic art moves us in our hermeneutic experience *beyond*, opening spaces in the imagination for emancipation. This theme of emancipation, liberation, or revolution, of demystification, is part of the inner logic of authentic art, rather than its explicit style or content.

Marcuse's exploration in *Aesthetic Dimension* emphasizes his lifelong argument: the decisive fact of progression and evolution, over and against repression and fascism, is the liberated subjectivity of individuals, present to true needs, intelligence and passion, imagination and conscience.

To approach this subjectivity, to uncover it, is to be intimate with history, with our concrete personal histories in all their subtleties and dimensions. Marcuse's turn back to psychology as well as hermeneutics is most important for our purposes here in educational psychology: the remembrance of concrete personal history, the understanding of our own psychologies, of the nature of our internal laws, is decisive in demystifying our "reality"; reification is forgetting. Authentic art, in this sense, transcends social constrictions of language, thought, and form, even as it is overwhelmingly composed of their presence.

From authentic art emerges a new rationality, a new sensibility. Marcuse sounds these lifelong themes for the last time here, in *Aesthetic Dimension*: the need for liberatory imagination, for the subrogation of aggression and destruction to creativity, to life instincts; the place and necessity of the intellectual, and artist, in negating established "reality." In (once again) exploring the role of art and the artist, Marcuse underlines the need for true democratization, and generalization of creativity. Art so represents the ultimate goal of all revolutions: the freedom and happiness of the individual, in rational society.

It is difficult to imagine a more important figure in the development of the postformal movement than Herbert Marcuse. Not only did he, with the Institute for Social Research, provide the decisive critical strength for a final philosophical break with the repression of formal ways of thinking, but Marcuse in particular provided the imagination for an alternative rationality and "reality," based on reconciliation rather than domination and duality. Not only was his work decisive for philosophy and politics, Marcuse's project is most fundamentally a project about authentic and concrete human existence, beyond our contemporary logocentrism and habits of representation and reflection. No reification was exempt from his critical lens, except perhaps a deeply felt humanism, and faith in the power of the mind to break through obstruction and clear the ground for truth. Marcuse challenged every category of thought and culture dialectically, declaring quite early in his career his intention to carry out a negation of the present order. His was a philosophical approach, but not the approach of an abstracted intellect; Marcuse provided guidance throughout his career to the development of his individual students as well as to the growing youth movement and the social and political New Left. His was a project about the disenfranchised, the outcast, and the consciousness not yet integrated into the greater order as the keys and catalysts for a revolution in society.

Marcuse died on July 29, 1979, after having suffered a stroke while on a visit to Germany.

CHAPTER 22

Abraham Harold Maslow

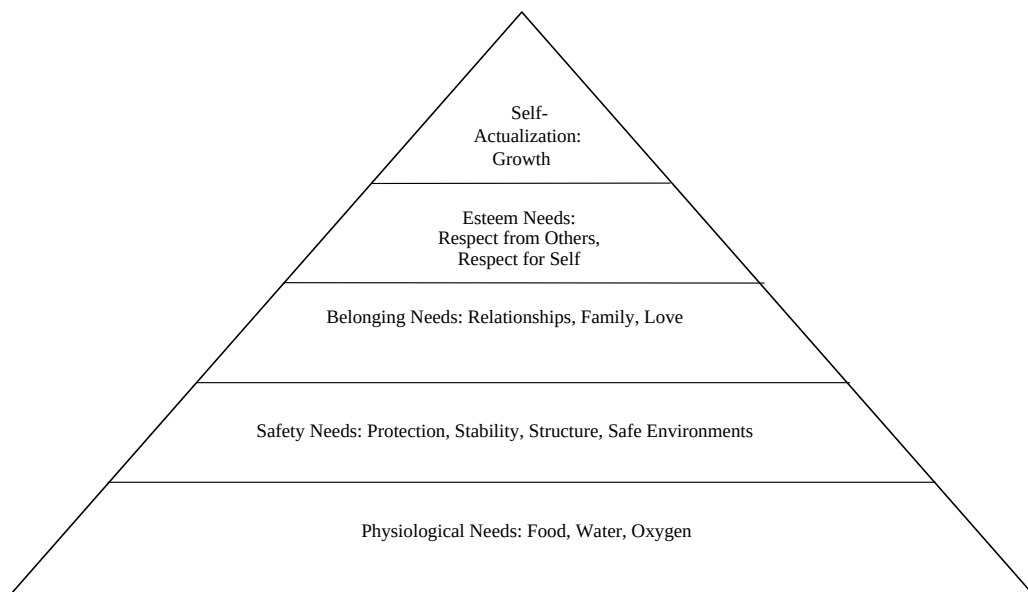
RUTHANN CRAWFORD-FISHER

Abraham Maslow was the first of seven children born to uneducated Jewish immigrants on April 1, 1908. His parents came to the United States in an effort to provide opportunities for education and prosperity for their children. Because of their sacrifice, they expected a great deal academically from their first-born. It was assumed Abraham would excel and become a lawyer. He did enroll at City College of New York; however, after only three semesters he transferred to Cornell, only to eventually return to City College. Shortly after his return, he married his first cousin, Bertha Goodman. His parents were not happy with his choice of bride, nor were they happy about his seeming inability to focus on their goal of his becoming a lawyer. It was not until after he was married and he moved to Wisconsin that he would begin a path in psychology that earned him the place in history. Maslow's insights into the human condition allowed him to develop a hierarchy of needs that has guided modern-day philosophy of educational psychology.

Maslow's first venture into psychology came in the form of a basic psychology course while at City College in 1927. Interestingly, he earned a C in that course, but the beginning of his great thinking came after reading Graham Sumner's *Folkways* (Lowry, 1972, p. 1). This book allowed Maslow insight into society, how environment influences individuals, and how societies evolve. This ignited a passion within him that would sustain him for years to come.

When Maslow transferred to the University of Wisconsin in 1928, he came under the tutelage of behavioral psychologist John Watson. During the time Maslow was at the University, there were many notable psychologists in residence. The main focus of the evolving work of this group was in the ever-emerging field of behavioral psychology. While at the University, Maslow earned a BA in 1930, an MA in 1931, and his PhD in 1934. All his degrees were in the field of psychology. It was actually in 1932 that Maslow began examining primate psychology, which was the beginning of his work that would lead to his ultimate crowning achievement of the development of his hierarchy of needs. In 1934, Maslow presented a dissertation focusing on dominance and submission of primates. In 1935, he presented his body of work at the American Psychological Association's conference, where he garnered the attention of Edward Thorndike, noted psychologist at Cornell. Thorndike invited Maslow to return to New York and work at Cornell. After only two years, he left the side of his mentor and Cornell to accept a teaching position at Brooklyn College.

Figure 22.1
Maslow's Hierarchy of Needs



During his tenure at Brooklyn College, he had the opportunity to meet many European intellectuals such as Eric Fromm, Alfred Adler, and several Gestalt and Freudian psychologists (Boeree, 2005). Once on his own, Maslow began putting together the pieces of his life, his knowledge, and his insights into primate behavior into a concise methodology of psychology.

Maslow suffered from a low self-esteem. While he was successful in his own right as he grew up, he was less than his father had hoped for. This sense of never being enough, coupled with his father's frequent taunting about his appearance caused a lack of self-esteem to develop. His understanding of the need for emotional security came from his work with primate dominance studies during his years at the University of Wisconsin. Maslow did extensive work in the area of submissiveness and dominance within the primate community. He examined how these elements influenced relationships among the primates. He studied how impulses, needs, desires, sexual drive, and aggression factored into the relationships of the primates. His observations of behavior, motivation, and need coupled with his own personal understanding of environmental influence and primate behavior began the basis for his hierarchy of needs (Boeree, 2005).

Maslow's hierarchy of needs has huge implications not only to the world of psychology at large but to the field of education as well. Maslow used the term *hierarchy* to illustrate that in four of the five levels, the successful attainment of human needs is based on the fulfillment of needs at the lower level. The tiers of Maslow's hierarchy (Figure 22.1) are as follows: physiological, safety, belonging, esteem, and, self-actualization.

The base tier of the hierarchy addresses a person's physiological needs. The items that fall into this category are air, water, and food. When people are very hungry, they begin to focus only on the need to eat food. When hunger pangs escalate to the point where they can think of nothing else, thoughts focus on getting something to eat. If those needs go unmet, the thought of eating

food becomes an obsession. All remaining thoughts dim as attention focuses on what food will be consumed. It is important to note, however, that if air intake of the starving individual were threatened, attention would instantly fade from hunger as a more primal human need of air came under attack. It is a fascinating phenomenon where one need that is so severe, that so dominates thought, is quickly replaced by an even more desperate human need. The implication of Maslow's understanding of the compelling nature of physiological needs is especially important to student performance in schools. If students come from homes where food is not readily available, they will not be able to focus on the activities happening around them. They will fixate on the need for food until that need is met. Many governmental programs have been integrated into the school day to address this very issue. Students who qualify for free and reduced-price meals are now offered breakfast and lunch at no cost so as to combat hunger and allow students to focus on learning.

The next tier of the hierarchy addresses the need for personal safety. Safety also encompasses the need for structure and stability. Once food, air, and water are secured for survival, finding a warm, dry place to sleep becomes of paramount importance. The safety and security of that place is important in the individual's effort to avoid pain or harm. Stability and protection are human needs most important in the formative years of children. These needs form the basis of their fight or flight response. The fight or flight response is an instinctive human response to environmental stimulus. When threatened with danger, humans will either flee the situation if they feel failure is imminent, or stand and fight if the situation does not pose imminent harm. Students who are provided stable, nurturing environments that have easy access to food, water, and security will develop with a fair degree of normalcy. Students who have intermittent access to food, water, and are uncertain about whether or not they will have a home to return to, whether or not a parent will be present, or whether or not the home they return to is in a safe environment can potentially develop many risk factors with regard to the fight or flight response. Students who live in unstable environments, which are not necessarily safe, develop with higher states of arousal. They are on constant edge trying to determine whether flight or fight is needed to secure personal safety, thus altering their brain chemistry. They operate in a portion of the brain closest to the brain stem, where the fight or flight response system exists. These students in unsafe environments have a difficult time processing higher-order operations because too many actions processed in the area of the brain stem affect their functioning. Students whose security needs are unmet and whose physiological needs are met on an intermittent basis are unable to function well in educational settings.

The next tier on Maslow's hierarchy is that of belonging. Belonging needs are those needs that involve connection to others. Love, community, and belonging to a group all form the basis of this level of function. Humans by nature are social beings. Since the dawn of time, humans have existed in colonies or social groups. Survival—then and now—depends on the ability to foster and sustain relationships. Especially critical to human development are the love bonds between parent and child. Children who grow up in homes devoid of healthy contact with adults will supplement that need with other individuals. Once into elementary age and beyond, positive peer relationships become a critical element to development. Individuals whose belonging needs go unmet may turn to less desirable groups in order to develop a sense of belonging. Gangs, cults, and negative peer groups supplement a human's need to feel part of a group. When students' needs in this level go unmet, they will be prone to developing a severe sense of loneliness, social anxiety disorders, maladaptive social disorders, and will have difficulty making and sustaining relationships needed to function in everyday society. Many of the students whose needs go unmet at this level can develop depression owing to a sense of inadequacy and inability to connect to the school community. Furthermore, students who develop maladaptive behaviors and whose needs

are unmet or met intermittently at lower levels may develop aggression issues, violent tendencies, or delinquent behaviors. In relation to education, students such as these are likely to develop high-risk behaviors such as absenteeism, class cutting, violent behavior, and early withdrawal from school.

Esteem needs constitute the next tier on Maslow's hierarchy. Maslow designates two distinct categories within this tier. In the lower level of esteem, individuals seek respect from outside their self. They seek positive strokes via recognition, attention, status, and appreciation. Their esteem is based solely on how others see them. In the higher level of esteem the need focuses on self-respect. The needs at this level focus on feelings of independence, self-confidence, and personal accomplishment. Students whose needs go unmet at this level often may withdraw from communities and others. Their low self-esteem keeps them from the ability to make and sustain much needed healthy relationships with others. They may fail to achieve their potential because they feel a sense of inferiority. Because they have little or no respect for themselves, they may believe at some level that they are incapable of success. Teens whose needs are unmet at this level may engage in risky behaviors. They have little respect for themselves, so they essentially have a negative self-fulfilling prophecy. In seeing themselves as inferior, they will aspire to be inferior. These children will not often take risks or strive to attain goals they deem too lofty for someone like them. Risky sexual behaviors are common among teens with inferiority issues. When they have a negative self-image, they will seek and take attention in any form. Abusive and unhealthy relationships may develop as the negative self-fulfilling prophecy is fulfilled.

The four tiers of the hierarchy discussed thus far—physiological, safety, belonging, and esteem—all fall under the heading Maslow termed deficit needs or D needs. The reason he referred to these tiers in a deficit mode is because if humans do not have the needs met at these levels, they may have potential deficits in their functioning as healthy individuals. The concept of deficits states that if needs at all levels go unmet, then the needs at the physiological level will take precedence over all other needs. When needs at the lower level are met, then needs on the next level become predominant. Maslow refers to this system of checks and balances as homeostasis. In this sense, the body is a self-sufficient machine. When it lacks something, a switch goes on as an intense need develops for the element that is lacking. When the need is met, the switch goes off and stasis is restored until such a time as another need develops (Maslow, 1970).

The final tier of Maslow's hierarchy is that of self-actualization. Self-actualization is the most complex of all the levels of the hierarchy. These are not deficit needs; the needs here are defined as growth motivation or being needs (B needs). B needs may take many forms and focus on an individual's drive to become something better than the present form. These B needs include characteristics such as compassion, understanding, insights into the needs of others, goal setting, and a drive for excellence. To be self-actualized means becoming what you are to become in life. B needs focus on realizing the primary goals in life and on personal self-improvement, ways for the individuals to better themselves. Unlike D needs, B needs feed themselves. As people become successful and actualize goals, they feel a desire to feed that feeling of success. Typically at this level, success breeds more success. To quote a U.S. Army recruiting slogan, B needs challenge humans to "Be all that you can Be." The interesting phenomenon about this need level is that in order to operate on this level, lower-level needs must be met. Humans cannot focus on becoming something greater when they are worried about food, shelter, belonging, or esteem issues.

Self-actualized people have many common character traits. The people who become self-actualized tend to be well grounded in a sense of reality. These people have the requisite skills needed to step outside of situations and solve problems. They are able to give up their person-centered focus and see the situation in objective fashion. They have a sense of justice,

independence, and accept others as they find them. Self-actualized beings have a true sense of humanness. They show respect to people of all walks of life, demonstrating compassion, care, and concern for others. Self-actualized people are comfortable with themselves and their place in the world. They look at the world and its people with awe and wonder. They are students of the world. Maslow feels these individuals show something called “human kinship or Gemeinschaftsgefühl—social interest, compassion, humanity . . . this is accompanied by a strong ethics, which was spiritual but seldom conventionally religious in nature” (Boeree, 2005, p. 5).

It is apparent, through Maslow’s experiences, his insights into the human condition, and his research, that his approach to psychology during the time of his research was something new and emerging. The psychologies of Maslow’s time were focused on psychoanalysis and behaviorism. The psychology emerging from the work of individuals like Maslow was known as humanism. Maslow refers to this new discipline as the third force, psychoanalysis and behaviorism being the other two. “Humanism deals with the state of a person’s awareness or consciousness feelings in an understanding context” (Hillner, 1984, p. 235). This form of psychology looks at the whole person, focusing on adaptive behaviors of humans. Humanism seeks to look at individuals in their natural environment under everyday conditions. By understanding the human condition, psychologists can understand man’s relationship to the world.

For education to achieve its greatest potential, it would benefit from a humanistic approach like Maslow’s. By attempting to understand the needs of children and how those needs relate to their ability to achieve their full potential, we increase the likelihood of unlocking the hidden potential in all children. With regard to basic human needs, federal and state education programs fund free and reduced-price lunches. They do so to ensure a level playing field for students who are deficient in this need. In relation to safety needs, schools have zero tolerance policies to protect students’ rights and to ensure student safety. In Maslow’s philosophy of human development, school rules should be designed to provide stability, justice, and an ethic of care by meeting the needs of each child. Some elementary and middle school programs now focus on developmental esteem building. In some schools and classrooms, small group instruction, cooperative learning, and community service foster a healthy sense of belonging that provides the potential for the children to attain the higher level of needs.

Now with the advent of the Elementary and Secondary Education Act (The No Child Left Behind Act of 2001), schools are attempting to focus on what they believe is the final tier of Maslow’s hierarchy. A great deal of investment has been put into achievement of standards in an effort to concentrate on improving the child’s sense of self. The unfortunate part of this modern-day crusade for personal fulfillment is that the educational system drags all those whose needs are unmet at lower levels to this venue, and has the same expectation for all. According to Maslow’s philosophy, students who are hungry, live in a car, succumb to severe feelings of loneliness, and have low self-esteem, will have little concern about standards, tests, homework, or even staying awake during a lecture. Maslow would assert that they cannot attain self-actualization because their D needs are not met. While many programs have been integrated into education to aide in the fulfillment of D needs, current educational funding levels create shortfalls in the ability of schools to meet the needs of all students. With regularity, students are asked to use higher-order thinking skills to process complex data. Many students have not developed these critical thinking skills because they are nowhere near the point of self-actualization. For students in deprived environments, the gap in skill development is paralyzing. Approaching education in a humanist view will require schools to value each individual child, seek to understand the worldview of the individual, and access needed resources so that the child may indeed realize the potential that lies within itself. Without looking beyond the test, the lecture, and the homework, we will fail to allow children to Be all that they can Be.

REFERENCES

- Boeree, C. G. (2005). *Personality Theories: Abraham Maslow*. Retrieved December 6, 2005, from <http://www.ship.edu/~cgboeree/maslow.html>.
- Hillner, K. P. (1984). *History and Systems of Modern Psychology*. New York: Gardner Press Inc.
- Lowry, R. J. (1973). *A. H. Maslow: An Intellectual Portrait*. California: Wadsworth Publishing Co.
- Maslow, A. H. (1987). *Motivation and Personality* (3rd ed.). New York: Harper & Row Publishers, Inc.

CHAPTER 23

Maria Montessori

KERRY FINE

Maria Montessori's (1870–1952) contributions to the field of educational psychology are represented in her groundbreaking theories of young children's natural cognitive and developmental abilities. Montessori's critical observations of her students led to the advance of novel understandings regarding human development and child psychology, hence bringing about revolutionary insights concerning how children learn and the best ways to teach them. Her work has informed the practice of educators and psychologists around the world to promote successful learning in schools.

Maria Montessori began her journey into the world of educational psychology by making history as the first female medical student at the University of Rome. There, she worked at a psychiatric clinic studying neuropathology, where she ultimately wrote her thesis on one of her patients. After graduating from medical school in 1896, and long after she finished her thesis, Montessori continued to work at the psychiatric clinic. While working at the clinic, she observed “idiot children” (the mentally retarded) who, unable to function at school or in their families, and with no other public provisions available to them, were locked in asylums, like prisoners. There, they were kept in bare, dark rooms, seeing no one but each other, and doing nothing but staring, sleeping, and eating the food brought to them by their caretakers.

Montessori's medical orientation was focused on the treatment of children as well as her passionate commitment to social reform. This background led her to be deeply concerned about the lives of children who were relegated to the Italian psychiatric hospitals. Montessori became convinced that the minds of these children were not as useless as society had determined them to be. She thus set about finding appropriate psychological and cognitive methods for developing the intellect of these special patients.

As a trained scientist, Montessori believed fervently in the power of observation. She spent many hours observing the children at the clinic and noted that they would play with, touch, and taste crumbs of bread on the floor for lack of any other objects of stimulation. She thus determined that sensory stimulation was a primary need of these children. Montessori, acting on what would later become one of the foundational principles of her method, concluded that their inherent sensorial needs should be harnessed as a method of developing these youngsters' minds.

She then began researching all previous methods of working with this child population. In doing so, she determined that the clinical environment in which her young patients were forced to live was contributing to their disabilities. Montessori came to believe that meaningful settings were critical to children's cognitive development. She was convinced that children's natural sensorial instincts would lead them to interact with the tools and materials around them, which they would then use to construct meaning of their world. Therefore, Montessori concluded that in order for her young patients to make progress, they needed to exist in more humane surroundings where they had appropriate materials to touch, feel, and manipulate. She decided that these children would never be cured in hospitals; instead they needed to be educated in special schools. This conclusion turned her attention from medicine to education and crystallized what was to become her life's work (see Kramer, 1988).

In searching for models, Montessori discovered two French doctors, Jean Itard and Edouard Seguin, who had developed educational materials based on sensorial and physiological stimulation that they had used successfully with "deficient children." Montessori was sure that these materials held the key to success with her child patients at the clinic. Having concluded that sensorial experiences were essential to the psychological and cognitive development of these children, she determined that if provided with an environment in which sensorial materials were present, her patients would naturally use these materials to engage in the learning process. Thus, Montessori's perspective suggested that children possessed an inherent desire to learn and that they would learn best through self-instigated actions in an appropriate environment. Before long, her novel ideas regarding the cognitive and psychological needs of children with disabilities became publicly acknowledged and she was soon lecturing widely about the imperative for a new kind of education for "problem children."

In 1900, Montessori was appointed director of the Orthophrenic School, an institution newly designed to serve "mentally incompetent children." This was the first school of its kind for such children in Rome. Montessori used the opportunity to experiment with the sensory materials developed by Itard and Seguin. Maintaining her belief that observation was critical to understanding children's needs, she studied her pupils carefully as she presented them with the materials. In this way, she gained important insights into their cognition and modified the materials and methods of presenting them as the pupils' developmental requirements became apparent to her. Montessori's practices contributed significantly to the field of educational psychology as they functioned to enhance understandings about the needs and characteristics of children's development at various stages (Standing, 1995).

On the basis of the information Montessori gained through her critical observations, she created a continuum of materials that captivated the children's natural interests while gradually bringing their understanding of concepts from the concrete and sensorial into increasing abstraction. For example, one of Montessori's designs was a three-dimensional wooden alphabet. The vowels were painted red and the consonants blue. The children instinctively held and touched the letters over and over again. Building on their natural curiosity, Montessori used the opportunity to repeat the sounds of the letters while the children felt them. Eventually, students began to internalize this letter-sound correspondence and over time, many of them learned to write and read. This form of education would later become known as the world-famous Montessori Method (Montessori, 1912).

Montessori's philosophies and practices worked so well that the children who had once been classified as unteachable, and assigned to live in asylums, became able to master a multiplicity of skills previously thought totally beyond their capabilities. By 1903, many of the students in her charge were even able to pass the standard sixth-grade tests given to "normal" children in the Italian public school system.

Never content with her initial successes, Montessori found her program's achievements troubling. She concluded that if her "deficient" students were able to meet the standards expected of

“normal” students, then surely the expectations for “normal” students were not commensurate with their abilities. Eventually she became convinced that the pedagogical methods employed by traditional public schools prevented children from reaching their full potential because they were not responsive to the inherent cognitive and developmental needs of their pupils. She couldn’t help but speculate that her materials and methods would help “normal” children to develop more quickly and progress much further (Lillard [2005] *Montessori: The Science behind the Genius*).

As Montessori’s fascination with the learning process grew, she returned to the University of Rome to study education, anthropology, and psychology. She also visited traditional public elementary schools to observe teachers and students. In the schools she visited, Montessori noted that primary students were made to sit in neat rows, memorize discrete bits of information fed to them by their teachers, and recite these lessons back, word for word, in unison. The accepted understanding of the time was that academic learning was not a natural cognitive process for children, and therefore something that students had to be systematically “forced” to do. Montessori, however, had a radically different orientation to the psychology of children’s minds. She believed that children were innately motivated to learn and that if schools provided the right materials and environment, students would *choose* to learn, often making tremendous progress in short periods of time.

This line of thinking prompted Montessori to attempt to gain approval for the application of her methods in the public schools. Unfortunately, the Italian Ministry of Education summarily denied her requests. Not one to be dissuaded, Montessori found an alternate opportunity to work with “normal” students. In 1907 she assumed a position coordinating a preschool in the poverty-stricken Rom’s district of San Lorenzo.

At that time, the San Lorenzo district contained significant populations of economically disadvantaged children who were too young to attend the public schools and had no one to care for them during the day while their parents worked. These children were simply left home alone all day and, without anyone to supervise them, ran wild throughout the neighborhood defacing buildings and committing other petty acts of vandalism. The opportunity to work with these children was attractive to Montessori, as it spoke to her commitment to social responsibility as well as providing a suitable circumstance to experiment with some of her educational ideas on “normal” children. So, on January 6, 1907, in the San Lorenzo district of Rome, the first *Casa dei Bambini* (Children’s House) was opened.

Montessori’s success was almost instantaneous. With fifty students, ages three through six, her first step was to introduce the sensory materials that she had successfully used at the Orthophrenic School. Montessori was fascinated by the way in which the young children were intensely attracted to the materials, working spontaneously and repeatedly with them, and displaying long periods of total concentration. The multiage setting, now a hallmark of Montessori classrooms, fostered a cooperative learning environment through enabling the older children who had mastered the materials to help the younger ones. Another advantage of this multiage arrangement was that there was a wide range of materials available to serve the heterogeneous student population. This permitted children to learn at their own pace, unrestricted by “grade level” limitations (see Kramer).

Montessori, always the observer, drew conclusions about the developmental needs and learning patterns of these children through watching what they did naturally, unassisted by adults. She constantly refined her materials and methods based on these observations of the children’s unprompted work. Among Montessori’s most significant contributions to educational psychology was her establishment of particular stages of children’s development, during which it was very easy for them to learn certain concepts because they had an overwhelming passion and dedication to command specific skills. Furthermore, Montessori determined that each of these stages only lasted for a certain amount of time and then disappeared when the related skills had been acquired. Perhaps most important, she concluded that the rate at which children would move through these

stages was highly variable and could not be predetermined by an adult or arbitrary curriculum schedule, a discovery that reinforced her belief in flexible, multiage learning environments. Montessori called these stages children passed through, “sensitive periods.”

Sensitive periods were essential for teachers and child psychologists to understand and recognize, argued Montessori, because as students were passing through these stages, educators needed to capitalize on their natural propensity to absorb important information by providing the appropriate learning experiences to support students’ development.

Some of the sensitive periods for learning discovered by Montessori are outlined below:

*Birth to six years: **Language Development***—Fascination with the use of sounds to communicate. This stage is marked by a progression from babble to words to phrases to sentences, with continuously expanding vocabulary and comprehension. Opportunities for language practice and improvement are essential.

*Birth to five years: **Coordination of Movement***—Fixation on coordinating and controlling random movements. At this stage, children have a strong interest in practicing tasks that are challenging to the development of their fine and gross motor abilities.

*Three to six years: **Social Learning***—Interest and admiration of the adult world and desire to copy and mimic adults, such as parents and teachers. Children at this stage are particularly captivated by how adults carry out social interactions.

*Four to six years: **Spatial Relationships***—Developing understandings about relationships in space is all-consuming. Activities such as the ability to find one’s way around familiar places and knowledge of how to work complex puzzles hold great appeal.

*Three-and-a-half to six years: **Reading, Writing, and Math Readiness***—Spontaneous interest in the symbolic representations of the sounds of each letter and in the formation of words; fascination with the attempt to reproduce letters and numbers with pencil/pen and paper; and absorption with the mathematical concepts of quantity and operations. Activities and materials that take these interests from the concrete to the abstract are vital.

Montessori observed that students were intuitively drawn to specific materials and activities that developed the skills relevant to each sensitive period. Hence, she soon realized how important it was to give children the freedom to choose their own learning materials, as they seemed to have a natural instinct for their individual sensitive periods. This also reinforced the necessity for teachers to observe their students and prepare the classroom with suitable materials and activities for the pupils to choose from. Montessori called this “the prepared environment” and strongly believed that if the environment was not properly prepared, children would not be able to reach their full potential.

In order for students to have complete access to the materials, Montessori designed low, open shelves where the materials were stored when they weren’t being used. In this way, children were able to select their own materials, work at their tasks for as long as they liked, and then put the materials back in the proper place on the shelf. Montessori also designed child-sized tables and chairs that the children could move themselves for ease of working. Her classroom was truly child-centered—fostering choice, autonomy, and independent activity, with the children’s interests and needs guiding their learning, as well as promoting student responsibility for maintaining the order of the environment (Montessori [1912] “The Montessori Method”). This orientation to children’s development was an extraordinary innovation to the field of educational psychology, as it departed radically from the behaviorist notion of teaching as a form of controlling human nature, positing instead that the best learning occurs in contexts of natural interest and active involvement (Lillard, 2005). Exactly three months after the opening of the first *Casa dei Bambini*, a second Children’s House was opened in the San Lorenzo district. Using methods similar to those she had employed at the Orthophrenic School, Montessori soon taught the four- and five-

year-old children in her schools to read and write. Before long, local newspapers began reporting that “miracles” were taking place in Montessori’s schools. Visitors deluged her classrooms. In the fall of 1908, Montessori opened three more schools, two in Rome and one in Milan. Her materials and methods began attaining international recognition. Beginning in January 1909, the orphanages and kindergartens in the Italian sector of Switzerland were transformed into *Casa dei Bambinis*. Over the next several years, preschools based on the Montessori Method opened all over the world.

The widespread enthusiasm regarding Montessori’s innovative approaches to the teaching and learning of young children represented a radical shift in the thinking of the psychological establishment of her time. Psychologists of Montessori’s day still believed that intelligence was determined solely by hereditary factors. Early childhood education, focused on the cognitive development of preschool students, was considered a waste of time and money. The notion that enriched environments in the preschool years might serve to counteract the challenges represented by limitations in intellectual ability or socioeconomic background was a revolutionary concept. Montessori’s methods, which illustrated the essential impact of early experiences on young children’s cognitive potentials, dramatically changed the perspective held by psychologists toward child development.

As her philosophy and practice evolved, Montessori carried her passion for social issues directly into the classroom. She was a prominent public advocate of lasting world peace and felt that global harmony could only be achieved through teaching children, who were born without hatred and prejudice, to respect and honor all peoples of the world (see Standing). Montessori had developed world-renowned teaching practices based on her respect for the inherent needs of children, and so it was a natural transition for her to insert this theme of respect into her curriculum. She thus insisted that social consciousness, student responsibility, and multicultural/global awareness be an essential aspect of the independent activity, critical thought, and mental development cultivated among students in Montessori schools. This was translated into classroom practice through emphasizing peace education, community service, and investigation of diverse perspectives, alongside a strong commitment to a multicultural environment and curriculum. For her work in this area, Maria Montessori was nominated for the Nobel Peace Prize three times—in 1949, 1950, and 1951 (Kramer, 2005).

Maria Montessori died in Holland in 1952, but her vision lives on in the Montessori schools that still exist all over the world today. In many ways, her educational philosophy anticipates a postformal perspective. As Joe Kincheloe posits in the introduction to this volume, postformal thinkers look for alternatives to the rigid realities that are constructed by society’s power holders. To do this, they often draw from the knowledge, perspectives, and abilities of marginalized peoples. Montessori’s educational practices were developed in direct reaction to the dismal realities that had been carved out for society’s disenfranchised. Her work with the mentally retarded and economically disadvantaged not only gave these children opportunities and skills they were formerly denied, but allowed their abilities to be granted respect and their needs to be met in ways that were both novel and profound. Furthermore, the insights Montessori gained through her work with these students proved to be legitimate for all types of learners. Educational psychologists of today must use Montessori’s example and critically investigate the unique resources and capabilities of current communities that have been denied a voice in their educational process. In uncovering the psychological and cognitive perspectives of alternative groups, modern-day educational psychologists can work toward the creation of teaching and learning models that more appropriately meet the varied needs of today’s diverse student populations.

Another area in which Montessori’s work is representative of postformalism is that her philosophy reflects an understanding that there is not “one universal truth” which holds valid for all children. Montessori believed that students develop at varying, individual rates. Therefore,

she argued, for education to be effective, both the classroom and the teacher must be prepared and able to work with children at their individual developmental levels, rather than where a decontextualized grade-level scope and sequence has determined they must be. In contemporary Montessori environments, students' progress is supported and measured in the context of their distinct developmental processes, rather than through the lens of irrelevant standards. Evaluation procedures, unless otherwise ordered by state or school district mandates, are authentic and may take the form of projects, performance assessments, student–teacher conferences, portfolios, logs, anecdotal records, or progress reports.

Furthermore, like postformalists, Montessori believed that if teachers were not thoroughly knowledgeable about their students, authentic learning would simply not occur. In Montessori's method of education, the teacher and student are engaged in a continuous relationship of mutual respect. The teacher, as observer, is constantly watching and learning from the children, determining their needs without passing judgment. When a child's needs become apparent to the teacher, he or she will present the appropriate materials to the student and the child's learning will therefore be supported. Thus, Montessori pedagogy reflects the postformalist belief that education is the result of human relationships, and does not occur in abstracted isolation.

Finally, like the postformalists, Montessori pondered questions of “what could be” in addition to questions of “what is.” These questions changed the way education was conceptualized. In asking them, Montessori recognized the political implications of educational psychology and the act of teaching. Consequently, she insisted that students be educated to ask these kinds of critical questions as well. She understood the importance of educating children not just to be academically successful, but also to actively develop a critical consciousness and work toward social change. Montessori's emphasis on developing autonomy and choice in the classroom established a foundation for students to develop into adults who would be able to confidently act on informed choices and ultimately redefine societies and bring about social justice.

Educational and psychological reform movements of today still draw from Montessori's ground-breaking work of a previous century, which demonstrated that *all* children can become self-motivated, independent, critical learners. Today, Montessori's visionary ideas continue to inform our understandings of developmentally appropriate practice and the cognitive and psychological needs of children. There are currently thousands of Montessori schools in the United States, including hundreds of programs in public and charter schools, where Montessori's methods and materials have been extended for use in classrooms through high school. Her brilliant insights into human development and learning remain viable concepts that have profoundly influenced the modern landscape of educational psychology.

REFERENCES

- Kramer, R. (1988). *Maria Montessori: A Biography*. New York: Addison Wesley.
- Lillard, A. S. (2005). *Montessori: The Science Behind the Genius*. New York: Oxford University Press.
- Montessori, M. (1912). *The Montessori Method: Scientific Pedagogy as Applied to Child Education in “The Children's Houses” With Additions and Revisions by the Author*. New York: Frederick A. Stokes Company.
- Standing, E. M. (1995). *Maria Montessori; Her Life and Work*. New York: Plume Books.

CHAPTER 24

Nel Noddings

PATRICIA A. RIGBY

What do you teach? Inevitably when this question is asked of educators they will respond: reading, biology, world history, geometry, second-grade, high school, or some specific content area or grade level. It is the rare professional who will respond: “I teach children” and yet that is what teachers teach. It is not a curricula that is taught but rather a way of thinking or acting in the world in response to the standards, guidelines, or rubrics demanded by educational governance boards. The discipline of educational psychology is dedicated to the study of how children learn and hence by association how teachers teach so that children learn. Nel Noddings, a philosopher and former math teacher, demonstrates through her “ethic of care,” which supplants traditional curriculum, that children learn the lessons for a life well lived through moral education steeped in caring relationships established between the carer and the cared-for. In Noddings philosophy of moral education, a four-stage process is invoked that facilitates the learning in the child of “traditional” feminine virtues of nurturing and caring. In this chapter, Noddings’s contribution to the study of the learning process of children, including a review of her impact on care theory, as well as critique of character education will be explored.

Much of the foundation of Noddings’s work can be found in her analysis and reflection on the writings of John Dewey. Dewey’s insistence that education for each child should be determined by the interests and capabilities of each child, as well as the vital importance of building educational strategies on the purposes of the child (Noddings, 1984, 2002, 2003), not solely on the child’s preparation for participation in a democratic society but also on the child’s moral development, speaks to the essence of the ethic of care as set forth by Noddings. This is nowhere more clear than when Noddings addresses curricular issues that are useful only in the artificial settings of schools and not useful in the day-to-day life of the student outside of the educational facility (Noddings, 2002). It is her contention that the main aim of education should be a moral one, that of nurturing the growth of competent, caring, loving, and lovable persons. The curriculum should be organized around centers of care for oneself, others, the environment, and for ideas (Noddings, 1992). This holistic approach is revealed in an understanding “that the caring response is fundamental in moral life because the desire to be cared for is universal” (Noddings, 2002, pp. 148–149). Dewey directly addresses the psychology of how children learn by demonstrating how the various curricular interests of the study of science, history, geography, and other mandated

subjects may be employed in the solutions of genuine problems. He further proposes that these interests must be progressively organized so that students who develop interests in specific fields may be invited to study them in greater depth as part of their own development. However, Noddings eschews what she sees as the liberal tradition in favor of more important and essential centers of care (Noddings, 1992). Noddings's argument, although more of a philosophical nature, addresses the nature of being human. She proposes that there are centers of care and concern in which all people share and in which the capacities of all children must be developed. Because of this, education should nurture the special cognitive capacities or "intelligences" of all children (using the schema suggested by Howard Gardner). The centers of care and the capacities to learn must be viewed in light of a consideration for difference between and among the children, and, most important, all must be done from a premise of attentive love and deep care for each and every child (Noddings, 1992).

Noddings asserts that many of the problems of society could be addressed if at the core of education there was a movement not to bring about equality in learning, but to recognize the multiplicity of human capabilities and interests—equity of learning. Education should be about instilling in students a respect for all forms of honest work done well (Noddings, 1992). It would instill a dedication for full human growth where people would live nonviolently with each other, sensitively in harmony with the natural environment, and reflectively and serenely with themselves (Noddings, 1992). In a system where human life and love are viewed holistically, the piecemeal approach to contemporary education would be reformed in the truest sense of the word. Noddings asserts that these existential questions become the curriculum: Who am I? What is my purpose? How am I in relation to others, self, and, the environment? Thus when there is a crisis in school or society that traditionally results in a new unit to be taught or program to be introduced, such as drug education, sex education, violence prevention and the like, in an ethic of care, there would already be a relational stance in place where the cared-for would understand the responsibility attendant to the relationship with the carer, and thus would result in the cared-for responding positively to the "other" as the situation, our capacities, and values allow (Noddings, 2002).

The ethic of care emerges from an understanding of feminine images and experiences in Noddings's perspective of the role of the maternal in society. A balance between the warrior model (maleness) and the maternal model (femaleness) must be established for a radical change in the current curricular practice. Students should learn from "the womanly and manly arts, and their learning must include both critical and appreciative analysis, as well as appropriate practical experience in living out these models" (Noddings, 2002, p. 113). She is direct in her analysis that while "warrior" stories may be used in teaching values they must be critically examined for the virtues they present and glorify. Are they in fact extolling a witness of a worthwhile attribute or are they examples of some evil embedded in the experience that will perpetuate a cycle of violence and tragedy (Noddings, 2002)? Her presumption that traditionally ascribed feminine characteristics are highly desirable is paramount in her work. Noddings places high valuation on the traditional occupations of women: care for children, the aged, and the ill.

There is no one curriculum or curricular approach that will provide for the adoption of the work of care ethicists; however, she offers a four-stage schema to assist in the transmission of the ethic itself: model, dialogue, practice, and confirmation. The key for the teacher in employing the ethic of care is a willing and committed entrance into a special relationship with the student. A teacher engaged in this dynamic thus receives not only a student's answers to specific curricular questions, but receives the student (Noddings, 1994).

In relation to the psychology of teaching, when modeling an ethic of care, the teacher shows how to care through the actions the teacher takes in her or his relations and care for others. An

antiseptic treatment is not the aim, but rather a clear demonstration that one's own behavior will reveal at the deepest levels what it means to care for and to be cared for by another.

Open-ended conversation where there is no preconceived idea as to the outcome is the basis for dialogue in Noddings's view. It is an invitation to talk about what one tries to model. Dialogue is the premise that links the carer and cared-for in a search for engrossment, or an open nonselective receptivity to the "other." Engrossment is an active attentiveness to the other person in the relationship. When she speaks of dialogue as a "common search for understanding, empathy, or appreciation" (Noddings, 1992, p. 23), with neither party knowing as they begin their conversation what the outcome or decision will be, Noddings builds on the work of Simon Weil in that "the soul empties itself of all its own contents in order to receive into it the being it is looking at, just as he is, in all his truth" (Noddings, 1992, p. 16). It is at his level of engrossment that the maternal images of a mother receiving her child are most clearly articulated. The interaction at this juncture leads the carer to experience motivational displacement: the other's situation so totally encompasses the consciousness of the carer that, at least temporarily, the carer joins with the cared-for in trying to respond to the expressed and/or perceived need of the other.

Experience in and the repetition of caring actions is foundational to the practice of caring. Students, who have been received in a caring manner, should have opportunities to imitate that same behavior, not only in formalized school settings, but also in service work outside of the academic encounter. In working with and caring for others the student participates in actions of caring, along with their adult models, and dialogues with the adults about the rewards and challenges of the work (Noddings, 2002).

Within the field of educational psychology, application and understanding of confirmation in light of care ethics holds transformative possibilities. It is an "act of affirming and encouraging the best in others" (Noddings, 1992, p. 25). It is holding an "other" in such a way as to know them so thoroughly in and through the relationship that a vision to what the person is becoming is made manifest and when identified to the cared-for they recognize it as an epiphany moment: "That is what I was trying to do" (Noddings, 2002, p. 21).

The movement toward adoption of an ethic of care transcends traditional curriculum as is prescribed in standards movements and *No Child Left Behind* politics. Noddings is seeking a new way of teaching children so that children can learn not only skills for occupations, but also more importantly skills for life. An example frequently cited in her work is the topic of homemaking, and while at times in her earlier work it seems to be an idealized version of the nature of home, refined in later discourse, there is much room for discussion about the attributes she ascribes to the task of making a home. Her approach is very much an integrated curricular approach in the model of James Beane, who allows for student and teacher creation of the topic to be studied. Homemaking for Noddings can include many disciplines such as economics, geography, and literature, as well as be multicultural. It can be also be philosophical. What does it mean to "make a home" (Noddings, 2003)? In a society where most students will be homemakers, why not teach them to learn the skills associated with this experience. By extension, she believes that this exploration would also foray into discussion of those who are homeless and what the implications are for those who make the decision that allow for this condition to exist.

Noddings's philosophy informs the field of educational psychology through addressing issues of how to teach and what to teach so that students learn. A large component of the teaching-learning dynamic for Noddings involves the asking of existential questions. How do I live? Is there meaning to life? This approach attempts to reach essential or core desires within the human heart. While oftentimes these questions are presented in theological discourse, Noddings clearly speaks of spiritual encounters, rather than religious ones. In presenting her caring pedagogy, she makes the distinction between specific religious traditions and of an awareness that might be

considered spiritual. However, it is interesting that she does see a need to inform students of the various religious traditions as part of their educational process. Oftentimes she speaks of the ability of a math teacher to bring the ideas of some of the great philosophers and mathematicians to the practice of teaching, yet she is adamant that the presentation of religion in the classroom should be from a disinterested point of view, not “I think” but “here are some things people have said about religion” (Halford, 1998, p. 30).

While emphasis on the ethic of care seems not to have made a significant impact on the transformation of the educational milieu, character education has been often presented as a desirable approach to healing the ills of this democratic society, yet who determines the content and the values to be inculcated and transmitted to the students? While oftentimes it is left to the school and/or the governing body of the educational institution, the reality is that many voices are left out of the discussion in even the most homogeneous groupings. The ethic of care as Noddings develops it, is fundamentally relational and is not individual-agent based in the way that character education is conducted in many schools; thus all voices are included when care is the guiding principle of teaching. Care ethicists rely on establishing the conditions and relations that support moral ways of life, not on the inculcation of values in individuals. Character education tends to favor inspirational accounts of individuals achieving some monumental task, while care ethicists utilize multidisciplinary works to present ethical decisions and the sympathies that these arouse (Noddings, 2002).

What are the aims of education? How do schools serve the society? As Noddings continues to develop and refine the ethic of care and her response to character education, she has advanced the consideration that happiness is the aim of education. She acknowledges that happiness is a common goal of the members of this society; hence, it should be an aim of education. While this objective cannot be measured in a strict sense in a society burdened with standards and measurement, happiness, also historically defined as human flourishing, is revealed when children learn to exercise virtues in ways that help to maintain positive relations with others, especially those others who share the aim of caring relationships (Noddings, 2003). Once again then, it is in the caring relationship—carer and cared-for—where the roots of happiness are found.

Relationships with self, the inner circle of friends, distant others, animals, plants, the earth, human-made world, and ideas grounded in an ethic of care (Noddings, 1992), as in the maternal care of a mother for her child, are essential for Noddings in her principles for moral development. Various examples of how this caring relationship reveals holistic appreciation for all aspects of life, including the respect for not only tangible realities but also the principles and ideas that humans hold, are pervasive throughout her work. There is a sense of a refinement over the years for her ethic; however, the essence remains firm and immutable: caring relationships are necessary for the well-being of the members of this postmodern world. While her work appears directed to the teacher and student in the American classroom, following strongly in Deweyian rhetoric, there is an appreciation for holistic concern toward all creation—local and global.

The discipline of educational psychology is dedicated to the study of how children learn and hence by association how teachers teach so that children learn. If Noddings were asked how do children learn, it seems clear that she would state unabashedly, “They learn by the modeling of competent, caring adults who demonstrate that the student is lovable and capable of loving.” She would then assert that with dialogue and practice this message would become integral to the cared-for student, so as to be able to wholeheartedly answer in the affirmative, “Yes, I am good, that is exactly what I know about me,” to the carer who confirms the goodness of the cared-for. Noddings’s work presents many opportunities for an opening of the dialogue as to how students best learn and how to facilitate a movement toward student achievement, which at the core is concerned with an innate respect for the individual, and how they live in society.

REFERENCES

- Halford, J. (December 1998–January 1999). Longing for the Sacred in Schools: A Conversation with Nel Noddings. *Educational Leadership*, 56. Retrieved December 7, 2005, from http://www.ascd.org/ed_topics/el199812_halford.html.
- Noddings, N. (1984). *Caring: A Feminine Approach to Ethicist Moral Education*. Berkeley, CA: University of California Press.
- . (1992). *The Challenge to Care in Schools: An Alternative Approach to Education*. New York: Teachers College Press.
- . (2002). *Educating Moral People: A Caring Alternative to Character Education*. New York: Teachers College Press.
- . (2003). *Happiness and Education*. New York: Cambridge University Press.

CHAPTER 25

Ivan Petrovich Pavlov

DANIEL E. CHAPMAN

As we study the formalist institution of schools through a postformal lens, it is important to revisit the thinkers who created the theories and influenced changes. One such thinker was a physiologist named Ivan Petrovich Pavlov. Pavlov is famous for his theories on conditioning and, even today, references to “Pavlov’s dogs” are common. He was an intriguing scientist because of the paradoxes in his thought and in his work. He won a Nobel Prize for research few people remember and his most famous work he was hesitant to begin. He always identified himself as a physiologist and despised psychologists, yet his legacy has been embraced and carried forth as a part of psychology (at least outside of Russia). Although it would make him turn in his grave, his theory of conditioning may be one of the many influences that helped shift our understanding of the world from formal to postformal.

Ivan Pavlov was born in 1849 to a poor priest in a small Russian town called Ryazan. After high school he enrolled in the local seminary. At that time, under Czar Alexander II, senior students could read progressive magazines and expose themselves to the latest intellectual ideas and scientific discoveries. This was quite liberal under the Czarist social structure. When he left the seminary for St. Petersburg University he was determined to have a career in science.

Pavlov valued empirical research and experimentation for his inquiry into the universe. He did not value reflection, introspection, or interpretation. Like many other formalists, he believed that the human body and brain could be fully understood by breaking the systems down into their parts and observing how they interact. A common metaphor is that of a clock. All the parts interact together to create the functions that make a clock. To Pavlov the human body and brain were nothing more than that and empirical scientific inquiries into these matters were the only inquiries that produced any form of truth.

While Pavlov won a Nobel Prize for his research that went into the book *The Work of Digestive Glands* (1897), it is not as well remembered as his work on conditioning (except by scientists in gastroenterology). Nonetheless, it deserves a few words here. For this research he was looking at the nervous system and how it influenced gastric juices in the stomach. He claimed that the nervous system determined the chemical makeup and the amount of secretion of gastric juices. This was revolutionary because it implied that outside forces could affect these gastric juices,

while for the previous two millennia physiologists assumed that “bodily humors” influenced most of the bodily functions.

This research idea entered physiology from an American physician, who had a patient that was shot in the stomach. The physician took this opportunity to observe the internal processes of the stomach under different situations. Influenced by this work, two European scientists attached a tube to a dog’s stomach that led gastric juices to a container for closer study. However, if the dog was not eating there were not enough juices produced to study and if the dog was eating the juices and the food were all mixed up making it difficult to study. Pavlov solved this problem by surgically isolating a part of a dog’s stomach so no food could enter, while keeping the nerves intact. Attaching a tube to this part of the stomach allowed Pavlov to study the juices without being mixed up with food. Sometimes good science is simply good method and technique.

He noticed during this research, that the dogs would secrete more by just the taste of food in its mouth, before the nervous system, as he understood it, would be involved. This made him theorize that there was a “psychic” element to the secretion of gastric juices. Somehow, the “psyche” was influencing a chemical reaction. He first used the term *conditioned reflex* during this research. (Actually conditional, but this will be explained later.) He found himself drawn to this part of the study, but he was concerned about crossing the physiological–psychological divide. Psychologists of the day were mostly interested in studying consciousness and their methodology was introspection. This appalled Pavlov and he did not want to be associated with this kind of research. After talking with psychologists about how to cross the divide he became frustrated with them. He declared that psychology should really be handled by physiologists and placed within the realm of physiology.

In 1902, a pair of English scientists first discovered hormones and declared that the hormone secretin actually influenced gastric juices. To Pavlov, this brought physiology backwards, back to the days of bodily humors. After watching a friend do an experiment that proved to him secretin influenced gastric juices, he locked himself in his study. An observer recalls that he came out half an hour later and said, “Of course, they are right. It is clear that we did not take out an exclusive patent on the discovery of truth.” Later research showed that secretin and the nervous system influence gastric juices, but at the time he felt defeated. This sense of defeat may have been enough to push him away from the nervous system and toward the “psychic” element he observed earlier.

There are four terms that one must become familiar to talk about Pavlov’s experiments: conditioned stimulus, unconditioned stimulus, conditioned reflex, and unconditioned reflex. The unconditioned stimulus is a change in the environment that one reacts to predictably without being taught. The reaction is the unconditioned reflex. For instance, one pulls their hand away from a hot stove automatically. The extreme heat on one’s hand would be the unconditioned stimulus and pulling one’s hand from the hot stove would be the unconditioned reflex. A conditioned stimulus is a change in the environment that one notices, but one does not respond in the same way one responds to the unconditioned stimulus. However, one can be taught to associate the conditioned stimulus with the unconditioned stimulus, and respond in the same way. For instance, one does not pull their hand away just when a light flashes. However, if every time a light flashes one’s hand is placed on a hot stove, one would start pulling their hand away as soon as the light flashes. The conditioned reflex would be pulling the hand away when the light flashes. The flashing light would be the conditioned stimulus. Originally, Pavlov used the term *conditional*, not *conditioned*. However, a mistranslation in English has made *conditioned* stick. The word *conditional* makes the point that the reflex is conditional on the appropriate stimulus’s being present. Using the term *conditioned* loses this point. But, *conditioned* infers training, teaching, and learning, as in, the reflex has been conditioned in the subject.

Pavlov continued to work with dogs as he did in the digestive gland study. Food was used as the unconditioned stimulus and the salivation was the unconditioned reflex that he studied. He believed that his work applied more generally to many living organisms, including humans, and to other conditioned and unconditioned stimuli. Further research has shown this assumption to be true. It was important to him to control the atmosphere of the laboratory as much as possible. Any distraction could potentially influence the results. The lab had no windows and it was as sound proof as he could achieve. He built a large contraption that would hold the dogs in relatively the same position each time, looking at the same thing each test. Pavlov surgically attached a tube to the dogs' salivary glands, which dripped into a container. With this arrangement he could accurately count the drops of saliva.

To begin his experiments he would first introduce the conditioned stimulus, that is, the ringing of a bell. Then he would introduce the food, the unconditioned stimulus. At first, the dogs would salivate only at the food; however, eventually the dogs would connect the ringing of the bell with the serving of food. They would begin to salivate at the ringing of the bell. The longer they repeated this the more the dog would salivate at the ringing of the bell. Therefore, Pavlov hypothesized, they *learned* that the ringing of the bell meant food. Pavlov was able to empirically show that they *learned* something they had not known before.

After the conditioned reflex was established Pavlov did further experiments. When he took away the unconditioned stimulus, the food, out of the equation, the conditioned reflex would disappear. He called this extinction. The ringing of the bell would produce less and less and eventually no salivation in the dogs. The unconditioned stimulus must be repeated in order to reinforce the connection. The connections established are always temporary and conditional. Repetition was key to maintaining the conditioned state.

Pavlov also studied how timing affects the conditioning process. He showed that the conditioned stimulus must occur before the unconditioned stimulus for the learning process to take place. If the conditioned stimulus is presented after the unconditioned stimulus no conditioning will take place. This is called backward conditioning. For example, if one presents food and then a flash of light, the flash of light will not produce salivation. He also showed that simultaneous presentation of the conditioned stimulus and the unconditioned stimulus will not produce a conditioned reflex. The question of how long beforehand one can present the conditioned stimulus before the unconditioned stimulus is more complex. One can present the conditioned stimulus minutes before the unconditioned and establish a connection, provided that the conditioned stimulus is continuous. For instance, one can ring a bell continuously for five minutes and then serve the food, and the ringing of the bell will produce salivation. If the conditioned stimulus stops minutes before the unconditioned stimulus, it is harder to establish a connection and the connection is weaker. More recently, researchers did a test where they fed a dog and several hours later treated it to make it feel sick. It became difficult to feed the dog the same thing. This showed, at least in certain circumstances, that delayed conditioning does work.

Pavlov also researched how general is the connection between the conditioned stimulus and the unconditioned stimulus and how do these dogs discriminate among different stimuli. So, for instance, if a tone was used as the conditioned stimulus, would a different key, pitch, or volume produce a conditioned reflex? His findings showed that the conditioning was generalized, but the conditioned reflex was not as strong. The more different the stimulus, the less strong was the conditioned reflex. However, the dogs could learn to discriminate between different stimuli. If the tone with a different pitch was not reinforced with the food, the dog would not salivate at that tone, but would still salivate at the original tone. Pavlov's research also showed that the longer the training took place with the original conditioned stimulus, the more the dogs discriminated between different stimuli.

While much of psychology focuses on how subjects respond to present conditions or how they interpret past conditions, Pavlov's research explores how subjects anticipate the future. I would not claim that Pavlov anticipated the future, but as I will explore in the next section, the theory of conditioned learning had profound influences for the rest of the twentieth and into the twenty-first century.

POSTFORMAL REINTERPRETATION

How did the theory of conditioning become attributed to Pavlov? Like most science, his ideas were not new. Materialist philosophers, such as David Hume and John Stuart Mill, speculated about learning theories similar to conditioning well before Pavlov's research. Not to mention that many animal trainers and parents knew about conditioning through their own practice. The idea has been around for millennia, so why has it been firmly attached to Pavlov? What is special or different about the knowledge he produced? I put this question out there as a way into reinterpreting Pavlov through a postformal lens. We will return to it later, but for now speculate on your own about the answers to these questions.

As mentioned earlier, Pavlov privileged empirical observation as a way to produce knowledge; he did not appreciate introspection or interpretation. However, he produced a learning theory that is strictly associative. In other words, he deliberately researched a learning theory that is not deliberate or deliberative at all. He did not study how organisms learn through logic; rather he studied how organisms learn through associations. There are no logical conclusions to be drawn while being conditioned. Rather, temporary connections are made that need continual reinforcement in order to maintain.

Looking at the history of the twentieth century an argument can be made that Pavlovian conditioning has been the most influential teaching and learning tool in America during this time. In this case, I am not referring to what occurs inside the schools of America. Education occurs inside and outside of the school building. Learning includes what we take away from all of our experiences. One experience that most Americans shared, beginning in the early to mid-twentieth century, is an unprecedented amount of exposure to advertising. Modern-day advertising uses conditioning to create associations between products and deep needs most humans have. For instance, beer may be associated to a healthy social life. If we accept that learning happens no matter where we are then we can see that advertising may be the most influential teaching method of the twentieth century. Certainly more money goes to educating people through advertising than on educating people through academic methods.

In the nineteenth century, advertisements addressed people as though they were logical creatures. They introduced the product, explained what it did, and how one could use it. The citizen could read the ad and make a rational decision as to whether they need or want the product advertised. During the 1920s a shift occurred in how companies presented their products through advertisements. Rather than an explanation of the product and what it does, the representations showed the lifestyle of the people who used the products. Sex, wealth, happiness, and success were attached to the products. No longer were people addressed as rational creatures, but they were addressed on an irrational level. They were addressed as creatures that could be conditioned, using deep social needs—acceptance, power, satisfaction—as the unconditioned stimuli. If one thought about it rationally, a certain kind of lipstick, cream, or beverage will not make one wealthy, but conditioning does not require this kind of thought. Knowing that these kinds of connections are temporary, companies follow Pavlov's ideas of repetition, and continually advertise to keep these associations in people's minds. To this day, many Americans are addressed as conditioned creatures more times in our lives than as rational creatures.

Postformal thinking, to some extent, has followed the path of Pavlov's research, but not Pavlov's methodology. Postformal thought values introspection, anecdotes, and reflections as a way to discover knowledge. While postformal thought rejects the privilege of empirical research, it purports to place it equally on the continuum of all ways of knowing. This has led to listening to many voices in many positions, not just those in positions of authority. Being informed by feminists, minorities, homosexuals, immigrants, hunter-gatherers, etc. have led postformal thinkers to believe that people from different positions can use reason and come to different conclusions. What accounts for the difference, in many instances, are the symbolic associations one makes with the world. For instance, the Confederate Flag from one world experience is a symbol of heritage and from another world experience a symbol of hatred. Empirically the Confederate Flag is neither; it is a piece of fabric with specific color patterns. However, people believe it symbolizes deep emotional conflicts and/or needs. Postformal thought asserts that we cannot dismiss symbolic knowledge that has been influenced, perhaps conditioned, by our position, community, and language. If we only pay attention to reason, we run the risk of valuing certain people's reason over others.

In Pavlov's time, the industrial revolution was occurring. Factories and large machines were at the cutting edge of technology, and like computers today, were supposed to be the answer to many of the world's problems. This must have influenced Pavlov's perceptions of the world. The large contraption he built to hold the dogs reflects the value he placed on machines. It certainly influenced Pavlov's perception of humans, he believed them to be like machines. Even his term *reflex* reflects this perception, as in, apply a particular stimulus and a predictable result follows.

However, in some ways, Pavlov's own experiments and conclusions turned against what he valued most. He described learning as an associative, not a logical, process. However, he valued logic and reason and the scientific method. It was only a matter of time after Pavlov's conclusions that someone asked, have we been conditioned to believe in the authority of science? What associations are bound up with science and logic and reason? Playing with those questions can lead one to see that science and reason and logic have many associations that lend it its authority. If a scientist makes a claim, many laypeople assume it to be true. Many politicians make policy according to these claims. Many media outlets report these claims. Words like *statistics*, *logical conclusion*, *reasonable*, or *scientific* are given an authority over words like *fiction* and *feelings* and *anecdotes*.

Thoughtful scrutiny of scientists' claims is often trumped by these associative powers. There are many horrible examples of this in the twentieth century. In America, the eugenics movement asserted that some people should not be allowed to procreate. Many poor and many African American women were sterilized. Some scientists claimed genetic superiority of some people over others, which justified the sterilizations. German scientists produced ideas of racial superiority that justified the Holocaust. European scientists embraced Social Darwinism, which states that certain societies are more evolved than others. This justified rampant European imperialism across the globe. In these cases, feelings and sympathy were a sign of weakness and a distraction from the "empirical truths" of certain superiorities. These ideas were accepted as true, not because they were carefully evaluated, but because the authority figures said they were true. If you were a member of the privileged groups, family members and neighbors repeated these ideas as true. By stating they were true one was praised; by denying their truth one was suspect. All of the loving, caring, trustworthy people in the community said it was true. It appeared as precisely, actually, empirically true. But, it was merely conditioned. It was merely learned.

Let's return to the question that opened up this section, why has Pavlov been given credit for the theory of conditioning when the idea has been around for a long, long, time? What was different about Pavlov and the way he displayed the claim to the world? The difference was that he brought it into a scientific laboratory. Rather than relying on observation of animal behavior

in context, he took the subjects out of context and tried to isolate and observe the phenomenon within a laboratory. This type of observation had, and still has, a great amount of privilege over other kinds of observation.

As discussed earlier, during Pavlov's life, building large contraptions and performing surgery not only isolated the phenomena under study, but it added symbolic validity to the research. Not only did his contraption have a functional effect of trying to isolate the dog from its surroundings, and not only did surgically attaching the tube isolate the dog's saliva, but there were also associative effects. These associative effects granted his research authority.

This authority does not come from any scrutiny over his truth-claims, but rather because we have been conditioned to accept it as valid. White men with big, bushy beards that don lab coats and have the ability to engineer big contraptions are the only ones we trust to have access to the truth. What Pavlov observed may or may not be true; however, the idea that he, and only he, should be credited with the theory of conditioning is highly suspect. The laboratory, the large contraption, the surgery, the white skin, the male scientist all came together under the right circumstances to grant Pavlov credit with the theory of conditioning.

CHAPTER 26

Jean Piaget

RUPAM SARAN

Jean Piaget, the Swiss biologist and psychologist, was also an educator who inspired the world with his concept of “Piagetian education”—an educational phenomenon that is grounded in developmental psychology and constructivism. The educational implications of his scientific theories have inspired educators and education reformists throughout the civilized world to bring reform in the traditional mode of education. Although he was not an education reformer, he was one of the pioneering scholars whose conception of children’s cognitive development influenced education reforms profoundly, in the United States as well as many European nations.

The constructivist tenets in education came to be known after Piaget’s work on the cognitive development and knowledge construction of young children. Piaget believed children constructed knowledge by interacting with their environment and learned by “doing,” rather than storing knowledge as passive learners. Piaget pressed for an active education for an inquiring mind. He declared that children learn best by trial and error. Thus, the concept of constructivism is attributed to Piaget. He was not an educationist and had never taught in a school setting, but he perceived teaching as an art. It was his belief that “the art of teaching” shaped students’ minds, and therefore practitioners of this art must acquire knowledge of their students’ minds (Piaget, 1948, 1953). Piaget argued that educators should have a good understanding of developmental psychology.

Until the early 1950s, Piaget’s contributions were not fully recognized in the United States. Although in the 1920s and 1930s, his research of children’s behavior and child development attracted American scholars, it failed to capture their full attention because his informal work was not considered scientific experimental study. However, in the early 1950s, American psychologists began to take interest in his research and his developmental theories.

Educators were the first ones to embrace Piaget’s theories to construct developmentally appropriate curricula and to reform the old ones. Piaget’s research set the stage for education reform and child-centered teaching practices in the American education system. His theories about human learning and cognition, children’s inner thought process, and children’s logic behind their action are the building blocks for those American progressive educational and pedagogical practices that advocate for developmentally appropriate curricula in schools. Piaget’s theories of one’s learning practices argued for children’s active involvement in their own learning. Thus, he initiated those

teaching and learning practices that encouraged children's active participation in their acquisition of knowledge and learning.

Jean Piaget's research into the reasoning of elementary school children was a milestone in education research. His theories of learning and knowing influenced the traditional education model that fostered the "banking concept of education" (Freire, 1921–1997), minimized student's creativity, and undermined teacher–student partnership (which perpetuated teacher–student distance in the classroom). The traditional model of education is grounded in passive learning and "storing knowledge" ideology, which prescribes a teacher's role as knowledge giver and a student as a receiver of knowledge. The teacher-centered traditional classroom discourses follow norms of obedience and constraints. In this environment children are treated as objects not capable of constructing knowledge on their own. In such a context, a teacher is the only person respected in the classroom. In the traditional education model, learning takes place in an environment of constraint and in the absence of mutual respect. In the context of learning, teaching, schooling, and adult–child relationships, Piaget advocated for mutual respect and a constraint-free learning environment. Piaget (1932) studied adult–child relationships that were based on constraints in which adults exercised their power and children played a subordinate role. According to Piaget, children did not attain higher levels of understanding of concepts in an adult- or teacher-centered classroom. Consequently, children do not learn in an oppressive learning situation.

BIOGRAPHY

Jean Piaget was born on August 9, 1896, in Neuchatel, Switzerland, in an educated family. Although, as a child, Piaget was interested in biology, later in his life he became interested in philosophy and the application of logic. In 1918, he received his PhD in science. After receiving the PhD he renewed his interest in psychology and studied techniques of psychoanalysis. He worked for a year in psychology laboratories and psychiatric clinics. In 1919 he became interested in intelligence testing and became involved in developing intelligence tests with Binet and Simon. During the 1920s, intelligence testing was a new field. The goal of intelligence testing was to set performance standards for young children by testing them and comparing their test results. Piaget was employed by Binet and Simon to administer tests. During this intelligence testing work, Piaget developed an interest in children's reasoning and thinking strategies. While administering tests he observed children's behavior and concentrated on their logic of thinking, their reasoning abilities rather than their test scores. Piaget regarded intelligence as biological adaptation that occurred at different stages of a child's life by assimilation of objects in children's thought processes. Children used their reasoning power to adapt objects and situations in their environment. In 1921 he published his first article about the psychology of intelligence. His interest in children's thinking strategies led him to work with elementary school children.

To study children's ways of reasoning and ways of knowing, Piaget developed a clinical method that is a fluid way of interviewing children. Piaget investigated the development of children's reasoning power by interacting with them and asking questions. His interview questions were not rigid or structured. The answer to each question determined the nature of the next question. His research method involved both observations and interactions. While studying children he interacted with them, pushing them to his desired interest direction. Thus, Piaget developed the ethnographic qualitative research methodology, which is currently the most popular research method among education researchers.

After his marriage to Valentine in 1923, and the birth of three children, his children became the subject of his research. He wrote three books on the observation of his own children. Before Piaget's study with children, there was not much known about children's thinking. The common belief was that children were not capable of thinking strategies and could not make a connection

between action and imagination. In other words, children did things without thinking about the outcomes of their actions.

The year 1940 was very important for his work in experimental psychology. That year he became the chair of the Department of Experimental Psychology. He worked on psychological theories as the director of the Psychology Laboratory and the president of the Swiss Society of Psychology. As a biologist and psychologist, Piaget interconnected his work to both disciplines. By using both disciplines to analyze young children's behavior, Piaget produced the most significant work in the area of child study. By the age of 84, when he died, he had added three major fields to the domain of child psychology. His major theories are developmental psychology, cognitive theory, and genetic epistemology (the study of the development of knowledge).

PIAGET'S THEORY

In the context of children's physical and mental development, Jean Piaget's theory of cognitive development has been enormously influential. Piaget argued that human being's mental or intellectual growth involved major developmental stages and at each stage it went through major changes. The mental development implies the intellectual growth of a child from infancy to adulthood. Although his theory of cognitive development received criticism from many scholars, any given study of children's cognitive growth cannot be completed without considering his ideas about the systematic development of human intellect. Before the emergence of cognitive development theory, the eighteenth-century empiricists did not differentiate between a child's mind and an adult's mind. Nativist scholars of that time also believed that a child's mind and an adult's mind worked alike and differences between the two were insignificant. Piaget was the first scholar who believed that children's way of seeing the world and their reasoning strategies were different from an adult's. He was the first one to study the cognitive development of children's minds, and his theory was the first to suggest that infants and children perceived the world in their own unique ways.

As a biologist, Piaget knew that all organisms survived by adapting to their environment. The adaptation and survival theory of biology influenced his theory of cognitive development. He examined the development of human cognition or intelligences through the lenses of adaptation and survival. To Piaget, the human cognitive development is an organism's constant struggle for survival in an extremely complex environment. His interest in children's thought processes and their way of knowing or acquiring knowledge led him to explore children's minds by observing their adaptation strategies and interacting with them.

Piaget's theory of genetic epistemology is the study of the development of knowledge in human beings. Piaget studied how children stored knowledge, how did they come to know something, how their prior knowledge affected their newly acquired knowledge, and how their way of knowing was different from adults'. Piaget was interested in the epistemology of cognitive development and therefore he explored the epistemological dimension of intelligence progression. He was interested in the process of knowledge development rather than knowledge itself. He defined *genetic epistemology* as the study of the characteristic of knowledge in young children. He investigated how the nature of knowledge acquisition changed as children grew older. He studied children's cognitive development from earliest infancy to the age when they could perform formal operations. As a biologist, he was influenced by the discipline of embryology, which provides an account of the sequential development of a fetus in its mother's womb. Thus the theory of genetic epistemology is a "parallelism" between the development of an embryo and intelligence, and a sequence of construction of individual knowledge and the process of constructing knowledge.

Piaget defined *cognitive development* as a biological and psychological process that involved functions, cognitive structure, and schemes of an individual's mind. Piaget explained *functions*

as inborn tendencies that guided individuals to *organize* knowledge in a cognitive structure and to adapt to the challenging environment. The term *organization* implies that all components of a cognitive structure are systematically interconnected and an individual accommodated new knowledge within the existing structure.

Piaget used the term *scheme* to describe the flexible cognitive structure of an infant's mind. As children grow older, their schemes become more individualized, because they learn more skills and gain abilities to differentiate between various activities. An infant uses his sensory skills or schemes to gain more knowledge of the world and accommodates it to the existing knowledge. The term *accommodation* implies fitting new knowledge to existing old knowledge. In other words, *accommodation* means using prior knowledge to learn new things.

Piaget explained cognitive structure as a flexible and interrelated system of knowledge that directs cognition or intelligence. He believed that intelligence is a process of *adaptation* and *assimilation*. As a biologist, Piaget viewed adaptation as a fundamental biological process of survival and believed that all organisms adapted to their environment for survival. In general terms, Piaget used adaptation for learning process. He implied the term *assimilation* to explain the complex process of learning that occurred with the help of prior knowledge. Thus, as new knowledge is added to prior knowledge, the cognitive structure changes. The constant construction of new knowledge activates constant changes in children's cognitive structure. Piaget argued that a stage of *equilibrium* or balance occurred between the cognitive structure of the mind and the new knowledge gained from the environment.

PIAGET'S EQUILIBRATION THEORY AND LEARNING

Piaget's theory of equilibration is about the cognitive balance that a child develops during the learning process. Piaget described four factors that contribute to changes in cognitive development of a child: *maturation*, *physical experiences*, *social experiences*, and *equilibration*. According to Piaget, among all factors that contribute to changes in cognitive development, equilibration is the most important one because it is the balancing factor. Equilibration is the act of self-regulation of cognition in which individuals try to understand environmental challenges physically or mentally and maintain a balance between assimilation and accommodation. According to Piaget, the self-regulating process of equilibration is the motivation to learn. For example, if a student encounters a challenge that he cannot understand or solve immediately, then cognitive conflict arises and disequilibrium appears. The effort to solve the problem with assimilation and accommodation until the problem is understood is the act of equilibration. Equilibration provides students a better level of understanding and enables them to acquire upward mobility. If a child encounters a challenge that he cannot relate to, the challenge is ignored and equilibration does not occur. Thus, the theory of equilibration provides educators insight into the learning process and motivates them to create challenging curriculum and make schooling experiences more interesting for students.

IMPACT OF PIAGETIAN CONSTRUCTIVISM ON EDUCATIONAL PRACTICES

According to the constructivist theory, knowledge is not an object to pass on nor is knowledge something that is separate from the learner. Learners do not receive knowledge passively. They are active participants in meaning making and actively creating their individual knowledge. In the last three decades, emergence of constructivism in education has led those in the educational practices to realize that behaviorist pedagogy had a negative effect on children's learning because it promoted a teacher-centered educational practice and treated children as passive learners. Behaviorism focused on outcome-based teaching, in which teachers provided input and children

produced outcome according to what they received. Proponents of behaviorism believed that individuals' cognition developed with conditioning and learning. In contrast, constructivism argued that human beings learned by constructing knowledge.

Piagetian *constructivism* describes the process of learning as knowledge construction rather than knowledge accumulation. According to Piaget, children construct knowledge and transform them to fit to their cognitive structure. For example, in a classroom setting all children may learn the same content but they accommodate it according to their individualistic cognition and prior knowledge. Piaget claimed that children did not reproduce knowledge they received, but rather they constructed knowledge with the help of their prior knowledge. Thus, learning is not merely an act of receiving and reproducing information; it is a complex act of construction and reconstruction of knowledge. It is through the developmental processes of adaptation, assimilation, and accommodation that a child constructs knowledge.

Piaget created the foundation for a constructivist approach of teaching and learning. He claimed that human beings gain knowledge through their experiences and the mechanism of construction and reconstruction of knowledge. Although sociocultural constructivists criticize Piaget for focusing on developmental cognition and neglecting the sociocultural aspect of learning, the importance of Piaget's concept of the individual's vital role in their own learning is undeniable. According to Piaget, all knowledge is rooted in one's prior knowledge and preconceptions. Consequently, learning is assimilation and accommodation of new knowledge into the existing prior knowledge and preconceptions. In the process of constructing knowledge, children interpret new experiences by filtering through old experiences and make meaning of their experiences. In a classroom setting, teachers should create a learning environment that would allow children to construct knowledge. Piaget stressed on activity-based learning.

RELEVANCE OF PIAGETIAN STAGE THEORY OF INTELLIGENCE DEVELOPMENT IN EDUCATION

A biologist, Piaget's concept of cognitive development was influenced by stage theory, which argues that all children reach adulthood by crossing the same stages of cognitive development. According to Piaget, human intelligence develops in four distinct stages: *sensorimotor intelligence*, *preoperational*, *concrete operation*, and *formal operation*. Piaget's stage theory guides educators to create an age-appropriate curriculum to help children learn and gain desired achievement. Although there had been criticism of his stage theory of intelligence development, it has been a very useful framework for educators to construct meaningful pedagogy. Piaget's theory of distinct stages of intelligence growth is one of the major contributions to psychology and education.

The *sensorimotor* stage is the period from birth to two years of one's life. In this period an infant learns about his world through simple interactions with adults and objects. During this period an infant exercises reflexes, develops schemes, discovers procedures for actions, becomes aware of advantages of intentional behavior, benefits of exploration, and gains abilities for mental representation.

The period from two to six years is the *preoperational* stage, in which children learn to investigate their world symbolically and physically. Although during this stage children can do simple problem solving, they cannot perform complex problem solving. Their physical abilities are limited.

During the *concrete operational* period, from age 6 to 11, children gain the abilities to perform mental and logical operations. By this stage, children are able to perform mathematical problems such as adding, subtracting, placing objects in order, and many other operations with concrete objects.

The period of *formal operation* is the final stage of cognitive growth that extends from age 11 to adulthood. This is the higher level of intelligence growth. During this period children can do mental operations, understand abstract concepts, and engage in problem solving using various operations.

Although the stage theory focuses on biological development and does not highlight the social-cultural aspect of learning, it provides a very detailed account of children's competence and limitations at each stage. The understanding of different stages of children's cognitive growth enables educators to gain insight into children's capabilities at each stage of intelligence growth and its effect on learning. At the early childhood level, insights into children's abilities and limits enable a teacher to understand the importance of children's age-appropriate behavior, their symbolic play, and many symbolic functions in the classroom. Piaget described symbolic function as representational behavior or the ability to use an object to represent something. For example, in a classroom if a child uses a plate to represent a boat, his or her action is age-appropriate and the teacher should take it as a normal behavior and view it as a learning process.

Piaget's work on developmental stages of intelligence had a major impact on educational practices. He suggested that development of children's numerical understanding was influenced by their biological development. Much later research supported his argument of mathematical understanding. It made teachers aware of different stages of intelligence and motivated them to embrace teaching methods well suited for children's level of intelligence, their limitations, their cognitive difficulties, and their unique way of learning. Piaget's child makes major progress from the sensorimotor to the preoperational stage. A preoperational egocentric child resists listening to others and tries to cling to his or her perspectives. According to Piaget, egocentrism is not selfishness. It means difficulty understanding other perspectives. According to Piaget, the most common example of egocentrism is children's speech. Very often, young children act as if they know everything and do not listen to adults. A three- or four-year-old egocentric child will get into a fight or act stubborn because he or she cannot understand the other perspective. Thus, Piaget viewed egocentrism as a biological limitation of the preoperational stage. In a classroom situation, understanding the egocentric behavior of a preoperational child as a biological limitation may enable teachers to eliminate frustrations for both teacher and children by handling egocentric perspectives tactfully.

Piaget's stage theory maintains that learning is sequential and each stage of learning occurs with the mastery of the previous stage, and the cognitive structure of each stage determines children's behavior and their performance. Children at the concrete and formal operational stages can perform complex academic tasks, and they need a challenging curriculum to provide problem-solving opportunities.

EDUCATIONAL IMPLICATIONS OF PIAGET'S THEORIES

Piaget's theory has profound implications for educational practices. He argued that children did not learn by listening to their teachers or watching their teachers doing things; rather they learned by exploring themselves. Piaget as a biologist, as a psychologist, as a philosopher, and as an epistemologist contributed to every aspect of education. He emphasized on readiness or age-appropriateness. Children assimilated experiences in their cognitive structure only when experiences could fit into existing schemes. If the teaching method curriculum is not age-appropriate and children are not ready for the content or teaching strategies they will not learn in the absence of equilibration.

If the content matter presented to students is too complicated or too simple, there will be no cognitive balance. The content matter should be challenging but accessible, so that students can be motivated to assimilate new knowledge and challenged to solve disequilibrium. Piaget stressed

different levels of cognitive development and provided information on children's competence and limitation at different levels of development. This enables teachers to understand the intelligence level of their students and to create learning environments suited to each stage and level of development. Piaget disapproved of passive learning and stressed that children should invent knowledge by being involved in their own learning. According to him, the role of a teacher should be that of an encourager and facilitator of learning. Teachers and educators should create an environment for active participation and learning.

REFERENCE

Piaget, J. (1953). *The Origins of Intelligence in Children*. London: Routledge and Kegan Paul.

CHAPTER 27

Carl Rogers

ANGELINA VOLPE SCHALK

Carl Rogers (1902–1987) made significant contributions to the fields of psychotherapy and educational psychology. At one point during his career, as a university professor, published scholar, and clinical psychologist, Rogers was considered to be the Psychologist of America. He was consulted on myriad issues and his concepts were so widely accepted that some are now thought to be commonplace. The main hypothesis postulated by Rogers, as stated by Peter Kramer (1995) in *On Becoming a Person*, is summarized in a single sentence, “If I can provide a certain type of relationship, the other will discover within himself the capacity to use that relationship for growth, and change and personal development will occur.” The implications of his hypothesis are widespread and still relevant today.

Rogers believed that human beings possess an innate goodness that is only altered when traumatized in some way; therefore, counseling was presented as beneficial for routine self-maintenance and as-needed repair. While scholars within and outside of his field have criticized Rogers for a naïve and oversimplified view of both human nature and the role of therapy, numerous others hold him in high regard for his simple, strong contributions to the field. Clearly, whether one is pro-Rogers or not, he made a great impact on the field, given the volume of discussion surrounding his theories. Rogers himself questioned whether he had been hurt more by his enemies or well-meaning friends who have misrepresented his work (Rogers, 1961).

Rogers wrote for a small, selective audience, for those who view individuals as human beings, not objects to be observed or repaired. He wrote for wives, neighbors, friends, and professionals; that is, he wrote for common people and educated people alike, because he believed that all people could benefit from his thoughts. His works are clear and articulate, with a far-reaching appeal. The basis for his theories stemmed from his personal experiences and upbringing, which helped shape the man and his outlook on life.

Carl Rogers was the fourth of six children in a very close-knit and religious family. Rogers’s parents instilled strict religious, ethical, and moral values in their children and stressed personal discipline while demonstrating their love and concern. His mother was a housewife and his father was a very successful engineer. His father was so successful that he was able to move his family to a farm away from the undesirable distractions of city life when Rogers was twelve. While on the farm, Rogers developed his love of science and blossomed as an observer of nature and people.

Rogers credits his parents' respect for knowledge and learning, as well as his own love of reading, for his early introduction to and deep involvement with Morison's *Feeds and Feedings*. This book exposed Rogers to experimentation, control groups, hypotheses, and scientific observation and laid the foundation for his adulthood academic passions.

Rogers initially studied agriculture at college in Wisconsin, due in part to his adolescence on the farm. During his junior year, however, he had an opportunity to travel abroad. This experience turned out to be life altering for Rogers. While in China for the international World Student Christian Federation Conference, Rogers was exposed to new ideas and a variety of people, without the stifling thoughts of his parents to limit him. Rogers claimed that he felt emancipated and finally felt free to let his imagination run wild, which enabled him to become a fuller, more independent person. His newfound independence did have a price, as his parents, especially his father, was disappointed and distant for quite some time after his return to America. During this period of his life, Rogers met and married his wife, so that they could attend graduate school together.

Carl Rogers credits his wife for much of his personal and professional growth, as she served as an unwavering and nonjudgmental sounding board and support throughout his life. Rogers began his graduate work at the Union Theological Seminary, where he realized that he did not want to work in a field that required him to settle on his ideas and maintain them, stagnantly, throughout his lifetime, in order to excel professionally. He then started to take courses at the nearby Teachers' College, Columbia University, and began to study and work in the field of child psychology. Around this time, Rogers and his wife began a family, which required that Rogers begin to look for a job; therefore, on completion of his graduate work, Rogers worked as a psychologist in Rochester, New York, for the Child Study Department of the Society for the Prevention of Cruelty to Children. During his twelve years at Rochester, Rogers had three significant experiences that influenced and reshaped his view of psychology and therapy. First, Rogers worked with a client who was not cured, even after they discovered the root cause of his disturbance. This realization led Rogers to recognize that authoritative teachings might not be absolute and that new knowledge was still ripe for the picking, even by him. Second, Rogers revisited an interview that he had conducted and held up as an exemplar early in his career only to realize that his methods of questioning had steered the interviewee's answers. This realization led Rogers to move away from coercive approaches in clinical relationships. Lastly, Rogers worked with a client's mother individually, after an unsuccessful run at working with the initial client, the son, and discovered that the therapist should not guide the sessions. Specifically, Rogers realized that therapeutically there was no need for him to shine; given that people inherently know what they need, he simply needed to listen and allow the client to guide the processes' movement. All of these insights, especially the last, helped Carl Rogers form his view of client-centered therapy.

Client-centered, or nondirective, therapy as espoused by Carl Rogers is an intensive, extensive, safe, and deep relationship between a therapist and a client, based on mutual trust, openness, and a willingness to not judge, but simply to listen and be guided by the client's revelations and growing humanity. He wrote *Clinical Treatment of the Problem Child* at this time, which was based on his ideas and his work with problem children in Rochester. Rogers started the initial development of client-centered therapy when he was in Rochester. While in Ohio, he began to recognize and to fully own the notion that he was capable of his own thoughts and theories and had, in fact, the credibility to share his knowledge with others. During this time, he wrote another book, *Counseling and Psychotherapy*, and continued to write seminal works for the field of psychotherapy when he moved to the University of Chicago and then the University of Wisconsin.

Carl Rogers's greatest contribution to the field of psychotherapy, and by association the field of educational psychology, was client-centered therapy. A therapist must have three qualities deemed

by Rogers to be essential: congruence, empathic understanding, and unconditional positive regard. Congruence occurs when the therapist exists openly and available to herself and the client, without façade, and responds honestly without playing a role. Unconditional positive regard requires the therapist to care for the client in a total, nonpossessive, and nonjudgmental way. Lastly, empathic understanding occurs when the therapist perceives the client's thoughts and feelings as if they were her own and accurately communicates all or part of this awareness to the client. Furthermore, this understanding occurs in light of the two previous elements, so the understanding is total and without judgment.

Rogers outlined conditions for learning, based on client-centered therapy, in several of his writings. Client-centered therapy calls for a nonjudgmental relationship between the therapist and the client and, when the aforementioned elements necessary for therapy to occur are present, both the client and the therapist grow. Rogers claims that in particular the client develops and changes in constructive ways. Similarly, Rogers posits that teachers and students should have an open, safe, and responsive relationship in order to foster greater individual and collective growth. Rogers uses the term *changiness*, meaning "a reliance on process rather than static knowledge," which supports his goal of education, that is, "the facilitation of change and learning" (Kirschenbaum and Henderson, 1989, p. 304).

In relation to educational psychology, educators should keep it real, according to Carl Rogers, and not don masks when interacting with students. Just as clients respond to therapists' true humanity, students will respond to their teachers' honesty and transparency. Students recognize their teachers' human self and respond in kind by exposing their true human selves and blossoming in the process. Rogers recognizes the difficulty in being real and trying to facilitate learning, especially in an academic environment that prefers obedience, distance, and knowledge transmission. Teachers who facilitate learning in their students through their authenticity also display another attitude expressed by Rogers as *prizing*, *accepting*, and *trusting* students in a nonpossessive caring fashion that avoids judgment (Kirschenbaum and Henderson, 1989). As clients communicate better with therapists when nonjudgmental support is evident, students relate to teachers who accept the good, the bad, and the difficult without casting judgment. Empathic understanding is another element that establishes clearer communication, facilitates self-initiated learning, and supports experimentation and growth. There is a profound difference between expressing oneself and doing so honestly. In order to keep it real, the teacher, similar to the therapist, must first accept herself unconditionally, as she will come to accept her students.

Essentially, Carl Rogers recommends that students are viewed as human beings in need of assistance and support to develop fully. As outlined previously, Rogers recommends that the following elements be in place to support the full development of students: *prizing*, *accepting*, and *trusting*. As Rogers (1989) states,

The "facilitative conditions" studied make a profound change in the power relationships of the educational setting. To respect and prize the student, to understand what the student's school experience means to her and to be a real human being in relation to the pupil is to move the school a long way from its authoritative stance. These conditions make of the classroom a human, interactive situation, with much more emphasis upon the student as the important figure who is responsible for the evaluation of her own experience. (p. 330)

Carl Rogers's focus for education models his focus for therapy and his approach to fostering general human development. Rogers calls upon therapists and educators to examine and know themselves in order to know others better. And, when therapists and educators truly engage with others, then change will occur and both parties have a greater chance of reaching their innate potential.

Carl Rogers wanted the field of education to move beyond its stagnant beliefs concerning the transfer of knowledge, and to transform itself from an institution that views educators as teachers who teach at an institution that supports facilitators of learning. Rogers spent a great deal of time in his later years writing on and peaking about the politics involved with education and the need to change. Top-down authority and control are the norm in education to this day, which is exactly what Rogers was fighting against. Rogers promoted shared decision making and student-directed learning. Through facilitated learning, Rogers believed that real knowledge and the skills necessary to grow fully as a human being could develop. The ideas postulated by Carl Rogers are similar in spirit to the ideas promoted by John Dewey, Lev Vygotsky, and other constructivists. In fact, if Carl Rogers's principles of congruence, empathic understanding, and unconditional positive regard were applied today, then society might see a greater realization of *Brown v. Board of Education* and the Individuals with Disabilities Education Act.

Carl Rogers made a significant contribution to the fields of psychotherapy and educational psychology. Through his beliefs and his works, Rogers developed clear and applicable guidelines for open, responsive communication. His simple, strong contributions to the field of education stemmed directly from his client-centered therapy approach. Rogers called upon educators to view themselves as facilitators of learning and to consider their students as other human beings on the same journey: to become more fully human.

REFERENCES

- Kirschenbaum, H., and Henderson, V. L. (Eds.). (1989). *The Carl Rogers Reader*. New York: Houghton Mifflin.
- . (1989). *Carl Rogers Dialogues*. New York: Houghton Mifflin.
- Kramer, P. (1995). Introduction. In C. Rogers (Ed.), *On Becoming a Person; A Therapist's View of Psychotherapy* (pp. ix–xvi). New York: Houghton Mifflin.
- Rogers, C. (1961). *On Becoming a Person; A Therapist's View of Psychotherapy*. Boston: Houghton Mifflin.
- . (1989). *On Becoming a Person* (Rev. ed.). Boston: Houghton Mifflin.

SUGGESTED READING

- Rogers, C. (1994). *Freedom to Learn* (Rev. ed.). Upper Saddle River: Prentice Hall.

CHAPTER 28

B. F. Skinner

KEVIN CLAPANO

B.F. Skinner's (1904–1990) operant conditioning theory and his approaches to the study of behavior have made significant contributions to a broad range of applied settings and disciplines. However, the contributions that operant conditioning has had on educational psychology through the development of teaching machines, programmed learning material, and the application of reinforcement stimulus concepts in classroom management is the most extensive.

Burrhus Frederic Skinner was born on March 20, 1904, in Susquehanna, Pennsylvania. Skinner's home setting is often described as a warm and stable environment. His father was a small-town lawyer and his mother a housewife. Skinner's childhood is characterized as spent on building and inventing things and actually enjoying school. Skinner built steerable wagons, sleds, and rafts. He made seesaws, slides, and merry-go-rounds. He made model airplanes powered by twisted rubber bands, tin propellers, and box kites that could be sent high into the air with a spool-and-string spinner. Skinner also invented things. Most college students are now familiar with the flotation system that Skinner built for separating ripe from green berries that helped him and his friend sell elderberries. For years, Skinner also worked on designing a perpetual motion machine that never worked. This truly provides a good insight into the childhood of the subsequent inventor of the cumulative recorder, the *air crib*, and the man who began the teaching machine and programmed instructions movement (Vargas, n.d.).

B. F. Skinner attended Hamilton College as an undergraduate where he majored in English. After receiving his bachelor of arts degree from Hamilton College, Skinner decided to become a writer. Encouraged by a letter from Robert Frost appraising his work, Skinner dedicated a year of his life to pursuing a career in creative writing. Skinner moved back to Susquehanna, Pennsylvania, but wrote very little. After a brief amount of time spent in New York's Greenwich Village and in Europe he gave up writing. While working in New York City as a bookstore clerk, Skinner happened upon books by Pavlov and Watson. Reading these works eventually left Skinner wanting to learn more.

B. F. Skinner enrolled in the Psychology Department of Harvard University at the age of twenty-four. Although Skinner considered his ideas to be mostly uninteresting, the stimulating and informal environment of Harvard gave Skinner the opportunity to grow and the freedom to not follow the path of any particular faculty member. Skinner received his PhD in 1931 and

spent five postdoctoral years working in William J. Crozier's laboratory. Crozier, who was an experimental biologist, had a major influence on Skinner's philosophy and behavioristic position. Crozier, in contrast to psychologists who focused on studying the processes going on inside an organism, passionately believed in studying the behavior of an organism as a whole. This was the philosophy that paralleled Skinner's goal of relating an organism's behavior to experimental conditions.

In 1936, Skinner joined the faculty of the University of Minnesota. Skinner's tenure at the University of Minnesota can be characterized as remarkably productive wherein he was heavily engaged in scientific inquiry yet found the time to write a novel entitled *Walden Two*. Skinner stayed at the University of Minnesota for nine years, had a two-year stay at Indiana University as Chair of Psychology, and eventually returned to Harvard, where he remained for the rest of his life.

SKINNER'S DEVELOPMENT OF OPERANT CONDITIONING

Skinner remained consistent in his philosophy that the organism must literally operate upon its environment. This is in total contrast to Pavlovian conditioning, where the organism plays a very passive role. Furthermore, Skinner believed that antecedent events need to be considered when studying an organism's behavior and that an organism's behavior can be controlled by systematically manipulating the environment in which the organism is operating. These comprise the foundation of B.F. Skinner's operant conditioning theory.

As the organism operates in its environment, it encounters a unique type of stimulus that increases the organism's response. In operant conditioning theory, a stimulus that increases the likelihood of the organism's response is called a reinforcement or a reinforcer. Hulse et al. (1980) formally defined a reinforcer as a "stimulus event which, if it occurs in the proper temporal relation with a response, tends to maintain or to increase the strength of a response or of a stimulus-response connection" (p. 18). In contrast to a reinforcing stimulus or a reinforcer, an organism operating in its environment can also be exposed to unique types of stimuli that decrease the organism's response. A stimulus that decreases the likelihood of the organism's response is referred to as aversive stimuli.

It is worth noting that operant conditioning is also called instrumental conditioning because the organism plays an instrumental role in developing the stimulus-response connection. This can be best explained by thinking of an experiment involving a rat in a box. In the box, known as a Skinner box, is a lever that when depressed delivers a food pellet into the box. The rat is operating in its environment and accidentally depresses the lever. A food pellet is then delivered into the box. In time, the rat will vigorously depress the lever to get more food pellets. Let us now examine the experiment through the operant conditioning theory. The rat (the organism) is operating in the box (the environment) and accidentally depresses the lever (operant response) and receives a food pellet (reinforcing stimulus). The rat then depresses the lever vigorously (increase in response) to receive more food pellets (reinforcing stimulus). This stimulus-response connection is established over time and this series of stimulus-response connections is considered as behavior. One can then ask, what if the reinforcing stimulus (i.e., the food pellet) is no longer delivered? Over time, the rat will stop the lever-pressing response because the reinforcing stimulus is no longer available. It could be said that the behavior has been extinguished. In the operant conditioning theory, this phenomenon is called extinction.

While engaged in heavy operant conditioning experimentation, Skinner ran low on food pellets so he had to reduce the number of food pellets that were given to the rats as reinforcement. Interestingly, even though the rats received less reinforcement, the operant behavior continued to be exhibited over a period of time. This led Skinner to the discovery of the schedule of reinforcement.

There are primarily four types of reinforcement schedules: (a) fixed-interval (FI), (b) fixed-ratio (FR), (c) variable-interval (VI), and (d) variable-ratio (VR). In FI reinforcement, organisms are given or exposed to reinforcement stimulus on a fixed time schedule. When an organism becomes conditioned to an FI schedule of reinforcement, its behavior becomes stable. The general rule with FI reinforcement is that an organism's rate of responding is inversely proportional to the interval between reinforcements. In this type of reinforcement schedule, organisms learn that responses early in the interval are never reinforced immediately and organisms will tend to pace the responses and "pile up" its responses toward the end of the interval. In an FR schedule, the reinforcement stimulus is provided after a fixed number of responses have been exhibited by the organism. With this schedule, the organism learns that rapid responding is important. There is a direct correlation between the rate of responding and the rate of reinforcement, that is, the higher the rate of responding the higher the rate of reinforcement. In a VI reinforcement schedule, time is a critical factor. After an organism has learned a particular response, the amount of time it takes for the next reinforcement stimulus to be presented keeps changing. It will not be possible for an organism to learn the time interval accurately. Organisms tend to respond at an extremely stable rate under the VI schedule. In a VR reinforcement schedule, an organism is given the reinforcement stimulus after a different number of responses have been exhibited. In short, variable number of responses is required to produce successive reinforcers. Reinforcing well-learned behaviors on a VR schedule generate extraordinarily high rates of performance.

An overview of operant conditioning has been presented. Behavior, which is a series of stimulus–response connections, is followed by a consequence, and the nature of the consequence (e.g., presence or absence of reinforcing stimulus) modifies the organism's tendency to exhibit or inhibit the behavior in the future.

OPERANT CONDITIONING APPLIED TO EDUCATIONAL PSYCHOLOGY

Most biographical accounts of B.F. Skinner suggest that Skinner's interest in educational psychology began on that fateful day of November 11, 1953, Father's Day, when Skinner visited his daughter's fourth-grade arithmetic class. While sitting at the back of his daughter's classroom, Skinner observed that the students were not receiving prompt feedback or reinforcement from their teacher and were all moving at the same pace despite differences in ability and preparation. Skinner had researched delay of reinforcement and knew how it hampered performance. If mathematical-problem-solving behavior is perceived as a complex series of stimulus–response connections that had to be effectively established, then the teacher in Skinner's daughter's fourth-grade arithmetic class definitely needed help. It was simply impossible for the teacher with twenty or thirty children to shape mathematical-problem-solving behavior in each student. In operant conditioning theory, the concept of shaping requires that the best response of the organism be immediately reinforced. In the math class, however, some of the students had no idea of how to solve the problems, while other students breezed through the exercise and learned nothing new. Furthermore, the children did not find out if one problem was correct before doing the next problem. They had to answer a whole page before getting any feedback, and then probably not until the next day.

That afternoon, Skinner constructed his first teaching machine. The first teaching machine that was developed by Skinner was a device that presented problems to learners in random order. This machine simply practiced and rehearsed skills or behaviors already learned. Learners did not learn any new responses or new behaviors. A few years later Skinner developed and incorporated programmed instruction into the learning machines. Learners would respond to content to be learned that were broken down into small steps. The first responses of each content sequence

were prompted but as the learner's performance improved less help was provided. In the end, a learner would have acquired new behavior.

Skinner's concept of reinforcement stimulus paved the way for the development of programmed instruction and outcome-oriented instruction in today's institutions of learning. The influence of programmed instruction is still affecting the teaching technologies used in today's society. Today's instructional designers are still using Skinner's operant conditioning concepts to create courses that contain measurable behavioral objectives. In addition, traditional instructor-led, computer-based, and online courses are being built based on the concepts of small frames of instruction, immediate feedback regardless of correctness of the response, self-pacing, and learner's response to knowledge checks. In addition, instructional designers are also designing knowledge checks so learners compose their answers rather than selecting answers from a set of choices. Instructional designers creating online courses are also starting to realize that course lessons, modules, and topics must do more than present blocks of content with quizzes or tests at the end of the instruction sequence. Depending on operant conditioning, the sequencing of steps is also very critical and is an important factor to consider in designing online courses. Furthermore, if instruction is to be effective, learners should be required to respond to what each screen of information presents and to get feedback on their performance before advancing to the next level of the course. Skinner strongly cautioned against technology that merely presents information to the learner. Teachers must be aware of their teaching strategies so that the learner or the student is not merely a passive receiver of instruction but an active participant in the instructional process. This concept helped in shifting education's focus to the outcome behavior of the learner.

Aside from the influence of programmed instructions, Skinner's operant conditioning concepts have been applied in classroom management. Hall and Lindzey (1978) have referred to token economies that have been used extensively in classroom settings with such populations as normal children, delinquents, and severely retarded children. When students exhibit proper classroom behaviors like completing assignments, paying attention, and not being late for class, tokens can be awarded. These tokens can be later exchanged for whatever reinforcement stimulus a particular student happens to value, whether they are in the form of food, movies, or periods of free play. In the classroom setting, the systematic and skillful use of reinforcement stimulus can produce beneficial and dramatic behavioral changes in students.

Skinner (1968), in his book *The Technology of Teaching*, described the modern classroom as particularly averse to learning and discussed behaviors in school administration and organization that were not conducive to learning. These behaviors that Skinner referred to were (a) the infrequency of reinforcement, (b) the lapse between response and reinforcement, (c) the aversive stimulation, and (d) the lack of a long series of contingencies for desired behaviors. To offset these behaviors, teachers must learn to use multiple stimulus control techniques. The other concepts that Skinner believed could aid teachers in helping students learn were the use of modeling, shaping, priming, and prompting. Skinner opined that if teachers already had a broad range of teaching strategies and tactics, then they would always look for additional elements and tools to add to the intellectual and practical repertory. Teachers can be trained to view teaching as a process that can be broken down into progressive stages with reinforcements following each stage. However, the classroom setting provides numerous variables and contingencies that teachers cannot realistically arrange. Despite this limitation, Skinner believed that operant conditioning could still provide the means necessary to effectively control human learning by building complex responses out of many simple responses and associating reinforcement closely in time with the response to be learned.

Skinner saw the world through the lens of operant reinforcement theory and through the eyes of a behaviorist. Skinner was a modernist and a believer in the value of a molecular approach to the study of behavior. He searched for simple elements of behavior to study, and

he was certain that the whole is no more than the sum of its parts. Skinner's approach, as with most modernists, was both scientific and reductionistic. What distinguished Skinner from the average experimental psychologist was his ability to study behavior in its complex natural settings and to devise and build technological equipment. Skinner almost immediately saw the relevance and interaction of major concepts and principles using his theoretical position. In addition, Skinner was a master at being able to combine elegant laboratory techniques and precise experimental control with the study of individual subjects. This truly represents a unique achievement. In a discipline where generalization of findings to a group is highly valued, Skinner's results were often reported in terms of individual records. Skinner emphasized the importance of studying individuals in detail and stating laws that apply fully to single subjects instead of only to group data. Furthermore, Skinner's findings were reported with a degree of lawfulness and precise regularity that is unequaled among behaviorists. Through the lens of an action researcher, B.F. Skinner can be viewed as a creative teacher who tried to improve his students' learning through the use of a systematic process while avoiding the use of aversive stimuli and punishment.

Burrhus Frederic Skinner is the most important American psychologist of the twentieth century. His theoretical influence is arguably one of the most important since Sigmund Freud. B.F. Skinner passed away on August 18, 1990. Teaching and instructional methods based on the basic elements of Skinner's operant conditioning theory and approaches to learning are still commonplace in educational systems ranging from preschool settings to institutions of higher learning.

REFERENCES

- Hall, C. S., and Lindzey, G. (1978). *Theories of Personality* (3rd ed.). New York: John Wiley and Sons.
- Hulse, S. H., Deese, J., and Egeth, H. (1958). *The Psychology of Learning* (4th ed.). New York: McGraw-Hill.
- Skinner, B. F. (1968). *Technology of Teaching*. New York: Appleton Century Crofts.
- Vargas, J. S. (n.d.). *Brief Biography of B. F. Skinner*. Retrieved December 11, 2005, from <http://www.bfskinner.org/bio.asp>.

CHAPTER 29

Robert J. Sternberg

KECIA HAYES

In 1949 in Newark, New Jersey, Robert J. Sternberg was born into a working-class family. The contemporary educational experiences of many urban students is reminiscent of Sternberg's elementary and middle school years in that he consistently performed poorly on IQ tests that were widely used by the educational establishment during that era. Influenced by the results of his IQ tests, most of Sternberg's teachers held low academic expectations of him. While pedagogically problematic, this situation spurred Sternberg to immerse himself in the study of human intelligence. As early as the seventh grade, he created his own mental abilities test, Sternberg Test of Mental Abilities (STOMA), as a science project. Upon entering Yale University for his undergraduate studies, Sternberg was committed to declaring psychology as his major field of study. He graduated from Yale with honors, with exceptional distinction in psychology as well as summa cum laude and Phi Beta Kappa. After Yale, Sternberg headed to Stanford University, where he obtained his PhD under the tutelage of Gordon Bower, and began to develop his ideas for componential analysis. Sternberg joined the faculty of Yale University in 1975 and still remains there now. He is a prolific researcher and scholar, having written more than 500 articles, books, and book chapters to date.

Throughout the 1980s, there was a rise in Multiple Intelligence research that focused on the mental processing that undergirds an individual's abilities and talents, which represented a shift from a focus on the identification of specific skill sets and intelligences. Sternberg emerged as one of the main theorists advocating this approach. He fundamentally changes the discourse on Multiple Intelligences with his conceptualization of a Triarchic Theory of Human Intelligence which centralizes the idea that intelligence is contextualized within individuals' relationships to their internal worlds, external worlds, and experiences. Sternberg defines intelligence as "the mental capability of emitting contextually appropriate behavior at those regions in the experiential continuum that involve response to novelty or automatization of information processing as a function of metacomponents, performance components, and knowledge-acquisition components" (Sternberg, 1985). In addition, unlike some other theorists of intelligence, Sternberg acknowledges that there is an interaction between people's social environment and their development of intelligence: "Intelligence is in part a production of socialization – the way a person is brought up" (Sternberg, 1988). Within the framework of this definition, Sternberg conceptualizes

intelligence through three fundamental subtheories, including the contextual, componential, and experiential, as he structures his Triarchic Theory of Intelligence. The componential focuses on the relation of intelligence to the internal world, the experiential addresses the varying levels of experience in task performance, and the contextual suggests that information processing is applied to experience in order to achieve one of the three broad goals of environmental adaptation, change, or selection.

Within each subtheory, there are specific mental-processing components. For the componential subtheory, there are metacomponents, performance components, and knowledge acquisition components. Metacomponents relate to recognizing the existence of a problem, assessing the nature of the problem, selecting and organizing the lower-order mental processes to solve the problem, implementing and monitoring the problem-solving mental strategy, judiciously soliciting external feedback, and evaluating the problem-solving process. The performance components refer to the lower-order mental processes that are activated to fulfill the instructions of the metacomponents. The knowledge acquisition components learn what is needed for the metacomponents and performance components to eventually fulfill their tasks. It engages the mental processes of selective encoding, which involves determining relevant from irrelevant information; selective combination, which requires that seemingly isolated pieces of information are merged into a useful whole that may or may not resemble the original parts; and selective comparison, which entails the connection of newly acquired information to previously acquired information. According to Sternberg, the problem-solving approach related to the componential framework is analytical, which reflects those skills used to analyze, judge, evaluate, compare, or contrast. This paradigm is most consistent with the traditional psychometric conceptualizations and measures of intelligence.

The experiential subtheory addresses intelligence from the perspective of whether a task or situation is relatively novel or in the process of automatization or habituation. Assessing intelligence as a function of task novelty is an essential element of Sternberg's theory because he believes that intelligence is not only demonstrated in the ability to learn and reason with new ideas but to do so within new conceptual models. It is not sufficient to grow within a particular conceptual system with which one is familiar but to expand one's learning and reasoning across conceptual systems that may be somewhat or completely unfamiliar. For Sternberg, the intelligent person is the one who can not only apply existing knowledge to new situations in order to achieve a particular goal but also more readily move from conscious efforts to learn a new task to an automatization of the new learning. The problem-solving approach associated with this subtheory is the creative, which includes skills used to create, invent, discover, imagine, or suppose.

The contextual subtheory conceptualizes intelligence as mental activity to achieve one or more of three particular goals, including environmental adaptation, shaping of environment, or environment selection. The focus of this subtheory is not with the specific behavior or the external forces that facilitate or impede the contextualized activity but rather with the specific mental activities utilized to select and attain a particular goal. Within this paradigm, Sternberg concentrates on assessing intelligence as a function of how individuals engage their real-world everyday external environments. Sternberg seeks to recognize that socialization has an impact on how individuals determine which goal is appropriate and how they then work to achieve the particular goal. In terms of a problem-solving approach, practical abilities, represented by skills used to apply, put into practice, implement, or use, are characteristic of the contextual subtheory. While this framework is often considered in terms of possessing "street smartness," it is more significantly about an individual's purposive adaptation to her real-world environment in order to achieve particular goals.

Sternberg's Triarchic Theory of Intelligence has been described as the model that synthesizes the paradigms of intelligence that preceded it. While this is a fair assessment, it falls short of

indicating the extent to which Sternberg expanded our conceptualizations of not only how to define and measure intelligence but also how to educate for intelligence. Through its recognition of a pluralistic configuration of intelligence, Sternberg's framework allows for multiple points of entry to develop intelligence because it centralizes the idea that individuals deploy various abilities to navigate through their worlds. Consequently, people need to be educated to strengthen their abilities across the three different problem-solving domains so that they can leverage the full range of their intelligence. Unfortunately, our systems of education have not been structured to utilize this approach. Students "are being taught by methods that fit poorly with their pattern of abilities. As a result, they are not learning or they learn at minimal levels. At the same time, they and their teachers are concluding that they lack vital learning abilities. In fact, many of them have impressive learning abilities but not the kind that are used in the methods of teaching to which they are exposed. As a result, they never reach the high levels of learning that are possible for them" (Sternberg and Williams, 1998).

Our educational approaches tend to be imbued with a unilateral focus on the development of students' analytical abilities. "By the time students reach adolescence, their experiences with reading materials and practices in school have taught them to dislike schooled literacy activities. Bean cites studies that point to how adolescents dichotomize reading in school, which they often view as boring and irrelevant, and reading outside of school, which they often view as useful and enjoyable" (Alvermann et al., 1998). Rose makes the point that the ways in which we currently and predominantly teach literacy dissects language from its daily usage, which can be problematic for some students (Rose, 1989). Within this context, individuals are presented with problem-solving scenarios that are structured by others, and with informational parameters, which have one specifically appropriate methodology that will yield the only correct solution. Such problems tend to be devoid of a connectivity to the real world of the student, which only helps to minimize the student's intrinsic interest in engaging in the process of solving the problem. "The abilities emphasized in formal schooling have limited value if they cannot be used to address practical, everyday problems" (Sternberg et al., 2000).

Sternberg's model of intelligence dictates that we need not only teach to develop the analytical but to also develop the creative and practical abilities. In doing so, we would present students with practical problem-solving scenarios that are not fully structured and predefined by an external source, lack the necessary information to achieve resolution, and have multiple possible methodologies to achieve a variety of appropriate solutions. The process of problem solving and learning would force the learner to utilize a larger range of their abilities that exist outside of the realm of the analytical. Using practical abilities to solve a practical problem presented within the academic sphere will be more meaningful for students.

In addition, through its rejection of a compartmentalization of knowledges and skills, focus on the development of practical abilities, and acknowledgement that intelligence has a sociocultural context, the Triarchic Theory of Intelligence provides educators with a landscape to integrate students' indigenous knowledges into the learning process. As they facilitate an educational approach that connects the learning process and the lived real-world experiences of their students, educators can further expand the work of Sternberg. Because practical problem-solving scenarios tend to be related to everyday experiences as well as involve the need for students to reformulate problems and acquire information to achieve resolution, there is an opportunity for students to begin to incorporate the indigenous knowledge that inform their real-world experiences into their problem-solving process. Furthermore, this paradigm also provides for an occasion for students to juxtapose the reality of their experiences against the constructed realities of society as they work toward a variety of solutions, including the evaluation of those solutions, for practical problem scenarios. While the paradigm articulated by Sternberg does not specifically delineate this condition, it does open the door for educators to create it.

Herein rests the possibility to move students toward the development of a critical literacy where they begin to deconstruct information and use their indigenous knowledge to construct and question the meanings, power differentials, and perspectives of the information that they encounter. Movement toward critical literacy is essential if we are to embrace the idea that the demonstration of successful intelligence necessarily involves the extent to which individuals leverage all of their abilities, by utilizing their strengths and correcting or compensating for their weaknesses, to achieve particular goals within the contexts of their everyday real worlds. To successfully utilize their intelligence for purposive navigation through everyday life, individuals need to be able to critically read the world in which they live. Within the context applying Sternberg's model to pedagogy, the goal should not only be to maximize the cognitive skills of students through a recognition of the plurality of their intelligence but to also give them new opportunities to think critically about the society in which they exist so that their education empowers them to transform the structures rather than conform to it. Interestingly, Sternberg's own early educational experiences can be understood within this context. He was a student academically condemned by traditional models of intelligence testing that labeled him as an underperformer or unintelligent. However, rather than conform to the circumstance of the stigmatizing label, he challenged it by engaging in efforts to acquire the knowledge to deconstruct the theoretical models that were foundational to the creation of the circumstance, and constructing an alternative theoretical model. Sternberg's work was informed by information and knowledge generated from his childhood experiences with intelligence.

Another important element of the Triarchic Theory of Intelligence is the way in which it focuses not only on the deficiencies, but also on the assets, of skills and abilities of successful intelligence. As we consider the extent to which many American youth, who have not fared well under our current pedagogical models that privilege an analytical approach, are demotivated and alienated from the learning process, Sternberg's paradigm can be incredibly helpful in constructing new and more effective models of schooling to alter this circumstance. Through his theoretical framework, there is an acknowledgement that students have a wide range of intellectual assets, even if they coexist with deficiencies that need to be addressed. This asset-based approach can be an important motivator for students who have historically experienced overwhelming failure in the traditional modalities of schooling. A deliberately active recognition and embrace of students' analytical, creative, and practical abilities can be incredibly empowering, particularly when their creative and practical abilities have been overlooked by our traditional approaches to pedagogy.

In addition to the motivational benefits that can be gained by students who are pedagogically engaged in a learning process imbued with a Triarchic approach, there are also opportunities to enhance academic performance. Learning triarchically allows students encode material in three different frameworks, which consequently strengthens and increases the ways in which students are able to retrieve and utilize such information. In his research studies of the model, Sternberg has documented performance gains across all three domains for students who previously had been recording poor academic performance. "Students who have studied triarchically excel in their performance not only on tests measuring analytical, creative, and practical achievement, but also on multiple-choice tests that require little more than memorizing the material. Moreover, students who formerly were not achieving at high levels start achieving at high levels when they are taught triarchically" (Sternberg et al., 2001). Sternberg and his colleagues also found that the Triarchic model gave teachers an opportunity to employ a greater variety of pedagogical approaches to deliver particular academic content, which is an important motivator for them as well. Just as students can be moved toward a critical literacy, perhaps teachers simultaneously can be moved toward critical pedagogy as they are empowered to engage their own knowledge and skills, outside of those dictated by prescribed and scripted curricula, in the facilitation of learning within their school spaces.

In thinking about the field of Multiple Intelligences and how its various theorists have articulated particular conceptual frameworks, Sternberg's Triarchic Theory is a model that can be used as an important point of entry to progressively advance the discourse on intelligences. The promise of Sternberg's theory to move the discourse primarily rests in its ability to socioculturally contextualize successful intelligence, its focus on the pluralistic domains of cognitive processing rather than talent or skill identifications, its acknowledgement of assets as well as deficiencies, as well as its recognition that successful intelligence can be taught. The promise of Sternberg's theoretical paradigm can only be realized if educators actively engage the framework and critically shape its application to pedagogical and curricular practices. This means that educators must be equipped and empowered to transform their approaches to teaching and learning such that their strategies include not only the more traditional didactic and fact-based inquiries of academic materials but also a more dialogic and thinking-based questioning as they help their students consider alternative explanations and evaluations of the phenomena and knowledges that they encounter throughout a lifelong learning process. In light of the educational experiences and outcomes of our youth, we need to embrace, exploit, and expand the potential that Sternberg's Triarchic Theory of Intelligence offers to educate individuals to develop a web of intelligence that they can successfully leverage within the real world of their everyday lives, and simultaneously affirms and builds upon those skills that they bring to the learning process.

REFERENCES

- Alvermann, D. E., Hinchman, K. A., Moore, D. W., and Phelps, S. F. (Eds.). (1998). *Reconceptualizing the Literacies in Adolescents' Lives* (p. 29). New Jersey: Lawrence Erlbaum Associates.
- Rose, M. (1989). *Lives on the Boundary*. New York: Penguin Books.
- Sternberg, R. J. (1985). *Beyond IQ: A Triarchic Theory of Human Intelligence* (p. 128). New York: Cambridge University Press.
- . (1988). *The Triarchic Mind* (p. 250). New York: Penguin Books.
- Sternberg, R., and Williams, W. (Eds.). (1998). *Intelligence, Instruction, and Assessment: Theory into Practice* (p. 2). New Jersey: Lawrence Erlbaum Associates.
- Sternberg, R. J., Forsythe, G. B., Hedlund, J., and Horvath, A. J. (2000). *Practical Intelligence in Everyday Life*. New York: Cambridge University Press.
- Sternberg, R., Grigorenko, E., and Jarvin, L. (2001). Improving reading instruction: The Triarchic Model. *Educational Leadership*, 58, 48.

CHAPTER 30

Beverly Daniel Tatum

PAM JOYCE

Beverly Daniel Tatum has been working in the field of educational psychology for more than twenty-five years. In this domain she has managed to bring a new perspective on race and racism from a postformalist and critical constructivist point of view, incorporating a nontraditional stance on these topics. Her fresh perspective injects much needed insight into the role of race and racism into the discourse of educational psychology. She is a scholar, teacher, author, administrator, and race relations expert who has extensive background in both psychology and education. Her detailed vita can be accessed at <http://www.spelman.edu/president>. Her central research interests include black families in white communities, racial identity in teens, and the role of race in the classroom and its implications for our students, schools, communities, and society.

Tatum is the author of *Why Are All the Black Kids Sitting Together in the Cafeteria? And Other Conversations about Race* (2000, 2003), and *Assimilation Blues: Black Families in a White Community: Who Succeeds and Why?* In addition, she has been published frequently in social science and education journals. In 1997 Tatum participated in President Clinton's "Dialogue on Race" and in 2002, she appeared as a guest on the Oprah Winfrey Show as part of a broadcast concerning American youth and race. Presently, Tatum is the president of Spelman College. Prior to her appointment at Spelman, she was acting president and dean, as well as professor of Psychology and Education, at Mount Holyoke College.

Tatum's written and oral contributions, in addition to her career accomplishments, span a continuum of hope. This underlying hope unfolds in her books, beginning with the exploration of the psychology of internalized racism, gradually traversing to an honest look at a specific school setting that implicitly holds a powerful message for all, and finally expanding from the nuclear geographic setting of a school cafeteria to the wider geographic area of a predominately white community. Developing an understanding of these geographic contexts is essentially acknowledging that the consequences generated from these situations first spill into the larger society and then sadly gush out even further over the globe for both conscious and unconscious mass consumption. It is when this occurs that the populous is exposed to the ugliness of racism in disproportionate doses. Tatum's goal is to expose the ugliness as it appears to be and thus break the silence and tacit underpinnings of racism that have always been omnipresent in society. In addition, she dramatically alters racism's lethal grip on the world in a more natural fashion through

her works as well as through conversation rather than the use of other blatantly obtrusive options that have been used in the past to achieve the same goal. In other words, conversation as a natural path is being pursued in contrast to past accusatory and culpable methods of change involving racism. In this way, her work is a source of hope as well as possibility, and subsequently becomes an audible call for human agency.

Another natural approach to learning about racism involves the ability to be insightful, and Tatum certainly manages to capitalize on her insights. She utilizes them as she reverts historical shortsightedness about race with its limited boundaries into multidimensional peripheral vision. As a result, multidimensionality develops from a three-pronged micro, meso, and macro perspective on race. This broad perspective incorporates the individual's internalized unrest on the micro level, the school/community's perpetuation of black invisibility on the meso level, and the larger society's blatant installation of the trickle-down effects of racism on the macro level. These three levels combined are represented under the auspices of the cycle of oppression. However slowly, the salient points enveloping racism materialize through these micro, meso, and macro representations and, therefore, heighten the awareness level of people everywhere.

Tatum's own heightened awareness alters the approach to racial boundaries and exemplifies enhanced vision for possibilities, ultimately allowing space for change and the foresight to act against the odds. Her awareness captures, in a nuclear school setting, racial dynamics in a traditionally "inclusive" democratic environment and demonstrates the pervasiveness of racism from self to society, from within to without. The irony of the pervasiveness of racism is that the so-called inclusive American school environment and the American neighborhood community are traditionally seen as places where the objectives of democracy can be fulfilled. Racism is in fact present within the school walls and continues to manifest itself like a version of distorted surround sound within the imaginary speakers of a massive educational music system. That is to say, racism and the denial thereof are omnipresent in education, the construction of identity, and cognitive activity.

According to Tatum's research, the subsequent dynamics of racism have no choice but to ooze into American institutions. For example, the turbulent micro world of black kids translates into the meso lived world of the school community and becomes identifiable by negative labels, as seen in subjugated student positioning in lower-level classes and unequal academic opportunities. Eventually, the macro world is influenced through subjugated work placements of these kids in the larger society. Tatum's exposure of the negative does not imply that she comes solely from a deficit point of view, but rather that she is brave enough to represent the racial inscription of "what is." The dim reality of racism under these circumstances thus becomes the transference of the dominant mindset to an inept socialization process, which eventually frames the structure of adulthood. The end results of the circular process of racism correlate directly with the ability, or inability as it may be, to cope with the overload of racist stimuli coming from internalized prompts and societal as well as global negative forces. This overload includes dynamics that are generated in physical spaces as well as in the psyche of society, which are interrelated and connected and which contribute to the phenomenon of silenced black voices.

In *Why Are All the Black Kids Sitting Together in the Cafeteria? And Other Conversations about Race*, mixed feelings about "same race" grouping emerge from a supposedly "neutral" school setting, the cafeteria, and questions the validity of the ideals of democracy and equality. The word "conversation" used in the title actually paves the focus of the book and provides a new direction for those in search of promoting understanding among people. On one hand, close interactions with people of the same race are interpreted sometimes in a favorable light as a private support group. On the other hand, the exclusivity of black groups specifically can be interpreted as self-segregation and carry a negative onus that undoubtedly cements a connection to the negative past with slavery and segregation laws. Either way, whether the conversations

sparked are positive and/or negative, this book evokes thought to at least engage in talk about race and the situation of racism in America. This kind of “talk” has quelled the overwhelming silence about race over the years and sanctioned the need for race discourse. It provides on one hand a social context for race and on the other hand rejects the idea of “racelessness,” which mechanistic educational psychology has perpetuated for a long time.

Openings originating from race conversations foster change as well as awareness. In conversations, movement begins to stir beyond talk and, in fact, evolves from discourse moving forward as an agenda of agency that promotes emancipation from the age-old debilitating conditions of racism. Some changes also emerge from intrinsic and/or extrinsic origins, thereby representing dual perspectives of the cafeteria phenomena as well as highlighting powerful hegemonic groups. Intrinsically, racism is the inner turmoil that stings and sometimes blisters the black child’s lived world experiences and, as an internalized experience, it has the unfortunate ability to fester and penetrate the human core. Extrinsically, racism operates from outside of the “self” and finds reinforcement in schools, communities, and the larger society. Coupling and sorting out the intrinsic and extrinsic aspects first on an individual level and then from a collective standpoint can assist in the possibility of constructive change. Tatum starts with dissecting intrinsic upsets of the black individual, aptly exploring the psychological dynamics, and then continues to transfer and intermix that information to the language of the educational and social arenas. Thus, through the intermingling of psychological, educational, historical, and social dynamics, educational psychology becomes enmeshed in the process.

Tatum draws on intrinsic information from an etymological sensibility, which emerges when she examines racial identity and unearths the origins of racism as it aligns with the development of identity. Although the point of origin is “self,” the end result always encompasses the whole. In actuality, the nuclear “self” simply mushrooms into intricate connections of life like an amazing geometric diagram developing slowly but surely, all pieces fitting together and forming a complete circle of humanity rolling along as every one affects the other. In *Why Are All the Black Kids Sitting Together in the Cafeteria? And Other Conversations about Race*, she refers to the psychologist William Cross to clarify the theory of racial identity that involves five stages: preencounter, encounter, immersion, internalization, and internalization/commitment. In a nutshell, Cross discusses how a person from a racial minority begins life by thinking he or she is like everyone else, then an awareness sets in that he or she is different, next this awareness seems to surround the individual from various points of the lived world, and with a gradual overstimulation of the senses, the individual begins to internalize the “what is.” Finally, in many cases, the individual accepts the “what is,” which eventually becomes his or her reality. The critical postformal reconceptualization of educational psychology, in accordance with Tatum’s works on race and racism, call for rigorous engagement with the psychological origin of “self” as well as exploration of group dynamics and its relation to the “self.”

Group dynamics and the relationship of “self” join together to create the cafeteria phenomenon. Why should it be an issue of concern that black kids are sitting together in the cafeteria, whereas, on the contrary, the idea of white kids sitting together in the cafeteria is not an issue? Regrettably, black kids sitting together and eating in a specific space usually solicits a shock-wave response to what should otherwise be considered a normal everyday social event. When a group of same-race black kids sits together, it often elicits a reaction that prompts questions and, at times, creates in the public mind the formation of a threatening environment. In fact, cause for concern usually ignites when any minorities gather together in one specific location.

Under these extenuating circumstances when everyday activities of a specific group of people are questioned and/or frowned upon, one might be inclined to pose a poignant question such as, “How does democratic practice apply in this situation?” In sum, the same-race grouping phenomenon can either be seen as a positive action, whereby it can be interpreted as kids simply

involved in supporting each other, or it can be seen as something negative, that is, as a situation that needs to be fixed. Consequently, the unsettling incidents that are revealed through Tatum's cafeteria-like self-segregation phenomenon shed light on yet another complex race situation and often result in critical enlightenment concerning issues of power and dominance at work in a democratic society. Although these views about racism, whether positive or negative, originate from natural spaces, they are not necessarily experienced in totally isolated contexts. Furthermore, Tatum's research introduces various coping mechanisms dealing with racism used by blacks in specific environments and also exposes examples of trickle-down negative consequences, from childhood to adulthood, that are connected to black lived world experiences.

Tatum's introduction of coping mechanisms for racist acts emerges from a new critical consciousness and a rigorous form of criticality that aligns with postformalist thinking. She is able to launch the criticality necessary to pursue the discomfort that is usually associated with discussions on race and in addition, embrace the subsequent life changing revelations that generally follow these experiences. This innovative way of thinking critically about race sheds new light on the power and influence of the web of reality for black kids as well as black adults and demonstrates how this intricate interconnected web affects others. Tatum's research about race in *Why Are All the Black Kids Sitting Together in the Cafeteria? And Other Conversations about Race* and in *Assimilation Blues - Black Families in White Communities: Who Succeeds and Why?* provides the resources needed to transfer pertinent coping mechanisms to the minority population and begins to plan for change. Operating in a manner similar to Joe Kincheloe's postformalist framework, Tatum proceeds to go deeper into the "what is" and then questions the norm with her willingness to do the rigorous work by addressing the "what could be." She is able, from a postformalist viewpoint, to exercise the criticality necessary to pursue the stages of discomfort usually equated with discussions on race and also acknowledge the subsequent life-changing revelations that follow the conversations.

Tatum's work on race relations gives educational psychologists, lay people, and educators the nudge to seek out the larger, more intrusive issues surrounding black kids and, consequently, in doing so buy into a more challenging, rather than accepted and predetermined, existence. What tends to be missed, sometimes blatantly ignored or even callously disregarded, is the kaleidoscopic world black kids are expected to face on a daily basis. In this particular world filled with mixed stimuli and an array of contextually based mixed messages, there is an endless variety of racist patterns configuring themselves in blinding displays of bright converging and confusing colors. These messages are presented from multiple lenses which intensify human existence and cause, on one hand, a constant need for blacks to search for survival skills and, on the other hand, enables the powers of the hegemonic groups to be nurtured and simultaneously enhanced. Therefore, context needs to be examined with a critical eye, and that is where Tatum's particularly perceptive peripheral vision again becomes apparent and necessary. With this vision, she emphasizes the power of and need for hermeneutics in the field of educational psychology.

In the context of the school cafeteria, a place customarily deemed as a "neutral" space where people can be free to choose whom they wish to socialize with, Tatum's critical eye is needed to interpret the reality of the situation. In a sense, the cafeteria appears to assume the idea of claiming territorial rights whereas students stake out areas in specific spaces mainly for reasons of bonding, comfort, and support. Thus, it is territorial only because black kids feel as if they have to protect a space for themselves in which they are allowed to say anything they want, to interact with people who look like them and possibly have similar life experiences as well. Tatum acknowledges as well as supports the need for black kids to secure sacred bonding spaces. In taking this stand, she gives credence to the black voice and encourages reaching out to one another within the confines of select spaces to satisfy growing life needs and become visible by means of action as well as speech. The action of racial solidarity demonstrates that power exists

in numbers, if only in the united front of a simple school lunch table, and speaks volumes through the silence of unity.

Tatum reiterates the micro, meso, and macro aspects of racism in *Assimilation Blues: Black Families in White Communities: Who Succeeds and Why?* In this publication, she assumes a dual perspective, emic as well as etic. She assumes on one hand the emic perspective as a resident in a predominately white community, called Sun Beach, coupled with the points of view of twenty other black families from an insider's perspective aligned with the situation. On the other hand she assumes an etic perspective in the role of researcher as well as scientific observer and in doing so presents the outsider's side to the situation. The dual perspective, from the inside emic and outside etic perspectives, imparts a comprehensive picture to the research information of the myriad dimensions of being black in the specific setting of the suburbs and the consequences of adjustment that must be endured for the "privilege" of remaining in the community and earning acceptance. The impact of the conceptual and social framework of a predominately white community on black people and the deep social structures surrounding them is visible from many angles. The impact can be visible from a psychological viewpoint, through the mind; from a sociological viewpoint, through interpersonal relationships; as well as from an anthropological viewpoint, through the treatment of blacks in the context of a specific community where hegemonic forces are most prevalent.

The impact of being black in a predominately white community can also result in a bicultural experience. Exposure to biculturality, or in this case, the merging of the values of white and black culture, often becomes a necessity in order to survive in the home community while simultaneously counteracting inner racist turmoil. The duality of this bicultural existence is reminiscent of the concept of "double consciousness" penned by Du Bois. The basic premise of "double consciousness," as summarized by Joe Kincheloe in *Critical Pedagogy: A Primer*, is having the ability to see oneself through the perception of others. This heightened level of consciousness is an acquired skill, and often a necessary tool for survival. In Tatum's predominately white town, blacks can survive by learning two ways of doing things, the white way or the correct mixture of the white way and the black way in order for desirable coexistence. Double consciousness is a part of the black world in multiple contexts and, unfortunately, a concept that has not been explored in mainstream educational psychology.

In addition to biculturality as a response to efforts of fitting into the dominant context, Tatum proposes blacks can exist by assuming a position of racelessness, where they systematically void their culture. In essence, racelessness is when an individual basically neutralizes his or her being and erases racial identity in order to blend into the hegemonic culture for purposes of survival. Under these circumstances, white culture usually takes precedence over black culture. Comparatively, the notion of racelessness carries a burden similar to the one created by assuming the role of emissary, which is that of imposing an aspect of invisibility of the inner "self." The emissary role, which refers to someone who sees all of his or her achievements as advancing the cause of his or her specific racial group, is another viable option for survival for some people of color. Of course, within this definition, the individual essentially carries the overwhelming burden of being the savior of the race. According to Tatum, however, the emissary role used for black survival in hegemonic settings as well as biculturality and the idea of racelessness all have the capability of robbing the black individual of some aspect of the "self." Tatum's acknowledgement of pertinent variables interconnected with black existence brings educational psychology into a more realistic perspective compatible with the changing times.

Another survival technique used by blacks living in a predominately white community, which is more self-assuring, is to import a relationship into the home by rallying the black extended family together for purposes of establishing a better sense of black "self." Although pursuing familial ties by reaching out beyond the lived community might be a strain on the family, yet

it might also have rewarding results, especially under the often-extreme existing circumstances that tend to void black human existence. Weighing the potential positive impact the family can have, Tatum sees the support of the black community, familial and/or otherwise, especially in the mixed-race community, as a protective buffer zone for the child. Thus, support from black family members is one way of counteracting the effects of invisibility.

Invisibility is just one of the possible consequences of operating in an alienating environment that often lists the definition of black people as synonymous with the word “intruder.” As Tatum points out, the “intruder” is seen simultaneously as visible and invisible, and in light of this dichotomous relationship the community assumes conflicting views. Blacks are seen visibly from the outside, from a surface perspective as cloaked in a skin of shaded brown hues. In contrast, however, they are not truly seen in the sense that they are essentially invisible and ignored, from an inner, core perspective as a human being. Owing to this fractured view of conflict and gross mislabeling as “intruder,” black people not only have limited power, but limited access to power as well. The “intruders” then remain in limbo under these conditions, teetering between visibility and invisibility.

Historically, blacks struggled for visibility and access to power through the possibility of acquiring land and/or education. Today, as emphasized by Tatum in her research, geographic location and education are linked to black families in school situations as well as in community-living situations. The nefarious connections between race and power loom in the context of situatedness, for example, as Tatum suggests in school or community, often lurking in the shadows of lived experiences as a constant reminder of past injustices. Subtle and sometimes overt indications of racism often rise up, which are rooted in history, thereby giving credence to the fact that racially charged occurrences are not isolated or mythical incidents but actually are embedded in society. These social dynamics affect every dimension of educational psychology and need to be included in this domain in order to get a broader picture of the “what is.”

Tatum, like Donald Macedo in *Literacies of Power: What Americans Are Not Allowed to Know*, addresses embedded societal myths. Overall, it seems the myth that society promotes is that there are no connections among the inner self, the school, and the larger society and this is heard in a resounding manner throughout Tatum’s research findings on race. The myth that racism no longer exists in the schools is also creating cacophony in the educational arena owing to the perpetuating literacy issues in the school system involving black kids and the inability of research to provide a solid reason or viable solution for these issues. Through the exposure of these myths, Tatum establishes a place for the reality of internalized racism and, therefore, builds credence about the roots of the turmoil that so often rages within the consciousness of black people. She illuminates the “what is” into future possibilities of the “what could be” by expanding awareness of the web of reality, across multiple individual and collective life-time encounters, and among diverse web prongs jutting out into the world clutching onto all that it comes in contact with in the lived world. Alignment with this level of agency can only be possible if one’s eyes are open, senses are piqued, and the need for involvement is understood.

In actuality, a microcosmic as well as positivistic representation of society which strives to distinguish and separate lived experiences by race ultimately represents the macro version of society in the “what is” present experience. The idea of using the cafeteria as a medium to accentuate the existence of racial problems in America in everyday normal situations is profound. Her innovation clearly portrays, especially in its nuclear setting, that the problem of racism is not isolated, fragmented, or housed in one area at all but, in contrast, is quite prevalent in many different areas of the world. In addition, the cafeteria scenario geographically transcends America because students in the cafeteria are engaged in a day-to-day experience shared by many other people around the globe in different ways based on varying cultural practices. Hence, the macro experience comes to fruition.

Therefore, same-race students who gravitate and cling to each other are simply duplicating what the hegemonic society has unconsciously as well as consciously set up as an accepted comfort zone. Minorities who are thus encapsulated by various overt and covert acts of racism on a daily basis, for example in the movies, the media, their communities, and their school environments, are prone to gravitate toward each other in specific contextual circumstances. With a barrage of negative information, black youth are all but commandeered to make inappropriate assumptions about their worth and identity. The possibility to exceed seemingly predetermined boundaries and customized zones of learning in this limited claustrophobic space is thus threatened by these overwhelming factors. Again, the social dynamics of race profoundly shape the concerns of educational psychology.

Lev Vygotsky espouses that it is possible to create our own Zones of Proximal Development (ZPDs). ZPDs are zones or spaces that scaffold learners to higher-knowledge plateaus with the capacity to be custom designed to suit the needs of the individual. They can be orchestrated to address individual needs, with the possibility of extrapolating a variety of existing useful items and incorporating new items for the purpose of reconstructing the existing “what is.” In a school environment as well as in a predominately white community, blacks can customize their space in some cases, as Tatum suggests, with bringing family members into the experience, in order to expedite the possibility of transformative change. But if we are, in fact, to make this change happen, we must not look at racism as a type of cancer that is incurable and prevalent throughout the land or we might not recognize a glimmer of hope when we see it. Instead, it seems we might have to redefine racism as a society in order to move toward change as well as encourage the field of educational psychology to expand its racial empathy and insight and deal with issues of race and racism.

Tatum herself defines racism as a system of advantage based on race. She uses the world like an artist’s palate to paint a picture of this definition by discussing the advantages of race for one group as compared to the disadvantages of another and, in doing so, she expounds on the ever-present societal racist overtones. In addition, she erases fragmented thoughts and jargon and concentrates on the interconnected nature of the world and how racism fits into the schemata. The results of seeing the connected nature of little incidents is the realization that life’s patterns and relationships are intertwined and at some point enmesh together to form a bigger picture. Thus, insights gained from merged relationships can be the catalyst for future possibilities, and Tatum’s work inspires this level of emergent possibilities.

In keeping with Tatum’s emergent possibilities, one might consider Kincheloe, Steinberg, and Tippins (1998) term *critical constructivism*, introduced in their book *The Stigma of Genius*, which involves critical consciousness of the social construction of self and society. Critical constructivism involves taking a critical stance that is open to acknowledging the existence of power in relation to and corresponding to the “real” world that is enveloped in the web of reality. It equates the major conflicts and recurring issues of race as due to the lack of self-reflection and exploration of origin as well as to the presence of the hegemonic societal umbrella that pervades all parameters of space. In short, critical constructivism embodies principles to explore in order to move from the “what is” and ultimately get to the “what could be” in relation to the multifaceted aspects of race relations and racism in today’s world. I argue that tacit aspects of school culture and damaging societal myths can find an avenue for exploration and open expression with an alignment of critical constructivism and educational psychology.

The ability to question representatives of and sources of power is a basic tenet of critical constructivism. In this sense, Tatum as a critical constructivist, in Kincheloe’s words, approaches “world making” from a united, cohesive standpoint by connecting the micro, meso, and macro world representations and thereby acknowledging the multidimensional sources of power and their effects on selfhood. Essentially, she abandons traditional reductionistic methods of

fragmenting bits of information from the past and present, and manages instead to keep all of the information together. Needless to say, as Maxine Greene (1995) implies in *Releasing the Imagination*, critical consciousness propels the race discussion to “open up lived worlds to reflection and transformation” (p. 59).

Further relating to critical constructivism, Maturana and Varela’s (1980) cognitive theory of enactivism involves a critical change as well. Enactivism proposes that individuals have the ability to transport select schema or inner knowledges to different spontaneous situations in order to construct or create individual experiences. The power to do so, Maturana and Varela argue, lies within, stemming from multiple relationships. Tatum exemplifies how the use of schema aids in the construction of race identity as she projects the possibility that black kids might be able to mobilize themselves for change if they would begin to see themselves as complete and not fragmented by life’s varied experiences. This thought process, however, demands a critical mind that knows, or has the ability to distinguish, myth from reality as well as the ability to appropriately use that knowledge under varying circumstances at any given time. Therefore, it is our social responsibility to nurture and stimulate more critical minds so that in turn, schema may be implemented differently from the past and eventually used as a tool for change.

The possibility of black kids using critical schema to carve out a new existence from the “what is” lived world, incorporating an enactivist psychological perspective, would ultimately be up to the individual. Therefore, how they internalize their collective past and present life relationships, and the responses and interactions engendered by the larger society would be a consideration in the change process. In this manner, the individual would then see his or her self as capable of taking control of spontaneous as well as long-standing situations with the “self” as the main component. According to Varela’s autopoiesis, self-organization or self-production, individuals are allowed to be in a lifelong marathon with self-(re)construction. Tatum proposes multiple ways, which were previously mentioned to engage in that reality. In other words, the essence of this theory gives individuals power to create a world, which then affords, as Kincheloe espouses, a new era of immanence, or “what could be” in our web of reality. Ultimately, in our ZPDs, in our relationship with others, the web of reality is open to what we can conceive and then construct and/or reconstruct.

Critical immanence helps us to see possibilities buried deep within our minds that we lost access to or misinterpreted because of lack of perspective or insight, social positioning, or inability to change the “what is.” Regrettably, it seems that individuals often struggle and sometimes respond without challenge to life’s moment-by-moment encounters in inappropriate or self-damaging ways. Through Tatum, we discover that problems with race might have internal origins but they ultimately go beyond the “self.” Consequently, the “self” is a good starting place, but by far not the only stop on the continuum of hope. If one can digest reality and possibly feel the frightening fury that exists in racist acts and through this process, recognize how racism has spiraled out of control over time, then it might be possible to get its damaging presence into perspective.

It might be possible to imagine the “real” meaning of the fluidity of change and the existence of limitless possibilities by extricating ourselves from the devaluing and demeaning stories, both past and present, of racism and realigning our lived order by first, critically deconstructing the negative and, then, critically reconstructing something new. It is the use of criticality that seeks to change this perspective. Tatum’s honest and revealing conversations, which encourage awareness of the interconnected nature of life, along with the understanding and awareness of the psychological roots of racial identity and its formation, provide a working format for the beginning of transformative change about race relations and the long-standing effects of racism.

As stated in Kincheloe’s introduction to this encyclopedia, knowledge can never stand alone or be complete in and of itself and, thus, the context of meaning in Tatum’s scholarly works comes from the heated conversations about race, the socialization process, embedded implicit and/or

explicit societal messages, and the situatedness of people in general. She captures a well-rounded profile of blacks in specific societal situations and, consequently, manages to successfully eke out an honest account of what it means and feels like to be black in a white-dominated society. The social networks that surround black people have been an especially significant consideration of Tatum's research from a reconstructive and emancipatory standpoint and are very important avenues of exploration in educational psychology.

In addition to context, Tatum builds and synthesizes knowledge by using what Joe Kincheloe has described as a bricolage approach to research. She starts with the topic of race and expertly weaves in the far-extending and disguised tentacles of racism. The multiple lenses that she engages to approach this research serve to enhance her work as well as her agency, which assist overall in increasing human possibilities. The circular nature of the data collected from the cafeteria, the community, and the larger society unfolds, and connections ultimately emerge from the ever-expanding and fluid perspectives of lived world experiences. Her research is a textured web penetrating the inner and outer worlds of people everywhere. It goes deeply into the black psyche starting with identity development, introduces the school community as a part of the development, and finally establishes the interconnections of the larger society in the development process. As Berry and Kincheloe (2004) argues in *Rigour and Complexity in Educational Research: Constructing the Bricolage*, these multiple lenses make for a *clearer* understanding of the relationship between race and educational psychology.

Tatum layers the psychological, educational, sociological, anthropological, ontological, and historical domains generated through research and ultimately harnesses a bricolage of information. Each layer of research connects to more information and subsequently, loops back to itself even more enriched and enlightened in a true cyclical sense. The layered information exemplifies the micro, meso, and macro levels of human existence and, as a result, multiple insights emerge from these varied perspectives. In sum, viewing the research in its complexity and visualizing the process as nonlinear, as Kincheloe proposes in his work on postformalism, collectively adds comprehensive dimension to Tatum's work and allows for increased comprehension of the work we must do in and for the world concerning matters of race. In this "era of immanence," possibilities remain present in Tatum's promotion of a more positive arena for the recognition and development of black voices and, finally, an opening for a true understanding of the sources of pain endured by black people for so long. Mechanistic educational psychology cannot remain stranded on its deracialized island once it takes these insights into account.

REFERENCES

- Berry, K. S., and Kincheloe, J. L. (2004). *Rigour and Complexity in Educational Research*. London: Open University Press.
- Greene, M. (1995). *Releasing the Imagination: Essays on Education, the Arts, and Social Change*. San Francisco: Jossey-Bass Publishers.
- Kincheloe, J. L. (2004). *Critical Pedagogy Primer*. New York: Peter Lang.
- Kincheloe, J. L., Steinberg, S. R., and Tippins, D. (1998). *The Stigma of Genius: Einstein and Beyond Education*. New York: Peter Lang.
- Macedo, D. (1994). *Literacies of Power: What Americans Are Not Allowed to Know*. Boulder, CO: Westview Press.
- Maturana, H. R., and Varele, F. J. (1980). *Autopoiesis and cognition*. London: D. Reidel.
- Tatum, B. D. (2000). *Assimilation Blues: Black Families in a White Community*. New York: Basic Books.
- . (2003). "Why Are All the Black Kids Sitting Together in the Cafeteria?" *And Other Conversations about Race*. New York: Basic Books.

CHAPTER 31

Lewis Madison Terman

BENJAMIN ENOMA

Lewis M. Terman was a renowned psychologist situated in the pantheon and generation of eminent American psychologists influenced by “the Great Schools.” In this era, the number of theoretical and empirical investigations of “intelligence” increased considerably. Terman was the twelfth of fourteen children born on a farm in Johnson County, Indiana, on January 15, 1877. As a teenager, he left home for College at Danville, Illinois. He made a living oscillating between the pursuit of higher education and school teaching. In 1905, he received his PhD from Clark University, Worcester, Massachusetts, six years after Henry Herbert Goddard, who also graduated from Clark.

Terman’s dissertation was on individual differences in intelligence. He employed a variety of tests to measure and differentiate between the cognitive abilities of “gifted” and “stupid” preadolescent boys. Although this work preceded Goddard’s translation in 1908 of the 1905 “Binet–Simon Scale,” the approaches to measuring human intelligence bore some similarities. Terman spent thirty-three years on the faculty of Stanford University, Stanford, California, twenty of them as head of the Department of Psychology.

The works of Francis Galton (1822–1911), eminent British psychologist who coined the term “eugenics” and the phrase “nature versus nurture” largely influenced Terman. Galton was Charles Darwin’s cousin. His theory of intelligence, part science and part sociology, held that intelligence was the most valuable human attribute and that if people who possessed high levels of it could be identified and placed in positions of leadership, all of society would benefit. Terman was also influenced by French psychologists Alfred Binet (1857–1911) and Theodore Simon (1873–1961), who codesigned the Binet–Simon scale, which comprised of a variety of tasks they thought were representative of children’s aptitudes based on chronological age.

STANDARDIZATION AND TRACKING

As mentioned earlier, Terman’s era was replete with theoretical and empirical investigations on human intelligence. On the one hand some foregoing scholars like French Psychologists: Alfred Binet and Theodore Simon approached this subject with the focus on ascertaining the level of intelligence that requires special education. In other words the goal was to identify the “least

endowed” children so as to give the extra support needed for them to cope. In the United States other psychologists such as Henry Goddard, Robert Yerkes, and Lewis Terman were fixated on the higher echelon, the “highly gifted.” These positions used similar techniques and shared the same basic assumption that intelligence in humans was a natural endowment that varied from individual to individual. While it is fair to say that both approaches were aimed at the ultimate good of the society, it is pertinent to note that the focus on the least endowed individual has a social justice slant, that is to say, provide special education for those who need it and level the gaps in achievement. While the quest for the highly gifted possessed an elitist slant, its proponents, Terman included, sought to control or eradicate the existence and reproduction of the least endowed. Furthermore, the former used the IQ tests to determine what a child needed to learn while the latter used the IQ tests as a tool to predict the child’s ability to learn.

If individual intelligence levels could be clearly ascertained then the population can be sorted on the basis of their IQ test scores and assigned to different levels within the school system, which would lead to corresponding socioeconomic destinations in adulthood. The explanation of these variances on the part of the gifted school was dependent on bloodline, racial or gene superiority as espoused in “Eugenics,” a popular and emergent theory at the time. As stated by Charles Davenport (Galton’s U.S. disciple), Eugenics is the science of the improvement of the human race by better breeding. Terman was very open about his position that the etiology of intelligence is largely hereditary. Terman more than any other individual in recent history raised the bar on standardized tests and its uses in schooling to track and differentiate the college bound from the vocational or life adjustment education of children.

The use of IQ tests gained more grounds as a result of two notable events. First, the Congressional bill or Immigration Act of 1924: Henry H. Goddard discovered that more than 80 percent of the Jewish, Hungarian, Polish, Italian, and Russian immigrants were mentally defective, or feeble-minded. He believed that such a defect was a condition of the mind or brain, which is simply transmitted as a genetic trait. He paid no attention to other factors that may have had a significant effect on the test scores. Tests were administered in English and under an arduous environment to immigrants after traveling great distances. “It would be impossible to rate real intelligence by using a test that is based on only verbal skills to someone in a language they are illiterate in.” (Judge, 2002)

Secondly, the U.S. Supreme Court ruling in 1927 upholding Virginia State’s involuntary sterilization of Ms. Carrie Buck, where Justice Oliver Wendell Holmes penned, “Three generations of imbeciles are enough. . . . He had decided that it was constitutionally legal for states to sterilize anyone they decided was eugenically undesirable. The principle that sustains compulsory vaccination, he elaborated, is broad enough to cover cutting the fallopian tubes.” In other words, the general health of society could be protected at the expense of the rights of individuals. This ruling gave further legitimacy to the claims of the advocates of mental testing.

Terman, in his seminal work “Giftedness,” on human intelligence and achievement, would go a step further and combine the Binet–Simon Scale with Wilhelm Stern’s numerical index to explain the *ratio* between mental and chronological ages. The result of this effort is the development of the Intelligence Quotient (IQ) test, employing among other kinds of tests the Stanford–Binet Scale.

U.S. ARMY ALPHA BETA TEST

In 1917 at the onset of the First World War, then APA president Robert M. Yerkes, assumed chairmanship of a committee comprising 40 psychologists to develop and administer a group intelligence test, the U.S. Army Alpha Beta tests. Notable members included Henry Goddard, Walter Bingham, Lewis Terman, Carl Brigham, Edward L. Thorndike, and William Dill Scott,

the first American professor of psychology, who soon resigned from the committee on account of differences with Yerkes. The significance of the Alpha Beta tests is that it is the pivotal exercise that moved intelligence testing beyond the individual toward the group. Thanks to the contributions of Lewis Terman, more than 1.7 million U.S. inductees were tested. The success of the sorting of men into ranks of officers and foot soldiers by the use of these tests lent credence to the belief that testing and tracking was the most efficient way to position the most talented to achieve their fullest potentials while identifying and curtailing the proliferation of those with low levels of native endowments. The Alpha test was designed for literate inductees while the Beta test was designed for illiterate or English-as-second-language inductees.

LARGE-SCALE ACCEPTANCE/LEGITIMIZATION

Lewis Terman conducted the best-known longitudinal study on human intelligence. In 1921 Terman and his colleagues began a longitudinal study of 1,528 gifted youth with IQs greater than 140 who were approximately twelve years old. Over a period of approximately forty years, the researchers laid the groundwork for our understanding of giftedness and paved the way for efforts to identify and nurture giftedness in school. Terman died in 1956 but the study will continue until 2020, to encompass the entire lives of his original 1,528 gifted youths. Results of the study have been published in several volumes. Prominent amongst his many findings was the fact that highly gifted children with 140+ IQ, contrary to popular beliefs about their looks and physical attributes, were well developed physically and often athletically inclined.

In 1922 Terman called for a formal multiple-track plan made up of five *psychometrically defined groups*: gifted, bright, average, slow, and special. While the possibility for transfer between tracks must be maintained, the abilities measured by the tests were considered for the most part constant and determined by heredity. Test scores could also tell us whether a child's native ability corresponds approximately to the median for the professional class, semiprofessional pursuits, skilled workers, semiskilled workers, and unskilled labor. "When his Stanford Achievement Test was published in 1923, the evaluative fate of school children for the next few decades was sealed" (Ballantyne, 2002).

Ellwood P. Cubberley, Education Chair at Stanford, a prominent advocate for professional school administrators, collaborated with Terman on many fronts. Terman himself having served as school teacher and school principal was able to influence school administration to adopt segregated curricula as the most efficient way of educating school children, hoping to eventually build a cluster of law-abiding, industrious men and women while by proxy ridding the society of potential criminals, prostitutes, and delinquent citizens all in the cost-efficient and scientific manner of aptitude testing.

MERITOCRATIC NORMS AND STATUS QUO

The field of applied psychology, like other disciplines that deal with human cognition, has a rupture in its approaches to theory. There is the formal, mechanistic, and positivistic approach and the postformal relativistic, constructivist, and critical approach. In the former, knowledge is objective and universal, determined by technical rationality, based on "science" and devoid of contextual or sociocultural variances. The assessment and evaluation of this formal body of knowledge is also inscribed with reductionist prescriptions. Formal knowledge is thus a finished product, absolute, finite, monological, and, I might add, reactionary. It possesses the ability to morph into new forms when debunked or discredited, for example, eugenics became genetics. Lastly, formal approach to theory is laced with power politics, mainstream ideology, and a

hegemonic agenda. Eugenics is a good example of the formal approach to human intelligence based on heredity.

Postformal thought on the contrary features comprehension of the relativistic nature of knowledge, the acceptance of contradictions, and the integration of contradictions into existing canons, its methods and assumptions can be analyzed critically, questioned, and reexamined ad infinitum. Knowledge is ephemeral and subject to anachronism. Postformal approach comprises evolving and dynamic constructions that take into account contextual subjectivity, individuation, and marginal or subjugated stances. In the postformal viewpoint was Terman's view of intelligence as a gift or natural endowment valid? Is his definition of intelligence consistent or questionable? Terman, in line with most mental testers and advocates of eugenics, saw human intelligence as a hereditary possession handed down from parents to offspring via the genome. This position to some degree asserts defeatism around the fates of the least endowed. If intelligence is a genetic transfer absent any individual effort or cultivation then it follows that schooling, indeed education, could serve no ameliorative purpose or hope to raise human intelligence levels; in sum, education is impotent vis-à-vis heredity.

This viewpoint incited disapproval from Walter Lippmann, who claimed that to isolate intelligence unalloyed by training or knowledge, and to predict the sum total of what a child is capable of learning after an hour or so of IQ testing ensconced in the name of science was a contemptible claim. William C. Bagley opined that IQ testing was undemocratic because of the fatalistic inferences and deterministic nature of the tracking that follow its findings. Alfred Binet, whose 1905 intelligence scale is at the origin of the IQ testing movement, denounced the American use and customization of his scale and the link of intelligence solely to heredity, tagging it as "brutal pessimism and deplorable verdicts."

In the name of science, Terman's colleague Goddard asserted in his day that he could determine the mental ability of individuals by a cursory examination of their physiognomies, which is right up there with Gall's phrenology. He put this pseudo-scientific ability to "infamous" use at Ellis Island, New York.

Despite staunch opposition to mental testing, its opponents were quickly labeled conservatives, unscientific, and emotional liberals. The argument of administrative efficiency with its ease of sorting and tracking large numbers of students by "legitimate" means in this progressive era in education won over the school system and governing policies. They also appealed to the fundamental American ideal of meritocracy, where rewards are based on individual intelligence plus effort.

Is Terman's view of intelligence as a hereditary gift valid? In the light of critical and constructivist discourses, Terman was off by a mile. Intelligence is not an innate possession, whose appropriation and development is absent other critical factors such as social milieu and cultural capital, environmental and artifactual influences. While one cannot argue against the existence of special-needs or at-risk students, grouping them along racial and social economic lines and assigning them a life adjustment or vocational curriculum is megalomaniac. This usurpation of power and exercise of social control is a vitiation of the democratic order.

REFERENCES

- Ballantyne, P. F. (2002). *Psychology, Society, and Ability Testing (1859–2002): Transformative Alternatives to Mental Darwinism and Interactionism*. Retrieved August 4, 2006, from <http://www.comnet.ca/~pbllan/Index.html>.
- Cross, T. L. (2003). Examining Priorities in Gifted Education: Leaving No Gifted Child Behind: Breaking Our Educational System of Privilege. *Roeper Review*, Spring, 101.

- Judge, L. (2002). *Eugenics* (Semester Research Project) - ENGL 328.004/HIST 1302.106. Retrieved March 24, 2005, from <http://www.accd.edu/sac/honors/main/papers02/Judge.htm>.
- Owen, D. (1985). Inventing the SAT. *Alicia Paterson Foundation Reporter*, 8, Index 1.
- Ravitch, D. (2001). *Left Back a Century of Battles over School Reform*. New York: Touchstone.
- Seagoe, M. V. (1976). *Terman and the Gifted*. Los Altos, CA: Kaufmann.
- Shurkin, J. N. (1992). *Terman's Kids: The Groundbreaking Study of How the Gifted Grow Up*. Boston: Little, Brown and Company.

CHAPTER 32

Edward L. Thorndike

RAYMOND A. HORN JR.

Currently, education is dominated by a standards and accountability movement. A full understanding of the nature and consequences of this standards and accountability movement requires an exploration of the movement's origins. A central figure in the origins of this movement is the comparative psychologist Edward L. Thorndike. Thorndike's ideas so dominated the early years of the field of educational psychology that educational historians recognize him as one of the significant individuals who transformed American education in the early twentieth century. Thorndike's work in educational psychology is still a formidable presence in contemporary education. His influence on contemporary education will be explored through a discussion of his work in psychology and the application of that work in education.

THORNDIKE AND PSYCHOLOGY

While pursuing his bachelor's degree at Wesleyan University, Thorndike became acquainted with the work of William James, an acquaintance that would lead Thorndike into the field of psychology. After graduating from Wesleyan in 1895, Thorndike continued his studies at Harvard University where he studied under James and began his animal studies, which would lead to the discovery of behavioral principles that formed the foundation of his forty-year career in psychology and education. Thorndike graduated from Harvard in 1897 and completed his PhD at Columbia University in 1898. After working one year as an instructor at the Women's College of Western Reserve University, he began his forty-year tenure at Teachers College, Columbia University.

Thorndike's early studies focused on learning in animals with chicks and cats. His now-famous cat experiments uncovered principles about learning that became part of the original theoretical foundation for behavioral psychology and, specifically, operant conditioning. In his cat experiments, Thorndike put a hungry cat inside a locked puzzle box with food outside the box. As a cat randomly struggled to get out of the box, it would at some point accidentally release the lock and thus acquire the food, which would reinforce the cat's successful behavior. After successive occurrences of this kind, the cat learned how to manipulate the lock and escape from

the box at will. From experiments like these that involved trial-and-error learning, Thorndike formulated the Law of Effect and the Law of Exercise.

The Law of Effect simply states that when an animal's behavior is followed by a rewarding experience, the probability that the animal will repeat the behavior when faced with the same context will increase. In this realization, Thorndike theorized that there was a connection between a stimulus and a response in that when an animal acted within its environment the response from the environment would affect what the animal learned. Thorndike followed the Law of Effect with the Law of Exercise, which stated that repetition strengthens the connection between a stimulus and a response. These connections, which Thorndike characterized as connectionism, between an animal's behavior, the environmental response, and the effects of that response on the animal would be developed to a more complex and sophisticated degree by B. F. Skinner in his development of operant conditioning. In 1911, Thorndike published his findings in his seminal work *Animal Intelligence*. Through the work of Thorndike and other behavioral psychologists, the field of behavioral psychology would influence all aspects of the field of education.

Through his use of scientific experimentation and statistical analysis, Thorndike also contributed to the development of empirical measurement in psychology and education. In the early 1900s, Thorndike and his colleagues began to develop objective measurement instruments that could be applied to educational contexts, especially in the measurement of human intelligence. For instance, in 1904, Thorndike published *An Introduction to the Theory of Mental and Social Measurements*. Through efforts such as this, Thorndike was able to promote the quantitative measurement of educational phenomenon and linked the field of statistics to the field of education (Lagemann, 2000, p. 65). Thorndike's use of statistical analysis and large-scale quantitative testing was especially evident in his contribution to the development of the understanding of intelligence as a multifaceted entity rather than a single, general intelligence as theorized by Charles Spearman. Thorndike theorized that there were three categories of intelligence, abstract, mechanical, and social, rather than the single "g" that Spearman proposed. One of his significant publications in the area of intelligence was *The Measurement of Intelligence* in 1927.

THORNDIKE AND EDUCATION

Thorndike's application of his psychological principles and methods in the field of education is still a powerful influence on the field today. Thorndike applied his theory to education in publications such as his 1901 *Notes on Child Study*, the 1912 *Education: A First Book*, his three-volume *Educational Psychology* that was published in 1913, and later works such as *The Teacher's Word Book* in 1921 and *The Fundamentals of Learning* in 1932. Today in the field of educational psychology, Thorndike's influence on education through behavioral psychology, standardized testing, and the statistical analysis of educational data is evident in the behavioral and analytical techniques that are available for educators to employ in their teaching and learning, classroom management, motivation, and assessment practices. The knowledge, skills, and dispositions of many school administrators also reflect Thorndike's behavioral and quantitative ideas and perspectives. In fact, in 1913 Thorndike and George D. Strayer published one of the first books for school administrators, *Educational Administration: Quantitative Studies*. However, Thorndike's influence also extends to curriculum, the acquisition of knowledge, and the role of educators.

Thorndike's Influence on Curriculum

In contemporary education, organization of curriculum is predominately disciplinary, not interdisciplinary, in nature. Curriculum that is organized around disciplines (i.e., math, science, social studies, language arts, fine arts) is one in which students study each discipline as a separate body

of knowledge with little or no connection to another discipline. In other words, in a math class students only focus on math knowledge and skills, and they are not expected to study other disciplines such as language arts or social studies in the math class. An interdisciplinary curriculum is one in which the different disciplines are combined to foster an authentic real-life encounter with the knowledge from all of the disciplines included in the interdisciplinary curriculum. An example would be a project that would require students to use math, social studies, science, and language arts knowledge and skills in a setting that would allow the interconnected knowledge to unfold in a natural manner similar to how it would unfold in real life. Curriculum that is organized in a disciplinary manner reduces knowledge from its naturally occurring interconnected whole to discrete parts that are disconnected from how the knowledge actually exists in real-world contexts.

In the early 1900s, the idea of disciplinary curriculum became entrenched in education through the efforts of individuals such as Frederick Winslow Taylor, who promoted the scientific management of education, John Franklin Bobbitt, who was a major contributor to the social efficiency movement, and Edward L. Thorndike, who was an advocate of differentiated curriculum. Thorndike argued for the differentiation of curriculum, especially in the secondary schools. A differentiated curriculum was organized in such a way that it would meet the anticipated future vocational needs of the students. The educational historian Herbert Kliebard (1995) provides a detailed discussion on this period in curriculum development, especially Thorndike's promotion of a differentiated curriculum. Concerning Thorndike's position, Kliebard writes,

He [Thorndike] went on to estimate that not more than a third of the secondary student population should study algebra and geometry since, in the first place, they were not suited for those subjects and, in the second, they could occupy their time much more efficiently by studying those subjects that would fit them more directly for what their lives had in store. (p. 94)

Those individuals who agreed with this position on curriculum maintained that an integral way to determine who studies what would be through the results gained from extensive intelligence testing. In this way, once it was determined which students would study a different level of knowledge in a discipline (e.g., basic math versus algebra and other higher-order forms of math), psychological principles such as Thorndike's connectionism (i.e., the use of stimulus-response sequences) could be applied to the step-by-step organization of the curriculum and instructional strategies.

Kliebard (1995) and Cremin (1964), another scholar who studied this time period, both situate Thorndike within the Progressive Movement in education. However, both indicate that Thorndike's social philosophy, like those who promoted scientific management and social efficiency, was conservative. Unlike liberal progressives such as John Dewey, Thorndike's conservative views aligned with the conservative position that education should be tailored for each student in that some would pursue intellectual knowledge and skill, while others would pursue the knowledge and skill necessary for their intended occupation. Thomas S. Popkewitz (1991) explains that differentiated curriculum and vocationalism actually promoted class differences between the wealthy and the poor. Popkewitz proposes that the field of educational psychology as envisioned by individuals like Thorndike became a central dynamic in the production of power relations through education in the twentieth century (p. 102). Through this organization of education, the power arrangements within American society were reproduced, thus continuing the dominance of certain social classes over others.

In relation to the reproduction of one class's power over another, differentiated curriculum, as envisioned by Thorndike, decontextualized the knowledge that students were to acquire. For instance, this means that the learning of math, science, or any other discipline was done within a

tightly controlled context that was devoid of any moral, social, economic, or political factors and conditions that mediated and informed the knowledge in real life. A decontextualized curriculum places the emphasis for a student's educational needs, knowledge, and achievement solely on the individual, thus denying all of the other factors that contribute to the student's social status, intelligence testing results, and educational achievement.

Thorndike's Influence on the Acquisition of Knowledge

How knowledge is acquired affects the nature of knowledge. For instance, if what is considered true knowledge can be acquired only through one view on knowledge and the methods of its acquisition, then all other knowledge about a phenomenon acquired through other methods of inquiry is considered less valuable knowledge, or even false knowledge. Currently in education, there is a sharp divide between those who view quantitative inquiry and qualitative inquiry as exclusive methods of knowledge acquisition. A recent movement towards a mixed methodology, or the use of multiple inquiry methods (i.e., both quantitative and qualitative in all of their diverse forms) is attempting to bridge this divide in order to gain a more holistic and realistic understanding of educational phenomena. Until the last decade or two, quantitative methods of inquiry dominated education's attempt to develop effective curriculum, instruction, and assessment. Despite the ascendance of qualitative methodologies in the late 1980s and 1990s, with the No Child Left Behind Act of 2001 (NCLB) quantitative methods are regaining their former position of dominance. In essence, the reductionist and empirical research that characterizes quantitative inquiry is representative of the formal philosophy of inquiry that only accepts empirical knowledge as valid knowledge. In contrast, postformal methods of inquiry attempt to capture the full and often hidden contexts of an educational phenomenon through their use of diverse and multiple forms of inquiry. Postformal methods value all forms of knowledge as valid in relation to their contribution to the holistic understanding of a phenomenon.

The work of Thorndike was instrumental in ensuring the dominance of quantitative inquiry. Through his early preeminence in educational psychology, Thorndike's precise scientific experimental processes, which relied upon statistical measurement, became the accepted academic process for knowledge acquisition. As the father of the measurement movement (Lagemann, 2000), Thorndike's influence has been greatly seen in the consistent use of standardized tests to determine student ability, achievement, and position in education. Large-scale assessment of students continues to be used not only as indicators of student success in all levels of education but also as indicators of the effectiveness of teachers and school administrators. The empirical assessments that Thorndike helped to initiate and promote have proven very effective in the ranking and sorting of students within educational contexts, in the construction of curriculum and assessment, and in the management of schools.

Many individuals have contested the equity of these assessments in making decisions about students, curriculum and instruction, and schools. One of their arguments is that despite their functional effectiveness, standardized assessments do not take into account all of the factors that determine student success, effective curriculum and instruction, and the ability of schools to meet the diverse needs of their students. As previously mentioned, standardized assessments decontextualize the act of assessment. What this means is that when students are assessed through SAT, GRE, MAT, or state standardized tests, they are assessed in a narrowly defined representation of the tested knowledge. Through the statistical procedures developed by individuals such as Thorndike, attempts are made to statistically control for other variables such as socioeconomic status, test bias, test anxiety, and a plethora of other variables that do affect a student's performance. This debate over decontextualized assessments versus holistic assessments that seek out the additional contexts that affect student performance has been greatly renewed with the implementation of NCLB.

With the advent of NCLB, the kind of large-scale empirical measurement and analysis originally promoted by Thorndike has become the exclusive definition of what constitutes scientific research by the U.S. government (National Research Council, 2002). The U.S. government, to ensure the dominance of this view, has constructed a new educational research infrastructure. Through organizations such as the Institute for Education Sciences and the What Works Clearinghouse, large-scale quantitative research in the form of experimental randomized trials has become the accepted process that is used to guide decisions about educational practice and the federal funding of educational research. Interestingly, the antecedents of this resurgence of the exclusive use of empirical research include the behavior and measurement work of Thorndike that occurred in the early 1900s.

Thorndike's Influence on the Role of Educators

A significant influence on education of Thorndike's work relates to the professional roles of educators. One immediate outcome of Thorndike's use of empirical scientific procedures is the ascendancy in importance of the expert. Since the employment of this type of research involves strenuous study, skill development, and time, only a few experts can generate this type of theory. Therefore, these experts have generated educational theory involving curriculum, instruction, assessment, and school management. Of course, teachers and school administrators rely on their own experiential knowledge, knowledge of the local context, and intuition to generate their own theory that guides their practice. However, in an empirical environment, this very different type of professional research and knowledge is not considered valid knowledge.

In addition, just as Thorndike's differentiated curriculum is the norm, so is a related organizational strategy called differentiated staffing. Differentiated staffing involves the development of an organizational hierarchy in which each individual performs specifically defined tasks within a well-defined role. School administrators administrate, teachers teach, and students learn. Traditionally, as has been the case, this is only one way to organize and utilize human resources in education. However, due in a large part to Thorndike's work, differentiated staffing is the entrenched norm. One outcome of this expert-driven differentiated structure is the deskilling of teachers. Deskilling refers to the narrow roles that teachers are to perform in this type of system. When deskilled, a teacher becomes a technician whose responsibility is to deliver the prescribed curriculum in a prescribed instructional manner. This type of role is often reinforced through scripted lessons and teacher-proof materials that restrict the autonomy of the teacher in adapting curriculum and instruction to better meet the needs of the students.

Another outcome deals with the issue of authority. In educational systems that are organized in this manner, different degrees of authority are allowed for each person's position in the hierarchy. Generally, the experts have the greatest authority in determining what is considered to be best practice, with the school administrators having the authority to mandate the proper delivery of the assumed best practice by the teachers. In turn, teachers are authorized only to make sure that the assumed best practice is effectively delivered. Those with the least authority are the students, whose function is to receive the mandated curriculum and comply with the mandated instruction. In essence, this is a system of control with the purpose of the differentiated delegation of authority to solely ensure compliance.

CONCLUSION

In conclusion, Thorndike's work, which began in the late 1800s with the scientific experimentation with chicks and cats, has led to a science of pedagogy that still influences education in the beginning of the twenty-first century. According to Lagemann (2000), "Thorndike was pivotal in grounding educational psychology in a narrowly behaviorist conception of learning that involved

little more than stimuli, responses, and the connections between them” (p. 235). Thorndike’s work has freed educational theory and practice from many questionable assumptions, and continues to influence all aspects of education. In her book, Ellen Lagemann has eloquently described the debate between Thorndike’s view of education and that of John Dewey. Lagemann’s conclusion is that Thorndike won that debate and because of his victory, education is very different than it would be if Dewey had won.

REFERENCES

- Cremin, L. A. (1964). *The Transformation of the School: Progressivism in American Education 1876–1957*. New York: Vintage Books.
- Kliebard, H. M. (1995). *The Struggle for the American Curriculum: 1893–1958* (2nd ed.). New York: Routledge.
- Lagemann, E. C. (2000). *An Elusive Science: The Troubling History of Education Research*. Chicago: The University of Chicago Press.
- National Research Council, Committee on Scientific Principles in Education Research. (2002). *Scientific Research in Education* (R. J. Shavelson and L. Towne, Eds.). Washington, DC: National Academy Press.
- Popkewitz, T. S. (1991). *A Political Sociology of Educational Reform*. New York: Teachers College Press.

CHAPTER 33

Rudolph von Laban

ADRIENNE SANSOM

Many of us have marveled at the way very young children begin to find their footing as they totter to take their first steps, but have you ever given thought to the intricacies involved in that process? Have you ever given thought about the way we move and perform our daily tasks? Have you ever given thought about the way we describe human movement? If you have been involved in dance education, human development, or in some other aspects of physical education or physical therapy, there would, no doubt, be times when you have used certain terminology to instruct, or used specific vocabulary to describe the concept of movement you are observing or wish to explore. But have you ever wondered where that language or terminology came from and why certain descriptors are used to describe movement?

For the purpose of this chapter I am concerned, in particular, with the terminology used to describe human movement especially as it is applied in dance education. This concern or interest arises because, from the perspective of dance education within a Western or Eurocentric paradigm, one man developed much of the discourse we use in dance education today. This man was Rudolph von Laban.

WHO IS RUDOLPH VON LABAN?

Rudolph von Laban (1879–1958), an Austrian, was born in Czechoslovakia. He was an artist, dancer, choreographer, and movement theorist. He has also been described as a visionary, and there is no question that he was certainly a great and creative thinker. To this day, he is well known for his contributions to the field of dance, especially dance education and for the development of movement/dance notation (Labanotation), which is a system of notating movement that can be used for the purpose of recording and, thus, replicating historical and choreographed dances. In a sense, it could be said that Laban brought a form of literacy to the art of dance and, consequently, helped elevate the status of dance as an art form during his time.

Laban (1988) developed his interest in the study of human movement in Paris when there was the emergence of a new form of dance, which was called modern dance in most English-speaking countries but was referred to as “free dance” or “la danse libre” in France for reasons that will become apparent. At a time when there was a rising interest in machines and technology during

the development of the industrial age, artists such as Laban found that urbanization increasingly separated the artist and, thus, society and people, from life. Laban, like many other artists during that time, wanted to reconnect to nature so as to counterbalance the fragmentation and separation that was occurring between being governed by machines and being more fully human and in touch with nature. This was part of a counterattack against the urbanization of society that was seen to be separating the artist from life. There was a desperate need for artists to reconnect to nature and, therefore, being human. For this reason Laban focused on the human body as a counterdiscourse to the industrialization that occurred in the eighteenth and nineteenth centuries.

There was very much a move during this time toward seeking an inner awareness of life and self, through tapping into one's emotions or feelings and, thus, seeing the world in a more spiritual and connected way as opposed to just being aware of the outside world without connecting to that world. During this time of seeking a new way to live in the world, dance was often exhibited as a commune with nature, where the objective was to feel the environment or space, not only through a commitment to engaging fully from a physical point of view, but also to enveloping the emotional dedication such a commitment would bring. Laban wanted to focus on the movement of the body as a means of discovering and exploring the capabilities of the human body for the purposes of promoting creativity, imagination, insight, and knowledge.

It was his belief that the body reflected the world one lived in, such as the formation of muscles and patterns of the body, which very much influenced dance at that time. It was these body patterns that, from Laban's perspective, required systematic study so as to offer another way of being in this world, physically, mentally, and emotionally. This was the visionary nature of Laban's theory and, thus, fuelled his desire to create a system that could be utilized in education and life in general for the purpose of "turning the tide" of human decay or despiritualization. Ultimately, Laban's development of the study of movement was a way of connecting the body, mind, and spirit, individually and collectively, so that what affected the self also affected society.

In the process of developing his study of human movement in the early 1900s, Laban worked closely with, among others, Mary Wigman (one of Germany's early modern dancers and a student of Laban) to explore his ideas of weight, space, and time. Laban's approach to observing, analyzing, and describing human movement was very exacting and it has been noted that Wigman often found Laban's precise and systematic approach to observing and eliciting movement somewhat restrictive. As a dancer, Wigman wanted to create or apply more emotion to the movement theories of Laban, so as to gain a far more sensuous approach to what was otherwise outwardly devoid of expression.

Despite this seemingly clinical approach to the observation and analysis of human movement, Laban was very much a man of passion and artistic and aesthetic sensibility. In a rare glimpse of Laban recorded on film, I had the fortunate opportunity to witness Laban playing a flute while promoting a bevy of dancers around him to gain freedom while they danced. Indeed, such words as liberation and excitement are used salubriously throughout modern educational dance texts written by Laban when describing the outcome of exploring particular movements for the purpose of promoting creativity and expressiveness using the language of dance. This promotion of "finding freedom" or flow was part of Laban's ideology of connecting with nature and, in so doing, being released from the grips of machines and technology.

From Laban's perspective, the movement of the human body was the key to this ideal, because movement acts as the conduit between the body, mind, and psyche. It was believed that without the recognition of the movement of the body and what that feels like, we would have less chance of feeling, sensing, expressing, imagining, thinking, and, thus, changing the world we live in. Our bodies, and therefore the movement of our bodies, act as a link between ourselves and the world we live in; hence, Laban's theories and practice, and therefore analysis of the movement of the human body, provided a way to explore this relationship.

LABAN'S CONTRIBUTIONS TO THE FIELD OF DANCE EDUCATION

Rudolph von Laban contributed greatly to the field of both movement and dance education. His serious and in-depth study of movement was astounding and he provided some necessary and crucial language to describe the intricate and complex movement of the body. In fact, his study was so vast and profound the language used for movement covered a very broad base of all the movements the body could perform. Because of the intricate nature of Laban's movement theories, his system of observing, describing, and recording human movement also facilitated the development of a complex form of notation, otherwise known as Labanotation, which enabled the recording and replication of human movement and, consequently, set or choreographed dances. This became part of Laban's main contribution to the field of dance and continues to be studied today. This was prime material for dancers because it opened up new ways of describing—especially for the purposes of choreographic replication—movement in such detail (before the advent of video) that dancers could literally transfer the original movements of dances onto their own bodies and recreate the dances.

What is particularly pertinent here in relation to the field of education is Laban's contribution to the place and purpose of dance education. After the Second World War, Laban moved to and lived in Great Britain, where he reconceptualized the role of dance in education. Based on his belief that children, particularly youth, would benefit from learning self-control and self-discipline, he considered that practice in the control of physical movement as well as the encouragement of creative forms of movement were necessary during the school years. These two aspects of learning about the movement of the body were both important from Laban's point of view and were considered to be part of modern educational dance. Laban believed ardently that dance, in some form, should be available to everyone and that movement formed the basis of all human endeavors using both the body and the mind.

Laban's purpose was to develop a new form of dance education in schools beyond the traditional forms of dance found in schools such as folk dance and historical or period dances. By drawing on what he could find out about the origin of traditional dance forms, as well as studying the everyday working habits of people in general, Laban worked to develop a comprehensive theory about the movement of the human body, which was noticeably lacking in comparison to the other arts, where much was written about the art form.

By its very form, movement, or dance, particularly from a historical perspective, leaves no trace beyond descriptions provided in words or in occasional etchings and photographs (which, in these other forms, become works of art beyond the art of dance) and, thus, is less permanent or visible when compared to other art forms such as painting, music, architecture, sculpture, poetry, and literature. For this reason, much of the history of dance has been lost.

While society continued to change, transformation in dance was less noticeable because there was little evidence recorded of such change. Thus, Laban set about creating a language for the "art of movement," or what was otherwise known, particularly in the United States and the United Kingdom, "modern dance." This "modern" dance was a newer, "freer" form of dance, which reflected the time as people began to release themselves from the restrictions of excessive clothing and industrialized working habits.

During this time there was also an emphasis on a distinct disconnect between the body and the mind, where the body was reserved for leisurely pursuits devoid of serious contemplation, and the mind was occupied in the far more important realm of work and study. Consequently, according to Laban, children in schools knew little of the richness and value that a life imbued by movement could bring. This is where Laban's belief in counterbalancing the industrialization of society needed to be activated in education based on a sound foundation of understanding the movement of the human body. From this arose the language used today in dance education, which was based

on the effort elements that underpin all forms of human movement such as weight, space, time, and flow. It is this knowledge of human effort that formed the basis of Laban's theories of the "art of movement." With an emphasis on all the movement the human body could do, the notion of dance, or the "art of movement" changed from being seen as just a set of technically executed steps to a flow of movement arising from all parts of the body. Hence, we have the study of movement and its elements, or what is more commonly known as the elements of movement.

This effectively provided education with an approach to dance that could be systematically studied on the basis of what was considered the "universal" principles of human movement. This new approach to dance served several purposes. Firstly, it was seen as a way to capitalize on the children's "natural" propensity to move while providing them with a form of exercise and increasing their sense of expression. The preservation of spontaneity and creativity were important considerations for Laban as was the fostering of artistic expression. Ultimately, from Laban's perspective, this would lead to an awareness of a broader outlook of the way we, as humans, live our lives.

While also considering the observation of movement deficiencies and, thus, using these observations to improve upon both the weaknesses as well as the strengths exhibited by students, Laban believed that these new dance theories would lead to an integration of the intellect with creativity, both of which he saw as equally important in education.

Thus, Laban's theories of movement brought about a new way to view dance in education and provided a sound basis and language that could be explored in all forms of dance. Dancers and dance educators alike embraced his work, but his vision or theories of human movement extended beyond dance as they expressed the way humans operated both physically and mentally in everyday life. For this reason, Laban's contribution to the field of the study of human movement is used by a diverse group of people such as athletes, actors, sociologists, physiotherapists, educators, and psychologists, as well as dancers. One of the early disciples of Laban was Irmgard Bartenieff, who had learned dance with Laban, and then went on to develop what is now known as Bartenieff Fundamentals. Laban's theories also contributed to the work of other dance educators such as Lisa Ullman, Joan Russell, Joyce Boorman, Valerie Preston-Dunlop, and Anne Hutchinson-Guest, to name just a few. Ultimately, all of those involved in dance education are influenced in some way by the work of Rudolf von Laban.

In general terms, the legacy Laban left behind after his death in 1958 has continued to be developed by students and devotees of Laban movement theories, and what followed was the creation of a codified language for movement, which became known as Laban Movement Analysis. This has commonly been referred to as LMA, which is the acronym I will use throughout the rest of this chapter. The terminology and, therefore, ideology behind LMA as it is practiced today encompasses four main categories: Body, Effort, Shape, and Space (BESS). Each of what I will now refer to as the BESS components can be studied in further depth, and it is these BESS components that form the basis of the terminology used in dance education.

Thus, LMA has become an acceptable codified language for movement and a valuable tool for observing and understanding "body language" or the information or stories the movement of the body conveys. When used by those trained as movement analysts, LMA can be used to describe and interpret all forms of human movement in any area where we use or take care of the human body.

WHAT IS LMA? THE THEORY AND PRACTICE OF LABAN MOVEMENT ANALYSIS

Briefly, these four main categories of BESS deal with the spectrum of movement the body can perform as observed and codified by Laban. For the purposes of describing something of what

the codified language or terminology refers to related to dance, the following is an explanation of each of the categories under the acronym BESS

- The Body aspect of BESS deals with principles such as the initiation of movement from specific body parts, the connection of different body parts to each other, and the sequencing of movement between parts of the body.
- The Effort dimension is concerned with movement qualities and dynamics, and is subdivided into Weight, Space, Time, and Flow factors.
- Shape is about the way the body interacts with its environment. There are three Modes of Shape Change: Shapeflow (growing and shrinking, folding and unfolding, etc.), Directional (Spokelike and Arclike), or Shaping (molding, carving, and adapting).
- Space involves the study of moving in connection with the environment and is based on spatial patterns, pathways, and lines of spatial tension. (Sandlos, 1999)

Perhaps, what one can see here is that, even by the choice of words used to describe Laban's work, there is a form of rationalization or clinical analysis applied to the concept of movement, which was Laban's intention because his movement theories had a broader application than just covering the rudiments of dance. He also wanted to address the basics of everyday working and sports movements so that his theories had a wider range of application. Of course, for dancers, whose work often arises from a passion or evocation of wanting to express some ideas/thoughts and feelings in movement, a clinical approach can appear to be somewhat devoid of that inner passion. Having said this, however, we can also look at classical ballet, and some other dance forms that have since been codified as a technique, such as the Graham or Cunningham technique, which, when separated out from the actual creation of a dancework, acts as a way to define and perform specified movements that can be devoid of—or separate from—the actual reason for creating the dance in the first place.

The techniques, in other words, become the tools we use for dance, but sometimes in a way that can hinder that actual passion, or desire, of dancing as well as accessibility to dance for everyone when set within a Western paradigm and discourse. Certainly, given the time Laban developed his theories, it is conceivable that the language he used had particular nuances that reflected that time. Much of Laban's work has been revised in later years, often because the original language used was viewed as being somewhat awkward and seen to be obscuring the original intent or meaning of Laban's work.

It is this issue that expresses something of the dilemma I have with the "language" used in dance education drawn from Laban's comprehensive observation and analysis of human movement and subsequently developed into LMA. This is the reason why I want to attempt to offer another perspective or reconceptualization of a way to use or read Laban's theory in dance education today.

If you flip through a "modern educational dance" text, you will encounter words such as *angle*, *bound flow*, *contracting*, *dabbing*, *direct*, *dragging*, *effort*, *expanding*, *falling*, *firm*, *flexible*, *flicking*, *floating*, *fluttering*, *free flow*, *gathering*, *gesture*, *gliding*, *grasping*, *growing*, *hovering*, *jerking*, *light*, *locomotion*, *motor sensations*, *patting*, *penetrating*, *piercing*, *plucking*, *poking*, *pressing*, *punching*, *rising*, *shooting*, *shoving*, *shrinking*, *slashing*, *sphere*, *streaming*, *sudden*, *sustained*, *traversing*, *throwing*, *thrusting*, *vibrating*, *whipping*, *wringing*, and *zone*. Although these "words" convey a comprehensive and diverse list of descriptive language that can be used to describe the almost infinite possibilities of movement of the human body, they are also open to an incredibly wide range of interpretations, seem to be somewhat abstract, particularly when disconnected to the contextual nature of the situation, and, from my perspective, many terms are strongly masculine in nature.

As a dance educator myself, and knowing full well how useful this language is, I am obviously not advocating for the eradication of such mindfully considered language used to describe the depth and breadth of human movement, but what I am questioning is the transmission of such language into any given context where dance is being taught without the consideration of “changing,” adapting, or adding to the language in a way that connects to the “audience” or specific learners so as to be seen as a viable and meaningful way of both learning and understanding dance.

Often when language, or a particular discourse, is presented within the parameters of “academia” or education, and already given the seal of acceptability by the “powers that be,” namely “white males,” there appears to be little attempt made to alter that language. It is as if the language is “set in stone” and there is a fear that if certain language is changed or adapted (or even added to) the original intention of the theorist will be diluted, or misunderstood. Now, don’t get me wrong! I am not calling for a complete overhaul of the incredibly rich language Laban has (and others have) already established for dance education. What I am suggesting is that the established and, therefore, accepted language should not be immune to, or eschew the introduction of, other terminology or ways of interpreting movement, especially when we consider the limited geographical and cultural climes the predominant language used in dance education originated from. This is so despite claims that the origins of dance, and therefore, language for dance, were drawn from all corners of the globe. I have noted that Laban discounted the dance movements of “native” people, or what he termed as primitive forms of communal dance because he deemed that these forms did not provide a sufficient source of inspiration. It is interesting to note that when “primitive” forms of dance are mentioned; they are used to compare to the initial or fundamental movements of infants and toddlers.

A POSTFORMAL CRITIQUE: THE IMPETUS FOR SEEKING A RECONCEPTUALIZATION OF THE LANGUAGE OF DANCE EDUCATION

Some years ago a colleague said to me that she felt some of the language we use in dance education could do with a facelift, or, in other words, a change. She posed the question as to why, as educators, we continue to hold onto somewhat outdated/limited/abstract words (or language) for the purposes of teaching dance education? Why, she continued, could we not introduce other language to assist the students in their exploration and understanding of dance education?

On top of this question came yet another question, this time from a different source. Another colleague in the field of dance education queried a student’s remark that the language commonly used in dance education was somewhat exclusive because it generally relied upon the language drawn from a Eurocentric base and excluded other languages and, thus, concepts from countries and cultures outside Europe where dance also existed. The reply or response from this particular colleague was that dance, no matter where it took place, or of what style it was, still involved a vocabulary to describe the basic elements used, such as space, time, effort (energy/force), and body.

When I began to examine these questions from a postformal perspective I realized that it was important to remember that postformal thinking draws from a wide range of theories, which involves critical theory and feminist theory, as well as critical multiculturalism, cultural studies, together with postmodernist epistemologies, indigenous knowledges, and contextual or situated cognition (Kincheloe and Steinberg, 1993). This means that we can no longer apply the theories of one predominant culture, or way of thinking, without considering other ways of thinking if we want to create a holistic educational psychology that is ethically and culturally grounded so as to form the basis of a democratic educational psychology. This necessitates that I raise the

argument that we need to examine the language of LMA more carefully and consider alternative discourses/approaches to dance education.

While not actually interrogating either of these two points of view, because there is more depth to them than I have actually outlined here, what intrigued me was the fact that the language we do use for dance education tends to have remained unchanged for many years. The list of descriptive words I provided previously are clearly drawn from Laban's theories of movement, and, as such, have become somewhat universal in their usage no matter what the context, such as the culture, language, age, and experience.

I also began to wonder if the language used could actually be detrimental to the acceptance of dance, particularly given the fact that dance aficionados would like to see dance as something all people could do in education. This concern relates not only to the teachers (aka adults) but also to the students/children, to whom this language would be imparted as a way to promote dance in schools. This language also filters down to early childhood environments, where, I know from experience, the language or vocabulary used is, or at least should be, gradually sidelined in favor of more meaningful terms and approaches to engage the young child's interest in dance.

What I started to see in this analysis was the fixation to hold onto certain language that was once codified by a theorist without considering that other language, vocabulary, or points of view about what constitutes dance could be used. It was almost as if there was a fear, or even a guilt, that if one did not heed what a now-well-known theorist espoused (and so thoughtfully too, in that time considering little other form of codifying dance was done apart from ballet), it was seen as sacrilegious to dare to alter or add to the already established and well-thought-out vocabulary, or theory.

Now, I am obviously not the first person to have considered this question of the appropriateness of language, because evidence is already offered in the initial openings to this query. I also know that there are other dance texts that expand upon the language used in dance, while still acknowledging the origins of the dance vocabulary used in most educational settings. For me, nevertheless, this has larger ramifications than the actual language being used, although this is obviously important because it not only is the crux of the matter being explored here, but it also speaks of privileging some ways or approaches (languages) over others, as if the other ways of speaking about dance (the child's, different cultures, minorities, or the "other") were not seen as worthy or valuable in a predominantly Westernized/Eurocentric approach to education.

On the one hand, I value having a language for the area I teach; without the language there would be a somewhat limited approach to teaching this subject. Also, without the language, there would be little to help students with learning some of the basic and essential, or necessary, components of dance education. A codified language, with some sound basis, is vital, particularly in an area where it is seen that you do not actually have to think to move the body. The language or literacy of dance provides at least some evidence of the fact that dance, too, requires some thought and learning, beyond just using the body or copying movements that someone else demonstrates.

From a postmodern as well as postformal perspective, it is important, nevertheless, to remember that these ways of thinking encourage the unearthing or uncovering of what is or what has been taken for granted. These states of thinking promote continual growth and movement or change, and, for this reason, applying a static approach to understanding the languages or legacies we have inherited would exclude the development of new ways of thinking or seeing the world, which was the very impetus that inspired Laban to develop his theories. I associate this perspective or way of thinking with the notion of fluidity and flexibility (interestingly enough, two words Laban uses in his analysis of movement), where nothing is set but is forever changing, as it is being created by those involved in the process of learning and teaching. When one is involved in their learning, this brings in different approaches drawn from diverse backgrounds where new and

more meaningful knowledge or understanding can emerge and add to the already rich body of knowledge that has been established.

Because the educator's/teacher's/instructor's approach to teaching will effectively influence what will be taught, and, consequently, learned, as well as how this learning will take place, it would be important to address the ways in which dance can or may be taught in educational settings by critically examining the language used in dance education. By doing this, we open up the possibilities of multiple approaches and thwart the perpetuation of the status quo through one approach to learning in dance. This links with a critical and postmodern approach to knowing where there is the need to look beyond a Westernized, Eurocentric perspective as the only epistemology to draw upon.

The language mainly used for the educational elements of dance carry one predominant view of "knowing" as opposed to exploring other languages and art forms, which can provide multidimensional understandings. We need to be aware of how the use of one predominant language for dance education can hinder as well as enhance what we come to know as dance and look at whether this raises issues of universalizing or generalizing, and provides, at best, somewhat abstract concepts/approaches to teaching dance. From a pluralistic and multicultural perspective, we need to promote the interrelationship between other cultural art forms and the Eurocentric/Westernized language and methodology used primarily in dance education today considering the students/children we teach and the diverse cultures they embody.

Ultimately, this leaves me with some questions that I think are worthy for all of us to consider from a postmodern and postformal perspective. Can these abstract and somewhat universalized concepts transfer across different dance styles/processes from other cultures/countries? Is this language still relevant in a multinational, multicultural society? Is it meaningful to children/students as a language for dance? Does it connect to students'/children's lives today? Is there still a place for a commonly accepted vocabulary for dance education that can be used universally and applied to any/all cultures?

CONCLUSION

In many ways Laban's theories were the antithesis of what ailed society, yet, as with many things in society, those who inherit such legacies fail to adequately apply the same visionary foresight to the ongoing sustenance of such legacies. Of course, I do not want to be misunderstood here, because I truly believe that Laban's theories and contribution to education have been mammoth, and for this reason, have been given worthy consideration in many fields (although in some fields concerning the body more than in others). Nevertheless, as with any visionary, we must continue to envision the possibilities, as well as the limitations, for the generations that follow.

Ultimately, I want to continue to honor the legacy Laban left us related to his theories of movement and its application to the field of dance education, but even more so I want to see it develop and grow as our world and people change and exchange different ways of being in the world. What can be more worthy of consideration than understanding ourselves as human beings and, thus, understanding others and the world we live in? Movement, or the way the body moves, is vital to this quest, especially where, in dance, the body and the person become one in a way that provides a means of celebrating who we are as human beings. Coming to know ourselves and answering the age-old question "Who am I?" is something that one begins to discover through being in touch with what makes us tick, namely the movement of the body and its interrelation with the mind and spirit. It is through the body that we experience the sensations of life, the pulse of our heartbeat, the weight and balance of bodily matter, the force of gravity, the tension and relaxation of everyday events, and the energy of life itself.

This was Laban's legacy, and something that we need to keep alive so as to never forget the treasure he left us with. This is perhaps best expressed in his own words: "Motion is an essential of existence. The stars wandering across the sky, are born and die. Everywhere is change. This ceaseless motion throughout measureless space and endless time has its parallel in the smaller motion of shorter duration, that occurs on our earth. This motion becomes movement in living beings" (Lewitzky, 1989). This belief in the power of movement is important to me and is something we all possess as breathing, living beings on this earth, and it is for this reason that I posit that all people, from all walks of life, from all cultures, and from all parts of the world, have their voices heard too, so as to add to the rich inheritance we have garnered from Rudolph von Laban. I cannot envision that such a forward-thinking theorist and visionary as Laban would not want his ideas expanded upon and, thus, critiqued. Nothing new comes without change, and change, which is meaningful and purposeful, comes from thoughtful and critical consideration of those things that have gone before.

REFERENCES

- Kincheloe, J., and Steinberg, S. (1993). A tentative description of post-formal thinking: The critical confrontation with cognitive theory. *Harvard Educational Review*, 63 (3), 296–320.
- Laban, R. (1988). *Modern Educational Dance* (3rd ed.). Revised by Lisa Ullmann. Plymouth, UK: Northcote Publishers Ltd.
- Lewitzky, B. (1989). Why Art? From University of California, San Diego Regent's Lecture, May 31, 1989. Retrieved May 11, 2005, from <http://www.perspicacity.com/dancesite/lewitzky/whyart.htm>.
- Sandlos, L. (1999). Laban Movement Analysis. Retrieved May 11, 2005, from <http://www.xoe.com/LisaSandlos/lma.html>. Retrieved 5/11/2005.

CHAPTER 34

Lev Vygotsky

KATE E. O'HARA

Lev Semonovich Vygotsky was born on November 5, 1896, in the small Russian town of Orsche. Within the first year of his life, his family moved to Gomel, one of the few designated provinces reserved for those of Jewish descent in tsarist Russia. Vygotsky's parents were both well educated and spoke several languages fluently. The second oldest child of eight children, Vygotsky frequently helped in the upkeep of the household and care of the younger siblings. The family was very tightly knit, and often joined together in discussions about history, literature, theater, and art. It was these family discussions that exposed Vygotsky to a wide range of interests.

His elementary education was received at home, studying independently and having a tutor for consultation. After passing an exam for the first five years of grade school, he entered into a private all boys secondary school known as a gymnasium—a secondary school that prepared students for the university. There he was a consistent student, and did equally well in all subjects. He graduated in 1913, with hopes of becoming a teacher, but unfortunately training for this profession was not an option. Teaching in public schools was a position not available for Jews in prerevolutionary Russia, and therefore his parents suggested he become a doctor because this would allow him more freedom.

Acting on the advice of his parents, Vygotsky sent an application to the Medical School of Moscow University and was accepted. After studying at the school for about a month, he realized that medicine was far from his true interest and transferred to the Law School of the same university.

And so again he began to study intensely, but like medicine, law was not pleasing to him. He was intent upon studying his true interests: literature, art, philosophy, and philosophical analyses of art. As a result, he decided in 1914, without interrupting his education at the law school, to enroll in the historical–philosophical division of Shanavsky University, a Jewish public university. The level of instruction at this university was very high, taught by leading scientists and scholars of that time; however, the degrees awarded were not accepted by the government, and graduates received no official recognition.

In December of 1917, the year of the Russian revolution, Vygotsky returned to Gomel after completing his education at both universities, and graduating from Moscow University with a degree in law. Upon returning home, Vygotsky was met by unfortunate family circumstances. His

mother was recovering from a bout with tuberculosis and his younger brother, who also contracted the disease, was in a critical condition. Within the year, Vygotsky's younger brother died, and tragically a second brother died of typhoid. Before the end of the year, his mother relapsed and once again he had to care for her. It was in 1920 that Vygotsky himself experienced the first of a number of attacks from the same illness that struck his family members—tuberculosis.

Throughout his short life, Vygotsky battled numerous times with the disease before succumbing to it on June 10, 1934, at the young age of thirty-seven. Prior to his death, Vygotsky completed 270 scientific articles, numerous lectures, and ten books based on a wide range of Marxist-based psychological and teaching theories as well as in the areas of pedagogy, art and aesthetics, and sociology. His collaboration with Alexander Luria and Alexei Leontiev produced a completely new approach to psychology that emphasized the importance of social interaction in human development. Vygotsky's work did not become known in the West until 1958, and was not published there until 1962 (Hansen-Reid, 2001).

Despite this, once recognized, Vygotsky's theories greatly influenced modern constructivist thinking. He contended that humans, unlike animals who react only to the environment, have the capacity to alter the environment for their own purposes. It is this adaptive capacity that distinguishes humans from lower forms of life. One of his central contributions to educational psychology is his emphasis on socially meaningful activity as an important influence on human consciousness. Vygotsky's "sociocultural theory" suggests that social interaction leads to continuous changes in children's thought and behavior. These thoughts and behaviors would vary between cultures and that the development depends on interaction with people and the tools that the culture provides to help form one's own view of the world. There are several ways in which a cultural tool can be passed from one individual to another. One is by imitative learning, where one person tries to imitate or copy another. Another way is by instructed learning, which involves remembering the instructions of the "teacher" and then using these instructions to self-regulate. And lastly, a cultural tool can be passed to others through collaborative learning, which involves a group of peers who work together to learn a specific skill (Gallagher, 1999).

Vygotsky also differentiated between a person's higher and lower mental functions. Lower or elementary functions are genetically inherited; they are our natural mental abilities. In contrast, our higher mental functions develop through social interaction, being socially or culturally mediated.

Our behavioral options are limited when functioning occurs at an elementary level. Without the learning that occurs as a result of social interaction, without self-awareness or the use of signs and symbols that allow us to think in more complex ways, we would remain slaves to the situation, responding directly to the environment. In contrast, higher mental functions allow us to move from impulsive behavior to instrumental action. Again, it is noted that mediation occurs through the use of tools or signs of a culture. Language and symbolism are used initially to mediate contact with the social environment, then within ourselves. When the cultural artifacts become internalized, humans acquire the capacity for higher-order thinking (Goldfarb, 2001).

This cognitive development is a process in which language is a crucial tool for determining how a child will learn how to think because advanced modes of thought are transmitted to the child by means of words. Once the child realizes that everything has a name, each new object presents the child with a problem situation, and he solves the problem by naming the object. When he lacks "the word" for the new object, he demands it from adults. The early word meanings thus acquired will be the embryos of concept formation. During the course of development, everything occurs twice. For example, in the learning of language, our first utterances with peers or adults are for the purpose of communication, but once mastered they become internalized and allow "inner speech." Vygotsky believed that thought undergoes many changes as it turns into speech (Goldfarb, 2001).

There are several core principles of development at the heart of Vygotsky's sociocultural theory. They are as follows: (a) children construct their knowledge, (b) development cannot be separated from its social context, (c) learning can lead development, and (d) language plays a central role in mental development (Gallagher, 1999).

In addition, the sociocultural theory contains another widely recognized element called the zone of proximal development (ZPD). Vygotsky believed that any pedagogy creates learning processes that lead to development and thus this sequence results in "zones of proximal development." It's the concept that a child will accomplish a task that he or she cannot do alone, with help from a more skilled person. Vygotsky also described the ZPD as the difference between the actual development level as determined by individual problem solving and the level of potential development as determined through problem solving under adult guidance or collaboration with more knowledgeable peers (Gallagher, 1999).

In order for the ZPD to be such a success, it must contain two features. The first is called subjectivity. This term describes the process in which two individuals begin a task with different understanding but then eventually arrive at a shared understanding despite original differences in thought or thought process. The second feature is scaffolding, which refers to a change in the social support over the course of a teaching session. If scaffolding is successful, a child's mastery or level of performance can change, which means that it can increase a child's performance on a particular task (Gallagher, 1999).

It should be noted that Vygotsky's ideas and theories are often compared to those of Jean Piaget, especially his cognitive–developmental theory. Opposing Vygotsky's zone of proximal development, Piaget believed that the most important source of cognition rests with children themselves as individuals. But Vygotsky argued that the social environment could catalyze the child's cognitive development. The social environment is an important factor that helps the child culturally adapt to new situations when needed. Both Vygotsky and Piaget had the common goal of finding out how children master ideas and then translate them into speech. Piaget found that children act independently in the physical world to discover what it has to offer. Vygotsky, on the other hand, wrote in *Thought and Language* that human mental activity is the result of social learning. As children master tasks they will engage in cooperative dialogues with others, which led Vygotsky to believe that acquisition of language is the most influential moment in a child's life. Piaget, however, emphasized universal cognitive change while Vygotsky's theory leads to expect a highly variable development, depending on the child's cultural experiences to the environment. Piaget's theory emphasized the natural line of development, while Vygotsky favored the cultural line (Gallagher, 1999). It was Vygotsky's idea of culturally influenced development that has been central to changing the history of educational psychology.

Indisputably, Vygotsky's ideas have left behind a world of thought and theory based on objective and scientific notions. He has opened the door to postformal thinking, with a major impact, in particular, on the field of education. The principals of his sociocultural theory remind us that we can cease our search for one "true truth." His ideas reiterate the notion that our capacity for learning, our cognitive development, is ultimately a reflective, ongoing, and never-ending process.

We can use his concept of the zone of proximal development to explore the ramifications of being at our "actual development level" when we are performing tasks without help from another person. We must ask the question, "How did we get to the point of 'actualization'?" We surely did not inherit this stage or miraculously become placed in it; we must have had to develop through our social and cultural interactions. But, these interactions need not be another person. For example, various forms of media may have helped us self-create our zone so that we are able to engage in individual problem solving. In recent times, computer technology has become a powerful cultural tool, which can be used to mediate and internalize learning. Computers and

related technologies change our learning contexts, thus creating meaningful learning activities. This developmental level is a fluid, ongoing process; the actual developmental level is forever changing. What a child can do with assistance one moment will be something that he or she will be able to accomplish independently in the next. In a pedagogical context, this theory supports the concept that when used effectively, technology can aid in the development of multiple literacies. In addition, we understand from Vygotsky that a cultural tool may be passed to another through collaborative learning. In this new context, peer instruction no longer needs a shared physical space. Learning communities may be formed over great distances via the Internet.

Vygotsky's zone of proximal development also has implications in the area of student testing and assessment, especially concerning children with learning and behavior problems. Acting on Vygotsky's ideas, one would have to question if ability and achievement tests are valid measures of a child's capacity to learn. Two children can differ substantially in the ZPDs. One child may do his or her best independently, while another may need some assistance. Therefore, the ZPD is crucial for identifying each child's readiness to benefit from instruction (Gallagher, 1999). Also, by viewing the purpose of standardized testing through Vygotsky's framework, we clearly discover the test's negative ramifications. Although standardized testing may allow for success of the "average developmental level" of the students being tested, it does not necessarily allow for the success of students whose developmental pace is different. The results of standardized tests and the pressure on them to perform well may greatly influence instruction. Low test scores can unfortunately move classroom practice away from child-centered approaches toward curriculum-driven ones. Curriculum then moves from a collaborative one, with hands-on learning, to one of a specific structure—one that is "drill driven." Classroom practice operates on the goal of bringing everybody up to the same level at the same time, regardless of social and cultural contexts. This disregard of the existence of the continued fluidity of developmental zones ultimately hinders the process of higher mental functions.

It is important to note that Vygotsky's ideas have also laid the foundation for those educational psychologists others working from the constructivist perspective. His notion of scaffolding, in which a person's mastery level changes with the assistance of another, is a concept that was later developed by Jerome Bruner and influenced Bruner's related concept of "instructional scaffolding." It is through the concept of "scaffolding" that we see Vygotsky's theory perpetuating an effective form of instruction that enables teachers to accommodate individual student needs and helps them develop into independent learners.

Scaffolding requires the teacher to provide students the opportunity to extend their current skills and knowledge. The teacher must engage students' interest and motivate students to pursue the instructional goal. Many times this type of teaching allows for interactive dialogue between students and teachers. In this way, communication becomes an instructional strategy by encouraging students to go beyond answering questions and engage in the discourse.

Currently, much of classroom teaching is dominated by a teacher lecturing and students listening. "Knowledge" is viewed as something that is to be transferred to the students. It is often decontextualized, neither socially constructed nor applied. By using Vygotsky's and Bruner's notions of instruction, teachers can help students develop new learning strategies, thus enabling students to eventually complete the task on their own. This is achieved when the teacher provides materials and "tools" to aid the student in developing beyond their current capabilities. Therefore, the teacher's role is not to simplify the content, but rather to provide unfamiliar content in a context that enables the student to move from their current level to a higher level of understanding.

Vygotsky also believed that an essential feature of learning is that it awakens a variety of internal developmental processes that are able to operate only when the child is in the action of interacting with people in his environment and in cooperation with his peers. Therefore, when it comes to language learning, the authenticity of the environment and the affinity between

its participants are essential elements to make the learner feel part of this environment. These elements are rarely predominant in conventional classrooms (Schütz, 2004).

Many times classroom-based language development strategies include vocabulary lists, rote learning, and recitation. When classroom settings deny non-English-speaking students the opportunity to interact in social settings with English-speaking peers, the possibility for those students to develop academically and socially is substantially limited. Many word meanings are determined within linguistic and cultural settings. Therefore, in order for English learners to fully understand the language they not only need to learn the words in English, but using Vygotsky's principles as a basis, they must also learn the cultural background that gives the words their English meaning. The vocabulary and terms must be learned in context.

In a broader sense, Vygotsky's ideas enable us to construct new ways of teaching and thinking about learning. With his theories in mind, educators must consider students' cultures and their subsequent effects on the ways students learn. As educators, we must examine our own cultural expectations surrounding teaching and strive to create learning environments that are optimal for presenting new information, concepts, and ideas. This means that each child brings with him knowledge as well as a conception of learning from his family, cultural background, and social context. In order for children to succeed, we must help by making associations between the learning in a school context and learning in a socially constructed cultural context.

Drawing from Vygotsky's sociocultural theory, educators must aim to construct developmentally appropriate curriculum while keeping in mind our students' social experience and level of collaboration. Effective collaboration aids in the development of learning strategies when learners are given the opportunity to work together in heterogeneous groups to discuss, analyze, and solve problems. In order to do this we must offer our students "tools" that are not solely the words and thoughts of the teacher, tools that encompass symbolic systems we use to communicate and analyze reality. We must expand beyond the language of the teacher to include signs, books, videos, photographs, musical pieces, wall displays, charts, maps, scientific equipment, and computers in order to support independent and assisted learning. The use of these cultural tools helps students develop abilities and mental habits needed to be successful in particular intellectual or creative domains. The development of abilities has a marked impact on the development of individual personalities. As students make decisions, plan, organize, express their point of view, provide solutions for problems, and interact with others, they continually develop cognitively in the social world.

Vygotsky's theory has also made an impact on the physical classroom. Traditionally rooms are designed so that the teacher is situated in the room in front of students who are seated in rows, one behind the other. From Vygotsky's perspective, a classroom would be redesigned to provide students with desks or tables to be used as a work space for peer instruction, teamwork, and teacher-facilitated small-group instruction. Like the physical environment, once again the instructional design of material would be varied in order to promote and encourage student interaction and collaboration; thus the classroom becomes a community of learning that allows for or encourages the co-construction of knowledge.

In addition, we must actively ask ourselves to determine specific ways in which Vygotsky's zone of proximal development concept can be used to improve students' learning. We must move from teaching methods that rely on recitation and direct instruction, and begin to generate procedures that are based on postformal thought, such as Vygotsky's scaffolding strategy, which supports students as they are introduced to advanced concepts, synthesize information, and adopt individual reasoning about their social and cognitive world.

And perhaps most important, we must recognize that students socially construct knowledge and concepts through experiences within their cultures and we must alter our teaching strategies

accordingly to create a connection between their cultural foundations of knowledge and their school-based experiences.

Despite the time that has elapsed since we first read Vygotsky's thoughts, his influence on the way we look at knowledge and learning are monumental. His impact in the present day is best described in the words of his daughter Gita: "Even though so many years have passed, Vygotsky's thoughts, ideas, and works not only belong to history, but they still interest people. In one of his articles, A. Leontiev wrote of Vygotsky as a man decades ahead of his time. Probably that is why that he is for us not a historic figure but a living contemporary" (Vygodskaya, 2001).

And so, almost a century later, Vygotsky continues to influence the field of educational psychology. His theories aid in our understanding of how children and adults learn, and, in our understanding of these theories, we are able to apply various strategies and tactics within educational settings. It is through his works and guidance that we can continue to socially construct knowledge, respond reflectively, think critically and thus become lifelong learners.

REFERENCES

- Gallagher, C. (1999, May). Lev Semonovich Vygotsky. Psychology Department, Muskingum College. Retrieved March 2, 2005, from <http://www.muskingum.edu/~psych/psycweb/history/vygotsky.htm>.
- Goldfarb, M. E. (2001, March 12). The Educational Theory of Lev Semenovich Vygotsky (1896–1934). *NewFoundations.com* (G. K. Clabaugh and E.G. Rozycki, Eds.). Retrieved March 5, 2005, from <http://www.newfoundations.com/GALLERY/Vygotsky.html>.
- Hansen-Reid, M. (2001). Lev Semonovich Vygotsky. Massey University Virtual Faculty (A. J. Lock, Ed.), Department of Psychology, Massey University, New Zealand. Retrieved March 2, 2005, from <http://evolution.massey.ac.nz/assign2/MHR/indexvyg.html> (a site cataloguing resources on Lev Semonovich Vygotsky inaugurated for the centenary of Vygotsky's birth by providing a Web conference on various aspects of Vygotsky's collected works. Academic papers and other resources on Vygotsky are continually added.).
- Schütz, R. (2004, December 5). Vygotsky and Language Acquisition. *English Made in Brazil*. Retrieved March 5, 2005, from <http://www.sk.com.br/sk-vygot.html>.
- Vygodskaya, G. (2001, December). His Life. *The Vygotsky Project*. Retrieved March 3, 2005, from <http://webpages.charter.net/schmolze1/vygotsky/gita.html>.

CHAPTER 35

Valerie Walkerdine

RACHEL BAILEY JONES

In a time of questioning traditional assumptions in many academic disciplines, Valerie Walkerdine is a critical educational psychologist working today reconsidering the “truths” of psychology. She has focused her research on the ways that gender, class, and the media affect the formation of how we see each other and how we understand ideas of the “self.” How do working-class girls come to know themselves in different ways than middle-class girls or both working-class and middle-class boys? How does class location affect the educational and career opportunities of girls? Walkerdine has worked throughout her career to answer these seemingly simple questions. Often collaborating with other psychologists, she has researched the gender gap in mathematics, the educational gap between middle-class and working-class girls in Britain, images of working-class girls in the media, and the creation of the “masses” by the media. By deconstructing, or taking apart, several traditionally accepted truths of psychology, Valerie Walkerdine attempts to build a new foundation for evaluating the development of children in relation to their gender and class. Her work in psychology complements the recent movement in child development known as “postformal” theory. I will examine how Walkerdine’s concern with multiple narratives and subjective ideas of truth mirrors the questions of power and truth taken up by those who reconsider the traditionally accepted formal theories of development.

Valerie Walkerdine grew up in a working-class family in England during the turbulent post-World War II era. Growing up, Walkerdine watched movies like *My Fair Lady* and *Gigi* that represented the working-class girls who are transformed by education and love into upper-class women. She claims that the character of Eliza Doolittle in *My Fair Lady* inspired her to dream of higher education to escape a life of poverty. It was the popular-culture fantasies of success that drove her to become an intellectual. She became the first of her family to succeed in higher education and enter into the professional middle class by becoming a college professor. Her personal history is very important for Walkerdine, because it informs her research into the area of the feminine working-class development. Unlike traditional psychologists, who attempt to achieve objectivity by denying any personal attachment to their work, Walkerdine accepts the fact that psychologists are humans who have personal connections to the subjects of their research. In the many articles and books that she has written, Walkerdine often mentions her own biographical experience and how it influences her view of the research subjects. The reality of her

working-class upbringing led Walkerdine to question traditional assumptions about links between class, gender, and innate intelligence. She understands that being a detached observer is impossible and believes that revealing the researcher's subjectivity ultimately strengthens the academic integrity of the research.

Walkerdine places her own history and subjectivity within the history of psychology as a scientific discipline. In order to question the modern framework of her discipline, Walkerdine lays out the way in which the "normal" psychological model was constructed. In the 1800s there was a growing belief that science could explain everything. Psychology was formed as a discipline in the late nineteenth century to create an objective and scientific framework to study the truth about human nature. Reflecting the rapid development of scientific research and discovery of the time, psychology was based on the idea that there were universal "truths" not only in the natural world, but also about the human mind. The discipline of psychology developed as a social science and claimed to have objective truth on its side. Early psychologists were primarily European males and they used their own standards to develop "scientific" models of normal behavior. Psychology, like biology, was used to justify colonialism, racism, and sexism through a form of social evolution based on the work of Charles Darwin. This evolution placed the white, European, middle-class male at the top of the evolutionary ladder, with women, children and all nonwhite colonial people lower on the ladder. The psychologically "normal" subject was created in the image of the rational white man. This placed all others as less than psychologically normal, somehow pathological, or mentally lesser. Early forms of psychiatry were used to adjust the deviant behavior of those whose behavior was outside the norm. Many racist and sexist ideas were supported by this culturally constructed psychological idea of "truth."

Valerie Walkerdine is engaged in a critical form of psychology that questions the history of the discipline and its claims to scientific truth. Postmodern researchers reveal their own subjectivity and connection to their research. Understanding that psychology was and is culturally constructed by human subjects helps one to realize that all psychological truths have to be reexamined within the cultural framework in which they were created. By questioning the modern psychology, with its idea of a single truth and objective research, Walkerdine belongs to the postmodern branch, which refutes the idea of objectivity and universal truth. It is through the idea of questioning traditional truths about the psychology of class, gender, and the media that we will examine Walkerdine's research into these three areas and their complex connections.

The consistent focus of Valerie Walkerdine's work is on the intersection of gender and class. She uses her biographical history of a growing up girl in a working-class family for the foundation of her inquiry. Some of her published work into these areas was on the socially accepted idea of male rationality. In *Counting Girls Out: Girls & Mathematics* (1998), Walkerdine describes her research (begun in 1978) into the question of why boys consistently outperform girls in the school subject of mathematics. The subject of math represents, for many, the highest form of rational thought. Rational thought has historically been attributed to the biological superiority of men. Women have been constructed as too emotional and irrational to excel in the rational discipline of mathematics. Walkerdine conducted research into girls' performance in mathematics by looking into the attitudes of teachers and of girls, as well as the cultural expectations for gender. She studied how these factors affected the performance of girls in mathematics. While traditionally the performance of students in math was researched quantitatively, or through analyzing test scores and number of passing grades, Walkerdine used observation of classroom dynamics and interviews of students and teachers to construct a picture of why girls struggle in math. Walkerdine found that the negative expectations of teachers and the poor expectations of the girls themselves had quite an impact on academic performance. Those expected to perform poorly often do. She also found that class was a factor in performance. Middle-class girls who did well in school

generally did well in math. Those girls in the studies from the working-class, with much lower expectations, generally did worse than boys and middle-class girls.

While her research into math performance focused on gender, Walkerdine's work in the book *Growing Up Girl: Psychosocial Explorations of Gender and Class* (2001), written with Helen Lucey and June Melody, evaluates the relationship between difference class and the academic expectations and performance of girls in contemporary Britain. This work questions the use of the middle class as the "normal" academic and psychological subject. It also questions the idea of the upwardly mobile individual and the idea that anyone can succeed as long as they work hard. The idea of "equal opportunity" crumbles when Walkerdine compares the achievement of working and middle-class girls. Parental and teacher expectations and support for middle-class girls will not allow them to fail, or even to be academically mediocre. The expectations for working-class girls are much lower and the opportunities are much harder to find. Academic failure is accepted and in many ways expected in the working-class families. The few girls of lower economic class in the research who did succeed in school had a difficult time leaving their families and felt more detached from their family and class roots as they attained higher academic success. As educated, upwardly mobile young women, they were received with apprehension by their parents, who lacked higher education. The middle-class girls who succeeded were reproducing the success of their parents and did not experience the disconnect felt by the working-class girls. In much of Walkerdine's psychological research, she finds that academic performance is greatly determined by your economic status and the education of your family because of culturally acceptable roles. Girls and the working class are expected to do poorly in the "rational" academic subjects because the system was set up for them to fail. She dispels the "truth" of innately inferior classes of people; all psychology is based in the cultural norms of its time.

In addition to her work on the psychology of creating academic subjects, Walkerdine is interested in how representations in the media of girlhood and the working class create and limit opportunities. In *Daddy's Girl* (1998), she uses the pop cultural representations of Lil' Orphan Annie and the roles played by Shirley Temple to illustrate how identities of working-class girls are constructed. Walkerdine argues that the media regulates behavior through negative representations of poverty and expectations of what a girl should be and how she should act. Going one step further, she argues that the media creates the very way we can know ourselves as individuals. It creates the words and images we choose from when we create our selfhood. Working-class girls see very few options for themselves in the media. One of the few routes to success for these girls is through performing and looking cute, like Shirley Temple's many characters that were poor, but unthreatening and charming.

Walkerdine also works with the sexualized images of girls in the media. She takes issue with liberal critiques of the media that victimize the girls and give them no agency or fantasy of their own. It is not only an adult male fantasy that places young girls in make-up and short skirts. There is a lure in the glamor and success of beautiful women in the media, and for young working-class girls, the fantasy of being a glamorous object of desire is a way out of poverty. While observing her young, working-class subjects watching movies and singing pop songs, Walkerdine clearly identifies with her own childhood. This identification gives her a unique insight into the psychology of these girls. It is not the clinical objective observation of traditional psychology, but a new type of research that begins with admission of the researcher's own formation as a subject.

The creation of group psychology, knowledge of the self as part of the mass of people, is the subject of Blackman and Walkerdine's further research into the media. In *Mass Hysteria* (2001), written with fellow critical psychologist Lisa Blackman, the authors look into the creation of the "mass" in psychology and the way the media constructs mass identity. In traditional psychology, any group of people acting together has been called either a mass or a mob, both with negative connotations. A large group of people involved in protest or movement is labeled with "mass

hysteria.” It is assumed that people in a mass are unable to make independent decisions and they have lost their individual identities to the group. Those in the mass are assumed to be of lower class and therefore less rational and more susceptible to suggestion. Walkerdine and Blackman describe how psychologists such as Sigmund Freud view the mass as mentally simple and irrational. Karl Marx, who argued for the masses to unite and overcome the oppression of class, believed that an enlightened intellectual was needed to lead the process of understanding and revolt. He believed that the working class needed to change and they needed a leader to show the path to revolution. The overall impression is that the working class, when viewed as the mass, is inferior mentally to the upper and middle classes.

In questioning the tradition of group psychology, Walkerdine questions the idea of the “self” as we have come to think of it. She draws on the work of Jacques Lacan and his theories of language. He wrote about how language can take the role of a set of cultural symbols. The words, as symbols, not only describe reality, they shape how we view reality and help to form ideas of the self. The way we think of ourselves, using the culturally available words, shapes who we are. In this view, the “self” cannot be viewed as independent from society. The intellectual elite of society, the professors, scientists, and doctors among others, use their expertise to create vocabulary that defines normality, intelligence, and illness. A large part of the construction of the self is based on the science of psychology and its claim to truth. I have written already about the racist and sexist history of psychological truths. In this light, the subjects created in our culture, using the language of science and the tools of media representation, have been based on the fiction of a naturally superior white middle-class male subject. All other subjects are somehow “abnormal,” or psychologically less stable. Walkerdine uses this context to bring up the issues of sexuality and race in terms of the creation of the “other” in psychological discourses.

Both heterosexuality and whiteness are set up as the “normal” ideal in traditional and modern texts. Homosexuality threatens our cultural image of normalcy, and must be made deviant to protect those who are “normal” and at the psychological center. It is the language of normalcy versus deviancy that controls our perception of sexuality. Psychological understanding of race, like gender, has been shaped by the history of the discipline. European colonial powers used psychology to defend their colonization and the often-horrible treatment of their subjects. They used the scientific language to maintain that nonwhite people were intellectually and biologically inferior and incapable of self-governance. Colonial peoples of Africa, Asia, and South America were constructed by the colonists as “primitive” and closer in mental functioning to children than European adults.

This is the same scientific language used to control a collection of individuals by calling them an “unthinking mob.” The diagnosis based on psychological normalcy also diminished the perceived mental functioning of women by labeling women as “irrational” and “hysterical” by nature. The psychology that propped up oppression for years invented biological differences to ensure their “just” use of governmental power. Walkerdine uses the postcolonial writing of Homi Bhabha and Franz Fanon to help deconstruct the history of racism built into the language of psychology. These authors fight the notion that intelligence and race are linked in any way. Like the false claims of objectivity in psychology, intelligence testing that claims to be objective is in reality based on racist cultural ideas of what it means to be intelligent, that is, rational, Western, and white.

Walkerdine uses the postmodern philosophy of Michel Foucault to reveal the construction of false truths that have been claimed by those in power to be objectively proven. Foucault is an important French philosopher who evaluated traditional claims of truth and revealed how people are controlled by powerful claims to knowledge. Walkerdine uses her perspective as a product of working-class upbringing to bring new insight into the issues of the masses. She does not pretend to be objective, and forms connections to the subjects of her research. Postmodern social science

stresses the importance of the researcher's socioeconomic position to their work. Facts of wealth, poverty, and oppressions are central to the psychological development of a subject. Walkerdine and her fellow critical psychologists are the first to overtly connect their own experience to that of their subjects. This admission of subjectivity is an important factor in revealing the vast networks of ingrained ideas about the formation of the individual. Theories of development need to be reexamined in order to rethink what psychology could mean for the future of education.

The postmodern, critical psychological research and writing from Valerie Walkerdine mirror the ideas of postformal learning theory. Both schools of thought begin with the wish to deconstruct and reexamine the modern idea of pure scientific "truth." Postformal theory uses the formal operations work of Jean Piaget as the modern conception of learning. Piaget's theory of formal operations set up distinct stages of mental development in children. In this view, rational, abstract thinking is the highest form of mental functioning. Again, we see the use of the European, male, middle-class idea of intelligence at the center of modern theory. All other processes that involve emotion, issues of power, and questions of meaning are devalued in formal theory. Postformalism seeks to expose the political and cultural assumptions behind formalism and to disprove the idea of one right way and one set of rigid stages of development.

The work of the postformal theorists, led by Joe Kincheloe and Shirley Steinberg, asks educators to evaluate and question the assumptions on which they base their practice. The culturally constructed truths in education about natural intelligence and equal opportunity make us believe that all children have an equal chance at success in school. If children fail, it is because they are not intelligent or do not work hard enough. Postformal analysis reveals how the cultural constructions of race, class, and gender affect real educational opportunities and the views of what counts as intelligence. Standardized tests that determine the amount of intelligence a child possesses are not only flawed by their use of culturally skewed questions, they measure and value only a certain kind of intelligence. This is the ability to take knowledge that can be applied to a real-life situation and abstract this knowledge to answer test questions that have little to do with life outside the test. Walkerdine critiques the same limited modernist view of intelligence in her work with the working class and issues of gender. The culturally biased view of intelligence is so important because it has been convincingly sold as the truth. Many have been excluded from higher education and professions on the basis of this notion of innate intelligence.

By focusing on questions that undermine the modern history of psychology, Walkerdine reveals the sexist and bigoted assumptions that have been claimed as fact. Her work in postmodernism is in many ways the psychological branch of postformal thought. Both theories deny claims to objective truth and both hope to set the groundwork for reconceptualizing and re-thinking education. A new vision is sketched out for educational psychology and development that is based on issues of social equity and justice. It is not enough to deconstruct old claims to truth and reveal inequity in terms of gender, race, and class. New methods based on the postmodern and postformal work could value and reward multiple perspectives and achievements.

Through her research, Walkerdine shows clearly that the stratifying of society based on the constructions of class, race, and gender are cultural psychological formations and not due to differences in innate ability. Changes in expectation and attitude on the part of teachers, parents, and the media could go a long way in creating a more equitable education. Of course the psychologists who, under the guise of science, developed the evolutionary order of intelligence have formed expectation and attitude over centuries. The rethinking of educational psychology will not transform social structures overnight, but the work of Valerie Walkerdine contributes valuable research to the field of psychology. She adds to a dialogue that is leading in the direction of social change and the reform of biased assumptions that for many decades have functioned as truth.

REFERENCES

- Blackman, L., and Walkerdine, V. (2001). *Mass Hysteria: Critical Psychology and Media Studies*. New York: Palgrave Macmillan.
- Walkerdine, V. (1997). *Daddy's Girl: Young Girl's and Popular Culture*. Cambridge, MA: Harvard University Press.
- . (1998). *Counting Girls Out: Girls & Mathematics*. London: Falmer Press.
- . (2001). *Growing Up Girl: Psychosocial Exploration of Gender and Class*. New York: New York University Press.

CHAPTER 36

John Watson

CHRIS EMDIN

The usual format of a description of a person's life is usually an incongruous mix of the chronological and the informational. We often receive broad strokes of the person's childhood and background, followed by the person's successes and their claim to fame. Born on a certain date and had a happy childhood; achieved notoriety at a certain age, lived and then died. In the case of John Watson, it is necessary to take a deeper look into specific times in his life and attempt to recreate the circumstances around these integral periods in order to get a firm grasp on his thoughts, ideas, and theories as they relate to the way we study learners in an educational setting. For the last hundred years, many of the perceptions of the general public on students' ability and aptitude have been shaped by Watson's theories. He has successfully ingrained a dismissal of subconscious motivations for success while impressing upon millions that repetition, the environment, and other external motivators hold the key to learning. These facts lead us to the activity of critically looking at why and how Watson shaped his ideas. We will begin this journey with a critical look at his childhood. Such a critical look provides us with a profound understanding of the man that revolutionized and certainly transfigured the inner workings and face of educational psychology. John Watson's life and work were intertwined in a dynamic inseparable manner and the issues that plagued his childhood and adulthood profoundly intersect with his work. Born into a family with deep idiosyncrasies, Watson constantly battled with dichotomies in his life and family. He had an exceptionally religious Baptist mother who encouraged cleanliness and morality in the lives of her children and a father who was a womanizer and an alcoholic. Although his family had a black nurse who helped raise John and established close emotional bonds with him, Watson often harassed black men and assaulted them as a hobby. These are the obvious dichotomies that exist in a study of Watson's childhood. His discomfort in these dichotomies led John to become a complicated student who exhibited an uncanny intelligence but also overt behavior problems. Such paradoxes in Watson's life led to his search for a universal, final truth in his academic work.

One of the most important concepts that personify the transformation from pre-behaviorism to behaviorism in the psychology of the era that encompassed John Watson's entry into and exodus from the academy was the shift from introspection as an acceptable belief to behaviorism. Watson created a need for an immediate shift from one philosophy to another. One could not be a

behaviorist who believed in the possibilities of some salvageable introspective theories. There was an all-or-nothing approach to Watson's theories. He created a perception that a combination of theories would lead to a weakening of psychology because of the ambiguity of introspection. This belief is grounded in the mechanistic tradition of formalist thinking in educational psychology, which echoes a reliance on only one way of doing and knowing and is uncomfortable with the possibility of reliable information from arenas that are outside its domain.

HIGHER EDUCATIONAL JOURNEY

Watson's journey into higher education began with his acceptance into Furman College and his meeting with Gordon Moore, who was a philosophy professor there. Moore provided Watson with a model of an individual who had the ability to be an individual and thinker in the midst of the rigid Baptist environment of the college. Moore was someone who was able to have ideas and thoughts that were contradictory to the religious, Baptist tone that existed at the school. This situation further exemplifies the binarisms that were commonplace in Watson's life and interactions as Moore walked a fine line at Furman between his academic interests as a liberated philosopher and his role at the school as a lecturer who had to abide by Baptist principles. Moore later got a job as a faculty member at the University of Chicago and Watson followed his mentor to the school when he was admitted as a doctoral student. Under the guidance of his mentor, Watson began studying philosophy at Chicago. He eventually grew tired of the abstract nature of philosophy and decided to study psychology.

PSYCHOLOGY/ANIMAL BEHAVIOR BEGINS

Watson's research at Chicago began late in 1901 with his studies on how rats learn. This research would eventually lead to theories on how humans learn as comparative psychology was employed to discuss general principles of behavior between rats and humans. In the beginning of his research, he designed mazes with concealed entrances where food was stored in a wire box. He then studied the time it took rats to find the food. Various experiments were designed and executed. The scientific advancements that developed as a result of the physical work and new techniques that Watson developed were phenomenal. At a time when these experiments were practically unheard of, his techniques reflected his pure genius. He had rats run through labyrinths with food at one of four paths, with the path with the food covered, and studied the process. After drawing conclusions on the time it took the rats, more complex questions arose and, as a result, more complex experiments developed. After the study on how rats traveled through the labyrinth to find food, he decided to study at what age they could travel through the labyrinth. He created obstacles in a box between a litter of rats and their mother and studied the age at which the rats could find their way back to their mother. He studied the brains of the rats at certain ages to properly gauge their growth. Watson even studied the effects of the senses of the rat as they traveled through the maze by removing the eyes, middle ear, olfactory bulb and whiskers from different groups of mice to determine whether these effects changed the rats' learning of the maze. In essence, he designed and executed experiments that at the time were extraordinary and revolutionary and led to various new conclusions about rats.

Watson concluded that learning developed in an uneven manner over time until an optimal learning time was reached, and that rats at a certain age learned better than rats at other ages. He also discovered that regardless of the absence of certain senses, rats could still learn the maze. His work had seemed to provide him with what he perceived as concrete results about the nature of the rats learning processes. The problem with the results of these experiments was that they made Watson believe that he could use similar methods for studying humans. Comparative psychology

in this and many other instances is a flawed approach to studying human learning. The quantifiable results of a study on rats cannot be applied to humans. As a matter of fact, the quantifiable results of observable phenomena in human beings cannot be compared to that of other human beings in different geographic areas. Imagine the differences when we simply compare socioeconomic backgrounds. In a comparison of individuals from different socioeconomic backgrounds, we discover emotional and cultural differences that are present but not necessarily visible. However, based on the assumptions that there were no aspects to his study of rats that were unconscious and that all of his conclusions were visible and verifiable, he was prepared to go one step further. He was ready to present his ideas on the nature of studying behavior in rats and express his belief that the results of his experiments could be used to draw conclusions about the nature of human beings. This method of observing, recording, and drawing conclusions based on the conclusions of specific observed phenomena were the spine of behaviorism's early beginnings.

Unfortunately, over time, the discipline of educational psychology has refused to evolve from its beliefs in universal data being applicable to specific groups as it is used to determine the ability, potential, and access to education of different groups of people. Watson hinted at his belief in the efficacy of a behaviorist theory to be used in humans and learning after his initial experiments with rats in 1901. His colleagues strongly disagreed with him because they understood the commonly held beliefs that humans were more spiritual and conscious beings. Despite their misgivings, he forged on with his work. While his work with rats was well received by intellectual journals, it was rejected by many popular magazines at the time. Watson had grown comfortable with these divergent opinions of his work and dealt with them as he had dealt with similar situations throughout his life. He forged on with his study and, as a result, laid the foundations for behaviorism in human psychology.

ANIMAL BEHAVIORIST TO HUMAN BEHAVIORIST

After moving into the position of Chair of the department of psychology at the Johns Hopkins University in 1908, Watson graduated from his study of rats to research on terns and monkeys. As he developed his research in these areas, he continued to theorize about the study of human behavior. In his early speeches on his take on psychology at Harvard and Columbia, Watson received negative responses to his provisional theories and ideas about human behavior, but continued with his study as he sought to remove the ambiguity of the prevalent consciousness movement of psychology by making it more scientific and observable. He was on a quest to discover specific answers to his questions on how human beings respond to certain stimuli. At this stage in his research, there was a need to find responses that could be consistent when a specific stimulus was presented. Utilizing the work of Pavlov and his work with dogs on "the conditioned reflex" Watson moved towards a study of conditioned motor reflexes in humans. Watson believed that similar to the dogs' salivating with the ringing of a bell in Pavlov's work, human behavior too functioned in this stimulus-response model.

This progression in Watson's thought led him to write many papers in publications that were not purely psychological, to share his work. Utilizing this media served as an opportunity to plant the seeds of behaviorism in the minds of the general public. This approach was and is still used to drive the mechanistic tenets of educational psychology into American and eventually international normal public discourse. As a result, there is a normalizing of preconceived notions that are not created by but end up enacted by the public. He argued on many occasions that human emotions, memory, attention and ways of being should be studied objectively. In Watson's thought there was no room for introspection because it had no observable, verifiable truths. Watson was also greatly concerned with the way that psychology competed with other sciences. Throughout his work, he criticized psychology for not having enough of a scientific approach to be considered a

science. His mission was to give psychology a jolt of real science that was necessary in order for the subject to be considered valid in comparison to other sciences such as biology and chemistry. The ideas of behaviorism were therefore bound with the following tenets. First, psychology is a valid branch of natural science. Second, being a valid branch of natural science, its goal is simply to control human behavior without the auspices of introspection. Third, there are no divisions between human beings and animals in the study of behavior and response. Historically, these tenets laid the foundation for modern educational psychology and its statistics-based analysis of the stimulus–response model.

BEHAVIORIST WORK (EXPERIMENTS WITH CHILDREN)

In this section, I will describe two of the kinds of experiments that Watson routinely administered in order to create the evidence for the efficacy of behaviorism. One of the experiments that Watson is best known for is called the Little Albert Experiment. In this study, Watson conditioned an eleven-month-old boy (Albert) over a period of two months to fear certain objects. In order to show that fear was exhibited in an observable fashion, Albert was shown various objects and his response to these objects were observed and recorded. At nine months old, he was shown a white rat, a rabbit, a dog, a monkey, and objects such as masks and cotton wool. At this time Albert showed no response to/fear of any of these objects. Two months later, a bar was struck making a loud noise behind Albert's ear whenever he was shown a white rat. The loud noise caused Albert to cry. This process was repeated until Albert would cry at the sight of the rat without the loud noise. Watson used this experiment to demonstrate that emotional responses were conditioned. In another experiment Watson studied how a child reacted to an object that was dangled in front of her. He swung a piece of candy in front of the child and took notes on how and when she reached for the candy and put it in her mouth. After about 120 days of experimenting and observing, the child had shown perception and movement in a coordinated manner. She reached directly for the candy, quicker than she had when the experiment began. From this work Watson theorized about the time it took for children to develop physiologically. We are once again introduced to issues that surround the use of observable phenomena to draw broad conclusions. As the experiment progressed, Watson decided to light a candle and hold it one eighth of an inch away from the child's hand. He then moved the candle in a circle around the child. The child was then allowed to reach for the flame and touch it. She would get slightly seared by the flame each time she touched it. Watson noted that at 178 days there was an improvement of avoidance of the flame and that by 220 days the child would still reach for the flame but would not touch it. The conclusion of this experiment was that the child develops an avoidance reaction to the flame. Watson believed that this avoidance reaction could have taken a shorter period of time to develop if the child had been allowed to not just touch the flame and be slightly seared by it in the initial stages of the experiment, but be allowed to be burned by the flame when she initially touched it. The belief was that there could be training to avoid the flame.

With his own children, Watson found a great opportunity to put behaviorism into further practice. He closely studied his children and how they learned to respond to certain stimuli (this stimuli included himself and his wife). He then utilized his observations as further research to support his theories on behaviorism. In his experiments with his son, Watson attempted to condition his son's daily activities to occur on a specific daily routine. Behaviorism in practice included trying to condition his son's bowel movements to occur at specific times of the day. He attempted to condition his son's time to wake, eat, play, and sleep. The goal was to develop/train children that were self-reliant and free from emotional problems. This theory is apparent in educational psychology and functions under the premise that a set routine is necessary to have a "good student." It is also seen in the focus on interventions for behavior and learning problems

that focus on training students to conform to preexisting norms. This mechanistic tradition also prevails in the lack of allowances for contextual delivery of instruction in classrooms. There is a reliance on a one-size-fits-all micro-managed curriculum that ignores issues that surround students with varying socioeconomic backgrounds.

WATSON'S THOUGHTS AND BELIEFS

The advent of Watson's work on behaviorism at Chicago represented an enormous shift from the functionalist psychology that his colleagues had supported. Functionalism gave the researcher an affective dimension by providing an opportunity for putting oneself in the place of the animal one was studying in an attempt to fully understand it. An entry into the affective dimension via functionalism and consciousness only added to Watson's consternation with the direction of psychology as a discipline. He firmly believed in the need for the scientific dimension of psychology. He attempted to reach this dimension through behaviorism. This search for scientific validation was important to Watson because it was the first step to having psychology held on par with other scientific disciplines. In an attempt to put forward his perspective on the field of psychology, he even proposed that the word *introspection* be banned from use in psychology. Watson's inability to accept critiques of his science is exemplified in his response to education scholars and philosophers and other critics of his work. In 1910, E. F. Buchner, a professor at Johns Hopkins who was renowned for his work in education and philosophy, critiqued behaviorism by questioning how the theory could remain devoted to being purely scientific and still maintain its practical use. Watson retorted by referring to Buchner as "a high-class Janitor" who came to Johns Hopkins "to coax these hayseed teachers to eat out of the University's hand, nothing more." When questioned about his thoughts on John Dewey, he said, "I never knew what he was talking about then, and unfortunately for me, I still don't know." These blanket dismissals of other paradigm's perspectives personified the stance of the pure behaviorists. Watson's belief was that if psychology would pursue the plan he suggested, "the educator, the physician, the jurist and the businessman could utilize our data in a practical way." He believed that behaviorism could and should be used in every possible arena. The practice of trying to make all things fit into one mold has been a long-lasting agenda of educational psychology. Its origins lie in Watson's attempt to use behaviorism in all arenas that involved human interaction. It remains today in the use of IQ testing as the criteria for measuring and judging human intelligence.

It is therefore also necessary for contemporary students of educational psychology to delve into a study of comparative psychology as it relates to Watson's movement from animal psychology to behaviorism. There is an obvious connection between these two areas of psychology, and each has exerted a powerful influence on the other. The natural progression usually discussed in the development from animal to human study by Watson was not necessarily a simple transition from the study of rats to the study of humans. There was not an end to the study of rats and then a new clear beginning to Watson's study on humans. The theoretical positions that ground behaviorism in humans were grounded in the experimental work that Watson conducted in animal psychology. Here we uncover the behaviorist belief that if experimentation is empirically verifiable for the rat, it would also be empirically verifiable in humans. As educational psychologists study Watson, we must view him not only as a behaviorist but also as an animal psychologist. There was no evolution, no change of interpretive frameworks from Watson the animal psychologist to Watson the behaviorist. He was both. Despite Watson's clamor for having psychology stand as an individual natural science, the nature of the science that he prescribed relied heavily on physiology because in essence it was a study of animals. This work can therefore be interpreted as a study in the earlier discovered and explored discipline of physiology. In

letters and conversations with his colleagues, Watson often asked, “Am I a physiologist?” The dichotomies that were present in Watson’s youth presented themselves in his academic work. He had to ask himself whether or not he was creating a valid new science or just doing an extensive study in animal physiology. I argue that this duality in his take on his work caused him to take such an unyielding stance publicly in his support for legitimizing behaviorism and denouncing introspection. Taking a mechanistic, formalist approach creates an arena where dichotomies are nonexistent. The way that Watson dealt with any ambiguity concerning his thoughts and philosophies was to attempt to scientifically validate them. The nature of the academic tradition is to create an arena where students blindly absorb a validated approved discipline without questioning it. The belief was that if behaviorism were scientifically validated, no more questions would arise.

Watson’s take on educational psychology was simply an extension of his general beliefs on psychology. He stated that any investigator in experimental education would need to be an animal behaviorist. This belief transformed educational psychology, because many animal behaviorists began to enter into the study of educational psychology and brought their reductionist animal psychology theories and beliefs into the field of education. The advent and subsequent infiltration of these beliefs were accompanied by the absence of introspective methodologies and the popularization of less complex, reductionistic views of children. Watson’s comparative psychology (animal-to-human comparisons) caused him to be sought after in education circles to explore experimental pedagogy. He did not fully enter into this arena until his exodus from academia (a departure forced by his affair with a student, whom he later married). At this point in his career, Watson sought to apply his theories to more popular issues like advertising and raising children.

UNDER THE BEHAVIORIST UMBRELLA

As the twentieth century progressed, Watson’s comparative psychology and behaviorism became increasingly influential in the discourse of psychology. Throughout this process, Watson’s allegiance to the denial of introspection and commitment to the formalist, natural scientific traits of psychology still remained. There is a thread that travels from the precursors of behaviorism in Pavlov’s notion of stimulus and response through rats’ learning their way around complicated mazes to the impact of behaviorism on theories of learning and the nature of educational psychology. There is an obvious marriage to the stimulus–response ideology that is undeniable in Watson’s work. This strict model of interpreting human activity is austere and flawed on the basis of its derivation from practical human behavior and its lack of practicality in descriptions of complicated human responses. Watson’s behaviorism is ultimately the most positivistic rendering of learning in the cosmos of educational psychology. In “Behaviorism: Modern Note in Psychology,” a paper written by Watson in 1929, Watson expresses his belief that “we need nothing to explain behavior but the ordinary laws of physics and chemistry.” A postformalist critique would argue that we have no criteria to describe the series of steps involved in complicated human acts, such as playing sports. We can see that the behaviorist model does not leave any room for the desire to score a touchdown and how that translates into throwing a ball. Watson’s work does not account for the process of having a desire to do something and the process involved in actually doing it. In this example, we see that purely observing someone throwing a ball has its limitations. This lack of consideration for complex human processes such as desire can be further examined in actions that take place as a result of a belief. The belief that it is chilly outside would cause one to carry a jacket just as the desire to stay dry would cause someone to carry a jacket. The concept of belief described above is another example that does not fit into the model described by

Watson because it goes beyond his principle of predictable impulse reactions to a certain specific stimulus.

Watson's theories on thinking describe the extent of the limitations of his science. To avert the obvious introspective and internal dynamic of thinking, Watson posits that thinking is a behavior that consists of motor organization. According to Watson, thinking is talking that we have been conditioned to do in a concealed manner. This way of thinking leaves no room for the concept of imagination and imagery, which I would argue are essential dimensions of human existence. In the introduction to this encyclopedia, Joe Kincheloe describes the process of meaning making and its impact on human constructions of reality. The process of meaning or making meaning lies in a domain that is interpretive. In *Releasing the Imagination*, Maxine Greene (1995) describes the pre-reflective world that is an essential component of existing in the present. The notion of a pre-reflective world, which is created from our unquantifiable ideas, feelings, and expressions, approaches a level of complexity that cannot be accounted for from a Watsonian standpoint.

ANALYSIS AND IMPLICATIONS

The desire to make psychology an accepted and unquestionable natural science drove Watson to develop a science that was visible and verifiable. This desire coupled with Watson's strict adherence to the stimulus–response model in every facet of psychological analysis and observation was an apparent positivistic and narcissistic practice. The notion that there is only one way of knowing, doing, and learning (Watson's way of knowing and doing) impedes upon the natural progression of an individual or an academic discipline. It limits the possibility of expansion beyond what is known, thereby assuming that both the individual and the science are finite. We can therefore presuppose that Watson's thinking fosters an innate belief that at some point, all stimuli and responses will be observed and measured. Watson's dismissal of consciousness as an ineffectual method of practicing psychology served as an avenue to limit reality to what is observed and therefore known. This practice has become so embedded in the fabric of American culture and education that it lurks within the auspices of political programs and movements that are presented to the public as a way of recovering and improving the present state of sociopolitical affairs. Just as Watson's work provided a spotlight for a focus on human response, reaction, and performance and disregarded human thought and ways of being, the academic and reformatory institutions throughout the United States have turned on the high beams of the spotlight by convincing our society that intelligence and standardized tests are the only true measurement of students' abilities and intelligence. This notion is also accompanied with the assumption that institutionalizing at-risk youth will change their behavior and make them well-regulated members of society. The absence of sociopolitical, hegemonic, race, and class issues in any mechanistic educational psychological study delineates a reality that is insensitive to the implications of such defining factors. In lieu of the absence of these factors, an employment of a postformalist approach to educational psychology is as necessary as the discipline itself. Safe, preexistent notions are forced to face the reality of questions like why and what-if. The discipline's claim of objectivity in the use of and assessment by fixed bodies of knowledge is dismantled in the face of a postformalist approach that takes these "objective" notions and utilizes them as a springboard to expose the biases that underlie their claims to objectivity. A lack of such an approach will only attain a superficial analysis of educational psychology that maintains the flaws in thinking, theory, and practice that have been present since the advent of behaviorism. Watson's creation of such work should therefore be used as a tool for further critical study with a realization

of its strengths and impact on psychology but also with an awareness of its shortcomings and implications.

REFERENCES

- Greene, M. (1995). *Releasing the Imagination: Essays on Education, the Arts, and Social Change*. San Francisco: Jossey-Bass Publishers.
- Watson, J. B. (1929). *Behaviorism: Modern Note in Psychology*. Retrieved August 4, 2006, from <http://psychclassics.yorku.ca/Watson/Battle/watson.htm>.

PART III

Issues in Education and Psychology

CHAPTER 37

Constructivism and Educational Psychology

MONTSERRAT CASTELLÓ AND LUIS BOTELLA

CONSTRUCTIVIST METATHEORY

As we discussed in previous works, essentially the prefix *meta-* indicates a reflexive loop. In this sense, a metatheory should be a theory that deals with the nature of theories, that is, with the nature of epistemic and paradigmatic assumptions implicit in theory construction. Such a definition is closely related to the use of the term *paradigm* to refer to a set of basic beliefs. Metatheories are superordinate to the content of any particular theory, and include at least two basic sets of assumptions: (a) *the nature of knowledge*, and (b) *epistemic values*.

As for the nature of knowledge, constructivist metatheory assumes that knowledge is a human construction, not the neutral discovery of an objective truth. Thus, it departs from the traditional objectivist conception of knowledge as an internalized representation of an external and objective reality.

Epistemic values are criteria employed to choose among competing explanations. Questions on epistemic values rarely arise in objectivist metatheory, since knowledge is viewed as a representation of reality and, consequently, explanations are chosen according to their truth value—that is, their correspondence with the external reality they represent. The objectivist conception of knowledge and truth are thus closely linked and imbued with science—with the reliance on *facts* to justify a given knowledge claim.

Constructivism cannot rely on the original/copy correspondence metaphor, since it departs from a representational conception of knowledge. Justification by means of the authority of truth is then regarded as an illusion. This nonjustificationist position leaves constructivist metatheory facing the task of articulating an alternative set of epistemic values, taking into account that values are, by definition, subjective preferences.

Although constructivist epistemic values vary according to different constructivist theories, all of them can be viewed as alternatives to the justificationist position. Two of the most pervasive sets of epistemic values in constructivist metatheory, however, correspond to (a) the pragmatic value of knowledge claims (i.e., their predictive efficiency, viability, and fertility) and (b) the coherence of knowledge claims (i.e., their internal and external consistency and unifying power).

A series of corollaries can be derived from these two basic epistemic assumptions of constructivist metatheory. In fact, different constructivist theories emphasize different possible corollaries. This differential emphasis led to the proliferation of different forms of constructivism. The next section of our work presents a brief discussion of six of such varieties (radical constructivism, social constructionism, narrative psychology, developmental constructivism, assimilation theory, and personal construct psychology) plus our own integrative proposal (relational constructivism).

CONSTRUCTIVIST THEORIES: UNITY AND DIVERSITY

Radical constructivism as discussed by authors such as Maturana and Varela, von Foerster, and von Glaserfeld rejects the possibility of objective knowledge, since all knowledge depends upon the structure of the knower. Thus, subject and object are constructions (or operations) of the observer, and not independently existing entities. Even if there is an ontological reality, we can only know it by assessing how well our knowledge fits with it. Thus, radical constructivism views knowledge as a construction—versus an internalized representation of an externally independent reality.

According to Maturana and Varela, living beings are autopoietic (self-creating or self-producing) systems in the sense that they are capable of maintaining “their own organization, the organization which is developed and maintained being identical with that which performs the development and maintenance.” The notion of autopoiesis is supported by von Foerster’s contention that the central nervous system operates as a closed system organized to produce a stable reality.

Organisms interact by means of structural coupling, that is, by codrifting and setting up the mutual conditions for effective action. Maturana and Varela equated effective action with survival. Consciousness and language emerge through the experience of structural coupling and effective action. By equating knowledge with effective action, or with viability, radical constructivism subscribes to the second theme in the definition of constructivist metatheory—the rejection of epistemic justificationism.

Social constructionism (as proposed chiefly by Kenneth Gergen) focuses explicitly on the role of social processes in the construction of meaning. Consequently, Gergen rejected both exogenic and endogenic epistemologies. Endogenic epistemologies are those that emphasize the role of the individual mind in the construction of meaning, while exogenic epistemologies emphasize the role of external reality. Social constructionism places knowledge neither within individual minds nor outside them, but between people. In other words, according to social constructionism, knowledge is generated by people interacting and collectively negotiating a set of shared meanings. By rejecting the objectivist conception of knowledge as an internal representation, social constructionism shares the view of knowledge as a construction—a social construction in this case.

The question of how to choose among knowledge claims has evolved in the work of social constructionists but, in any case, the criteria proposed by social constructionists can generally be seen as instances of the social and political uses of knowledge, and share the constructivist rejection of justificationism.

While both radical constructivists and social constructionists share the critique to representation and justificationism, the latter prefers the term *constructionism* to emphasize their mutual differences. Some reviewers have noted that while radical constructivism tends to promote an image of the nervous system as a closed unity, social constructionism sees knowledge as arising in social interchange, and mediated through language.

Narrative psychology proposes narrative emplotment as the organizing principle in the proactive construction of meaning. According to the seminal work of Theodore R. Sarbin, human beings make sense of otherwise unrelated events by imposing a narrative structure on them. Thus, for

instance, when presented two or three pictures, we tend to construe the plot of a story that relates them to each other in some way and helps us predict how will it likely evolve. Narrative emplotment, then, equates knowledge with the anticipatory construction of narrative meaning.

Both Sarbin and Donald P. Spence proposed narrative smoothing as the criterion according to which knowledge claims are tacitly chosen. In his approach to self-deception, Sarbin noted how some people maintain self-narratives that are apparently counterfactual, a phenomenon traditionally explained by means of such mechanistic constructs as repression or dissociation. When narrative smoothing is used as an explanatory principle, however, such constructs are redundant. Narrative psychology proposes that people tacitly edit their self-narratives (by spelling out inconsistent information) so that the self as a narrative figure is protected, defended, or enhanced. Thus, narrative psychology shares the constructivist critique of knowledge justification by means of its correspondence with objective reality.

Developmental constructivism as originally discussed by Jean Piaget and further elaborated by researchers of postformal development also views knowledge as a proactive construction of the knowing organism. According to developmental constructivism (particularly Piaget's version of it), knowledge is an active construction of the knowing subject, triggered by the quest for equilibrium, that is, by the cognitive system's need for order and stability. Piaget's rejection of the empiricist conception of knowledge, for example, is founded on the constructivist notion that knowledge cannot be viewed as a copy of the external world.

Developmental constructivism also departs from the objectivist conception of truth as correspondence between mental representations and reality. According to most organismic perspectives, including the Piagetian approach, knowledge systems develop by means of recurrent qualitative shifts in the direction of increased complexity. Thus, knowledge can never be considered an accurate depiction of reality, since each new refinement will require justification at a newer and higher level. Developmental and organismic constructivism, then, equates useful knowledge with dialectically adaptive action, that is, the ability to adapt one's knowledge structures to the environment and to adapt the environment to one's knowledge structures.

Piagetian constructivism, however, is controversial in two ways. First, it limited its focus of convenience to the development of logico-mathematical reasoning from birth to adolescence. Second—and related—it equated adult cognition with the construction of a world that has been described as constituted by closed systems. The attempt to extend Piagetian thinking beyond formal operations has generated a growing body of research on adult cognition from metatheoretical positions even closer to constructivism than Piaget's initial one.

Assimilation theory as originally proposed by Ausubel represents an alternative constructivist approach to Piagetian ideas in educational psychology. Assimilation theory equates meaningful learning with the learner's deliberate effort to relate new knowledge to concepts he or she already possesses. Thus, learning is equated with meaning making instead of information processing, thereby emphasizing the proactive role of the learner's construction processes in the creation of new knowledge.

In assimilation theory terms, the usefulness of a new concept depends on its being relatable to other concepts in the subject's knowledge system—that is, its being assimilated. Propositions linking concepts are not necessarily right or wrong, true or false, but accepted or unaccepted by a community of learners. Thus, epistemic values can be viewed as a composite of social consensus (as proposed by social constructionism) and increasing complexity (as proposed by developmental constructivism).

Personal construct psychology (PCP) as originally proposed by George A. Kelly can be defined as a constructivist theory to the extent that one accepts the characterization of constructivist metatheory discussed above. Kelly's theory of personal constructs was the first attempt to devise a theory of personality based on a formal model of the organization of human knowledge. Kelly's philosophy of constructive alternativism asserts that reality is subject to many alternative

constructions, since it does not reveal to us directly but through the templates that we create and then attempt to fit over the world.

The constructivist conception of knowledge as an anticipatory construction is explicit in PCP's fundamental postulate: a person's processes are psychologically channelized by the ways in which he or she anticipates events. PCP also shares the constructivist notion of predictive efficiency as an epistemic value.

Finally, what we call *relational constructivism* constitutes our attempt to press the dialogue between constructivism and social constructionism further and to enrich it with the voice of narrative and postmodern approaches. It is based upon the following nine interrelated propositions, all of them sharing the aforementioned set of constructivist metatheoretical principles:

1. Being human entails construing meaning.
2. Meaning is an interpretative and linguistic achievement.
3. Language and interpretations are relational achievements.
4. Relationships are conversational.
5. Conversations are constitutive of subject positions.
6. Subject positions are expressed as voices.
7. Voices expressed along a time dimension constitute narratives.
8. Identity is both the product and the process of self-narrative construction.
9. Psychological processes are embedded in the process of construing narratives of identity.

Even this sketchy discussion of different constructivist theories shows some features of the contemporary constructivist scene that we will focus on in the next pages.

First, not all of the constructivist approaches have the same theoretical status. Some of them constitute formal theoretical systems (e.g., PCP, Piaget's theory), while others are younger and, therefore, less developed.

Second, while all of the approaches mentioned broadly share a common conception of knowledge as a construction and nonjustificationist epistemic values, their mutual compatibility at subordinate levels is sometimes controversial. For instance, social constructionism and PCP differ in their relative emphasis on the social versus personal origin of construing. However, some PCP theorists have recently tried to reconcile both approaches by proposing a social constructivist psychology. Such reconciliation is also the explicit intention of our own efforts to articulate a *relational constructivist* framework in the realm of psychotherapy and a *socio-constructivist* one in the realm of educational psychology.

Similarly, some authors who even suggested that Piaget's philosophical assumptions are not constructivist (since the assimilation/accommodation process means that we can experience *outer reality* and distinguish it from our *inner world*) have questioned the compatibility between Piaget's approach and PCP. However, Piaget's approach has been included in our discussion because it has been explicitly characterized as constructivist by some other authors and is one of the most influential authors to first consider children as meaning makers. Thus, we are not suggesting that all constructivist theories constitute a unified whole, but that they share a superordinate core of metatheoretical assumptions. This shared metatheoretical core allows the ongoing exploration of cross-fertilizations between different constructivist approaches, the final goal being not an overarching unification but the increasing complexity of constructivist thought.

CONSTRUCTIVIST APPROACHES TO EDUCATIONAL PSYCHOLOGY

Before proceeding to specify the characteristics of the main constructivist approaches to educational psychology we need to locate it within the framework of constructivist epistemology.

Our aim in doing so is to approach educational psychology as a specific applied discipline that is both psychological and educational in itself.

From its very origins, discussions about the object of study of educational psychology have maintained two antagonistic positions: (a) regarding educational psychology as an *applied field of study of general psychology* and (b) regarding it as an *applied discipline* bridging the gap between psychology and education. The latter ultimately involves overcoming the psychological reductionism that is typical of the former, since it requires assuming that there are disciplines other than psychology that contribute to explaining and improving the teaching and learning processes. This vision leads to substantial changes in traditional approaches to educational psychology, which can be summarized as follows:

- i. Fields of study should be prioritized taking into account the problems and issues experienced by practitioners;
- ii. Instead of promoting an excessively specialized and technical discourse to explain and approach the problems generated by practice, it should be shared with practitioners in the educational field;
- iii. The outcomes of educational psychology should be approached as means to improve educational practice;
- iv. Educational psychology should accept the fact that its contributions are partial—although valuable—and they must thus be contrasted and combined with those coming from other disciplines also dealing with educational phenomena;
- v. Educational psychologists should try to analyze the situated and implicit knowledge that professionals within the field of education have of their own practice, so as to be able to enrich it instead of trying to replace it with disciplinary and scientific knowledge;
- vi. Finally, educational psychologists should take a stand in the ideological and ethical debates that characterize any educational option. Also, they should accept that contributing to the improvement of education necessarily entails taking part in the social debates dealing with core educational issues.

Having said that, the goal of educational psychology can be equated (in the words of César Coll) to the study of change processes taking place in people as a consequence of their participation in educational activities. Such a definition locates disciplinary knowledge halfway between a strictly psychological and an educational one. At the same time it incorporates the study of personal change processes (psychological knowledge), avoids reductionism, and fosters interdisciplinary approaches by placing such change processes within the broader framework of educational practices.

As an applied discipline—and in collaboration with the rest of educational disciplines—educational psychology is committed to elaborating a comprehensive scientifically based educational theory as well as to guiding a series of practices that are coherent with such a theoretical development. This provides a threefold dimension to educational psychology as a (a) theoretical, (b) technological, and (c) practical discipline.

Having thus defined the object of study of educational psychology, we will now focus our analysis on the varieties of constructivist approaches to educational psychology from a conceptual and epistemological point of view.

Educational psychology as a field is a subject of diverging theoretical and epistemological positions. In the last decades, authors from different conceptual traditions highlighted some common threads among such divergences:

- i. The existence of an individual mind or, rather, the usefulness and need of studying intrapsychic processes *versus* the relevance of concepts such as “distributed mind” or “shared cognition.”
- ii. The existence and functionality of individual mental representations, the nature of these representations, and their relation to social processes.

- iii. The validity of the units of analysis adopted according to the answer given to several previous questions. In this respect, the discussion focuses on the viability and validity of using units of analysis that can bring together both mind and culture.

We will devote the next paragraphs in our paper to discuss the different answers that may be given to the above questions by grounding the constructivist option in which we position ourselves.

Regarding the first question, it may be fruitful to focus the debate not so much on whether intrapsychic processes exist or not, but on the question of what can such processes add to our understanding of the learning process. For instance, if we adopt a broader approach to the concept of *mind*, the question could be, how does such a broadening affect our understanding of the processes taking place in the classroom?

The answer, at least taking into account what we presently know, cannot be a simple one. As Salomon argues in his compilation on distributed cognition, we may consider different entities in different contexts. Thus, in certain educational contexts cognition is likely to be a collective process, depending above all on the organization of such cultural contexts. A good example is classrooms which are organized as learning communities, that is, classrooms in which learning benefits from the social interaction among equals. However, not all contexts are organized in this way and, in some cases, they function as individual contexts as well. Thus, contexts where we think with others and contexts where we think on our own with the help of other cultural artifacts can coexist.

This point leads us to the second question suggested: the existence and/or functionality of the notion of individual mental representations. The connection between individual representations and social activities is difficult to ignore, but it is also obvious that it is not an isomorphic one, and that it is not always a smooth one. Salomon defines it as a “spiral of effects” that mutually influence each other.

Moreover, research results from studies on conceptual and representational change consistently question the existence of schematic representations that are stable and relatively independent from their context. As a result, among other things, of the persistence of implicit theories, the coexistence of contradictory knowledge, and the nonactivation of certain schemata in certain contexts, a new representational model has been proposed from cognitive psychology which is more in line with the social approach to learning and cognition, and more congruent with a view of cognitive functioning characterized by flexibility and adaptation to context.

Such a new model, as we have already pointed out in previous works, includes the existence of intermediate levels of representation between schemata and action—levels of a potentially explicit nature and highly context-dependent—called *mental models* (Liesa & Castelló, in press). We believe that this new representational model constitutes a potentially significant cornerstone for the construction of a new integrative paradigm in which individual representations as well as a cultural approach to teaching and learning processes can find room.

Finally, regarding the third of the threads suggested above and following the previous line of thought, we believe that it is not only possible but also highly desirable to broaden the unit of analysis of educational psychology to the social and cultural, that is, to action, activity, interaction, or interactivity. This is particularly the case if we assume that educational situations must be studied in context and that teaching and learning processes in school settings are always socially and culturally situated.

However, this does not solve the problem of the complexity of devising and conducting educational research studies in culturally situated contexts—quite the contrary. Even if an interactive unit of analysis facilitates the understanding of social action taking place in the classroom, it does not allow us to grasp the relationship between such an action and the different levels of

representation as defined above. In this respect, even if options depend on the kind of research conducted and on the goals we want to accomplish, the most valid option is likely to be one that includes different complementary units of analysis capable of explaining both action and representation.

From what we have just discussed, it can be inferred that our positioning in constructivist educational psychology is neither a radically cognitivist nor an extremely social and cultural one. As we highlighted in previous works, we believe that the adoption of a *socio-constructivist* perspective is currently the most comprehensive and coherent option so as to respond to the challenges faced both by research and intervention in educational psychology.

CURRENT ISSUES IN EDUCATIONAL PSYCHOLOGY: A SOCIO-CONSTRUCTIVIST PERSPECTIVE

We would like to begin our analysis of the current state of the art in educational psychology by reflecting upon the implications of *research on specific content teaching and learning* in educational psychology. The tendency to study supposedly content-free psychological processes, highly criticized in the 70s, seems to have been finally abandoned to the extent that, in the next few years, the epistemology of disciplinary knowledge acquisition is likely to become one of the emergent areas in educational psychology.

We still don't know much about the processes of knowledge construction in specific content areas and, even if this is a field to be studied in collaboration with other disciplines, it is also an unavoidable one to face if educational psychology is to progress along these lines.

Regarding the line of interest dealing with the *teaching process*, advances in the understanding of the processes of new knowledge acquisition are clearer and more substantial than the ones focusing on the elucidation of educational influence or on criteria for enhancing teaching processes. This should be one of the future research lines in educational psychology, hence incorporating the results of studies conducted following social and cultural approaches and, particularly, relating these results to the ones on knowledge acquisition processes.

In terms of the dichotomy *descriptive versus experimental research* it should be noted that the development of educational psychology research in the last twenty years reveals an increasing tendency to design experimental research studies in contrast to descriptive studies. However, given the significant shortages and gaps in our understanding of such relevant elements as teaching processes, the relationship between explicit representations and implicit knowledge, or between representations in general and performance, and if we are to progress toward the integration of different theoretical perspectives, we will have to admit that it will be advisable to incorporate research strategies more focused on descriptive and interpretative studies.

Regarding the *relationship between the classroom and other educational settings*, we would like to point out that, as noted by other authors, considering the classroom as a privileged environment for the study of teaching and learning processes is a recent and increasingly significant trend. However, and concerning the research agenda, it would be necessary to also bear in mind the relationship between the classroom subsystem and other subsystems which are part of the educational context—institution, community, etc.—as well as the different levels in which the classroom is embedded—transcultural, national, and institutional.

Another relevant issue within educational psychology deals with the *relation between educational practices in school and in other contexts*. In this respect educational psychology research has historically focused on the study of educational practices in school. However, it will be necessary to incorporate the study of other educational practices in the future decades, especially taking into account that a great deal of career development thus require it, and that this kind of

knowledge would redound in a better understanding of educational change. Emergent research about learning communities may accomplish this function.

Finally, we would like to briefly discuss the integration of different theoretical perspectives in emergent paradigms. Following other authors' considerations, we have already argued that we are witnessing the emergence of a new paradigm characterized by a necessary integration of cognitive and social assumptions which allows us to account both for the construction of individual representations and for the social situations where teaching and learning processes take place.

We believe that a large part of the research studies taking place in the next decades should decisively contribute to the articulation of this new integrative conceptual framework. In order for this to be possible, researchers must be sensitive to the present status of knowledge in educational psychology, and must also be capable of devising complex research studies addressing both the cognitive and the interactive aspects of instructional contexts.

FURTHER READING

- Biddle, B. J., Good, T. L., and Goodson, I. F. (1997). *International Handbook of Teachers and Teaching*. Dordrecht, NL: Kluwer.
- Claxton, G., and Wells, G. (Eds.). (2002). *Learning for Life in the 21st Century: Sociocultural Perspectives on the Future of Education*. Oxford, U.K.: Blackwell.

CHAPTER 38

Reconsidering Teacher Professional Development Through Constructivist Principles

KATHRYN KINNUCAN-WELSCH

The literature on the professional development of teachers through the decade of the 1990s and into the twenty-first century has highlighted one common theme: substantive professional development opportunities for teachers are sorely lacking. Many have pointed to the scarce resources dedicated to professional development; many have suggested that a focus on standards, curriculum, and student assessment has obscured the relationship between teacher learning and student learning; many have commented that the prevailing culture of schools and schooling poses barriers to teacher engagement in quality professional development. However one chooses to cast the current state of professional development for practicing teachers, it is clear that teachers are under closer public scrutiny than ever before, without any radical changes in support for improving classroom practice. It is in this context that I share a portrait of professional development for teachers that is grounded in constructivist principles. This portrait has evolved from over fifteen years of working with teachers, principals, curriculum directors, and teacher educators in designing professional development experiences that have deepened teachers' understandings of what and how children learn, and scaffolding those understandings to improved practice.

Constructivism has been discussed from multiple perspectives, including philosophical, psychological, social, and educational. These perspectives, of course, overlap when we shape what we do in the day-to-day realities of teaching and learning. The perspective that I bring to this chapter describing the professional development of teachers is that constructivism is a theory of learning that suggests that individuals make meaning of the world through an ongoing interaction between what they already know and believe and what they experience. In other words, learners actively construct knowledge through interactions in the environment as individuals and as members of groups. It is from this understanding of constructivism that I describe how professional development of teachers can be guided by constructivist principles of learning. It is worth noting here that the literature on constructivism has predominantly addressed students in PK-12 settings. An understanding of how teachers learn is critical to substantive and ongoing improvement of instruction in schools. It is with that premise in mind that I offer the following vignettes and related thoughts on the professional development of teachers through a constructivist lens.

TEACHERS CONSTRUCT THEIR OWN UNDERSTANDING THROUGH EXPERIENCES

The underlying principle of constructivism as a theory of learning is that the learner constructs meaning and deep understanding through experience. One might ask why constructing meaning and deep understanding is important. Teachers have available to them an abundance of ready-made lesson plans and scripted materials to guide them through the instructional day. Unfortunately, these ready-made materials do not support teachers in making those in-the-moment instructional moves that scaffold children to deep understanding and insights. Children come to any instructional setting and learning goal at very different places. Teachers must be able to craft instruction through varied pathways that brings every learner into the instructional conversation. This requires both knowledge of content and of related pedagogy. One way to accomplish this is to provide teachers with experiences that provide them with opportunities to explore the relationships between content knowledge and pedagogy.

Immersion and Distancing

One of the cornerstones of professional development initiatives that I have found to be successful is the notion of providing experiences for teachers through *immersion and distancing*. This simply means that when designing professional development, cofacilitators and I plan experiences that engage, or immerse, participants in some active learning connected to the goals of the professional development initiative. After that immersion, all the participants, including those facilitating the group, step back from the experience, or distance from it, and reflect on how the experience challenged their beliefs and practices. The reflection can be written in a journal and/or shared orally with group members. It is through the process of connecting the experience to currently held beliefs and practices that often leads to a dissonance, or space of discomfort. If teachers feel safe to experience this dissonance, then the way is open for new understandings about content and pedagogy. Let me share a few examples from my professional development work with teachers.

I cofacilitated groups of teachers in rural Southwest Michigan from 1994 to 1996, the Cadre for Authentic Education, who were interested in bringing constructivist principles to their teaching, particularly in the area of math and science. One of the first challenges we had as facilitators was to help the teachers construct an understanding of constructivist pedagogy. We designed a two-week summer immersion experience in which the teachers engaged in exploring the principles of constructivism in the morning and applied their emerging understandings with groups of children enrolled in a math and science summer camp during the morning of the second week. The schedule for this immersion is presented in Table 38.1.

We followed this two-week immersion with monthly meetings and site visits throughout the subsequent school year. We were committed to a professional development design that acknowledged that deep understanding and shifts in teaching can best be accomplished through ongoing immersion within the local context of teaching.

Our summer immersion activities followed principles of constructivist pedagogy by including learning through many modalities: reading and discussing books and articles, viewing videos, presentations by experts in the field, and group learning activities. During the second week, the teachers were immersed through pedagogy. Children from the surrounding school districts came during the morning to participate in learning activities that were planned by the teachers on the basis of the content and pedagogy that was being explored.

Each day of the two-week immersion allowed for ample time for distancing through dialogue, reflection, and journaling. The commitment to distancing was a departure from the prevailing professional development. Teachers often experience a “sit and get” scenario for staff development

Table 38.1
Schedule for *Cadre for Authentic Education* Two-Week Summer Immersion

Cadre for Authentic Education Week of July 18					
	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 a.m.	Overview	Opening (Administrator's Day #1) Sharon Hobson: "Constructing A Learning Community Through Communication"	Opening Judy Sprague: Lunar Activity	Opening Math Video: "Conceptual Change" Featuring Deb Ball	Assessment Issues Video: "Private Universe"
9:15 a.m.–9:25 a.m.	Break	Break	Break	Break	Break
9:30 a.m.	Action Learning Activity "Link Activities Forward" Reading: "Immersion and Distancing: The Ins and Outs of Inservice Education"	Sharon (Cont.) Links Forward	Reflection: Self-Assessment and Group Assessment "Identifying Content As it Relates to Core Curriculum"	Feedback: Balloon Activity (Assessment Criteria)	
11:30 a.m.	Lunch	Lunch	Lunch	Lunch	Lunch
12:00 p.m.	"Journaling—A Reflective Practice"	Judy Ball: "Cooperative Learning Groups: Establishing Standards"	Jeff Crowe: "Dynamics of Assessing Group Work"	Discussion/ planning—Options for Week II: Transference Models, Posing of Questions, Issues	Discussion/ planning
View Write: 3 areas: Talk–write Read–write Talk 5 minutes Write	Reading: "The Need for School-based Teacher Reflection"				

Table 38.1
(continued)

1:00 p.m.–1:15 p.m.	Break	Break	Break	Break	Break
1:15 p.m.	Constructivism: “Bridges and Transition”	“Problem Posing–Problem Solving: Building Common Understanding”	Reflection: Lunar Activity Assessment	Discussion/Planning	Discussion/Planning
2:15 p.m.	Days Review	Journaling	Journaling	Journaling	Journaling Wrap-up/Evaluation
2:30 p.m.–3:00 p.m. Resource “Library” open for inspection (Optional Activity)					
8:00 a.m.	Monday Opening	Tuesday	Wednesday	Thursday Administrators Day # 2	Friday
Student Activities (Menu Choices)					
Students Attend	Leaders: Judy Sprague	Leaders: Judy Ball Drew Isola	Leaders: Judy Sprague Judy Ball Drew Isola	Leaders: Judy Ball Drew Isola	
	Lunar-Based Activity	Science Options Activities	Math/Science Option Activities	Science Optionactivities	
11:30 a.m.	Lunch	Lunch	Lunch	Lunch	Lunch
12:00 p.m.	Discussion/Reflection/ Planning	Discussion/Reflection/ Planning	Deb Ball	Discuss Class Videos with Administrators/ Advocacy Planning with Administrators	Discussion/ Reflection/ Planning/ Evaluation (off site)
	Journaling	Journaling	Assessment Issues	Sharon reviews planning with teachers and administrators	Finalize first 1994–1995 follow-up meeting Journaling
2:30 p.m.					

that has little opportunity for lasting impact in the classroom. Immersion and distancing was an element of our design we were committed to and carried into our meetings with the teachers during the school year following the summer experience.

We asked the participants to create tangible artifacts of their active construction of meaning about constructivist pedagogy in the follow-up sessions during the school year. In one of the structured activities, the facilitators asked participants to share a problematic issue of experience with a peer, discuss how that problematic experience might be addressed, and articulate initial thoughts about an action. This engagement in active construction of meaning about constructivist pedagogy was particularly powerful for the teachers because it acknowledged that shifts in pedagogy are not simple. Teaching is a complex activity that is often structured around deeply embedded routines and practices. Our goal was to bring those routines to the surface, examine them, and reconstruct through dialogue with a trusted peer. Selected examples from the teachers are presented in Table 38.2.

The examples are clear indication that the teachers were grappling with the day-to-day conflicts of existing structures and expectations and their emerging understanding of constructivist pedagogy. The teachers were questioning not only the external demands such as mandated curriculum and assessment, but also their own struggles as they saw teaching and learning from a different perspective than they had in the past.

It is this struggle, perhaps, that best characterizes constructivist professional development. Teachers must be supported and encouraged through meaningful experiences to question their own beliefs and practices. Current professional development does very little to encourage this examination and reflection. As professional development for teachers continues to be closely scrutinized in this era of accountability, perhaps we will see a commitment from school districts and external professional development providers to learning through experience, *immersion*, and reflecting on how that experience should influence practice, *distancing*, as a necessary element of quality professional development.

Constructing Metaphorical Representations

It has frequently been said that teachers teach as they have been taught. Teachers come to the profession with deeply embedded mental models of classroom practice that have been shaped over many years as students in schools that have not changed much over time. As a facilitator of teacher learning, I have found it useful to engage teachers in uncovering their tacit, or embedded, belief systems. Teachers must realize what they believe and how those beliefs shape practice. Furthermore, within any professional development initiative that is directed toward changing practice, those embedded belief systems must be altered if enduring changes are to occur.

One of the ways that I have supported teachers in examining their belief systems is by asking them to think about their beliefs and practice through metaphor. Metaphors, expressed through language or physical artifacts, become a medium through which belief systems are challenged and opened to new ways of thinking about how teaching and learning should be. I will illustrate how I have used metaphors in two very different professional development initiatives.

The first example is taken from the Cadre for Authentic Education initiative described in the previous section. Teachers participated in this initiative as a way of bringing a more constructivist orientation to their pedagogy. As part of the two-week summer immersion experience, the teachers constructed mobiles of learning that represented classroom practice as it currently existed in their classroom and also, in contrast, practice from a constructivist perspective. The physical construction from each group was very different, but each mobile clearly represented teaching and learning from two very different sets of principles about classroom organization, curriculum, and instruction. For example, one group represented the traditional classroom as three primary colors;

Table 38.2

Selected Responses From Follow-Up Meeting Activity.

Cadre '94 For Authentic Education,
Allegan County InterMediate School District,
October 11, 1995

Reflections on Constructivist Teaching/Learning: The following is a synthesis of participants' sharings from the activity on selecting a problematic issue of experience, which emerged directly in relationship to changing the teacher "self" and/or their classroom toward a more constructivist orientation. Included are the original problems or issues (in first person) and the shared peer-assisted solutions. In each problem and solution, the underlined areas indicate what each participant identified as constructivist terms, concepts, or language.

Problematic Issues or Experience

The squelched *creativity* of students is an issue for me. I play a song "Animals Crackers in My Soup," and asked the 5 & 6 year-olds to act it out. Most of them stood around until I finally stood up and did it with them. They then copied my actions. How do I get little ones to think creatively on their own and in groups? They seem to do well in play.

I have been working on a unit on the solar system. Students are *very interested* in this. They have *willingly researched* the planets and reported on them. They have *created* their own planets, etc. However, the unit has taken too long. I have been told that I should be on rocks and minerals by now. I have to "cover the whole list of outcomes."

My administrator is "test driven" and very concerned with keeping everyone happy. There are to be no changes with the way things are—status quo is *encouraged*. I find it difficult to be defending my *constructivist approach* on a daily basis only because it causes the administration problems with a few parents. The *children* are happy and *enthusiastic*, I might add but no classroom visits are made. It could be me! A personality conflict, perhaps. (In which case there maybe no hope!!)

I had 16 groups (4 classes) of kids doing agency. The agency groups had to develop a complete advertising campaign to try to capture a company account. The *scaffolding* included the psychological and secondary needs of man, ad techniques, analyzing ma., TV, radio, and billable adds. When they worked, I allowed *space* for the

Peer-assisted Solution

As I watch them at play, I could praise the creative thinking as I perceive it. Later when we have a *group activity*, I could have them *reflect back* to the kind of thinking they were doing during play. By helping them to *become aware of and feel good about their own ideas*, they will be *encouraged* to be more creative.

I know the students have *internalized* the information covered in this unit and the *ownership* they feel. This attitude is a *reflection* of the "traditional" approach to education. I must gently help those ignorant of *constructivism* become familiar with it. I will invite them in to *experience* the *enthusiasm* of the students and to *interact* with them. I will probably limit the time spent on the next unit, if really necessary, but try to allow some *constructivist* activities as well.

I think I might try a 4-part approach. (1) Invite the principal, other staff to visit and help *evaluate often*. (2) Find reasons to have parents in the room—*often*. (3) Once a week give an objective test covering the concepts in the subject that week. (4) Have kids *journal* often about *what I saw, what I learned, how I can use it—then share* as much as possible with principal and peers (yours). Finally, I'd call Cadre members to vent! Oh, I'd also send parents frequent (weekly) notes about what we're doing and why. P.S. Been There!—*Rubrics* (frequent help too. Share rubrics with principal.)

Upon reflection, I would supply the superintendent and principal with an outline or some statement of goals and objectives and a *rubric* with respect to assessment techniques—prior to performance. This would indicate to the powers to be that while errors were (will be) made, they were those of the students

Table 38.2
(continued)

groups to take *total ownership*. Finally, when they presented, the technical end was poor, they didn't have the things ready, wasted time locating on the tape, etc. Very bad looking to superintendent and principal. How do I allow ownership, yet have quality control.

I have always struggled with using groups (*cooperative learning*) in my class. Frequently I will find that many of the groups become dysfunctional because of personality clashes and behavioral problems. I have a hard time with the philosophy that all students need to become accepting enough so that they can "get along" with and work with others no matter what. Many times I can't blame students for refusing to work with certain students since I wouldn't want to work with them either given their attitude and behavior.

(possibly mine, in terms of criteria), the less-than-perfect presentation was a powerful learning tool, and that we (as learners) would improve because of them.

I think I will begin some *teaming and trust building* so the students will *respect each other*. I can think of situations where once I got to know, really know some people whose behaviors and attitudes were offensive to me that I understand why those behaviors and attitudes were covers for self-protection. If I can create situation(s) that allow this *bonding* to happen then it should carry over in the content groups. I might also work on taking the grading pressure and task pressure off of getting the task done with a good grade. Also, I might take the students aside on a regular basis to talk about why they behave as they do, suggesting some of the possibilities until I find the nerve that triggers the behavior. Once it's out then maybe we can deal with it. Another way might be to look at the number of tasks in the *groups* so all are important and necessary.

within the constructivist classroom the teacher was seen as the artist's hand holding a paintbrush and the student's hand was laid on the artist/teacher's hand. Another group used a jigsaw puzzle as the organizing theme. In the traditional classroom, all the pieces were disconnected; in the constructivist classroom, all pieces were interlocking and labeled with the following characteristics: (1) unlimited possibilities, (2) adaptation to the situation and the needs of the learner, (3) the possibility of an unfinished puzzle, and (4) no specific pattern. A third group constructed an umbrella and depicted the characteristics of constructivism along each spoke. Another group portrayed their past and evolving belief systems as a tapestry, which wove the tenets of constructivism into traditional theory and practice. The materials, natural and irregular such as ivy and wheat, were representative of children's natural curiosity. Cheesecloth was representative of the filtering of new ideas. An electronic cable represented the flow of energy through life. Ivy represented new beginnings. The teachers shared their physical metaphors with each other, and the conversation provided the teachers the opportunity to examine and reflect on beliefs and practice.

A second example of how metaphors can be incorporated into a professional development is taken from an initiative funded by a Michigan Department of Education Goals 2000 professional development grant awarded to a consortium of twenty-five districts in an urban area of Southeast Michigan. The purpose of the initiative, Staff Development 2000, was to examine how study groups can serve as a means for teachers and administrators to continue learning throughout their profession. A second purpose was to examine facilitation as a process within professional development.

As a culminating activity at the end of the eighteen-month initiative, the fifteen teachers and administrators who participated in this initiative gathered for a two-day writing retreat for the

purpose of capturing what we had learned from our experiences as members and facilitators of a study group. One of the ways we captured our learning was through written metaphors that addressed the question What is a study group? As in the metaphorical representations of constructivist practice, the participants were encouraged to uncover their belief systems about study groups and represent their construction of meaning through metaphors. An example of the metaphors about study groups is below.

A study group is the collection of passengers huddled together on the steerage deck of a ship as it steams into New York harbor at the turn of the century. A diverse collection of folks, each bringing a unique set of talents and experiences, coming together for a common purpose. Motivated and willing to do whatever it takes to achieve a common and highly desired goal.

The participants in this initiative had, for the first time, the opportunity to learn in community with others. The metaphor above illustrates how this participant experienced the journey of learning in and about study groups.

In summary, having the opportunity to construct meaning through immersion and distancing and through metaphorical representations of past, present, and evolving belief systems is an important element of professional development grounded in constructivist principles. The second element of constructivist professional development I would like to describe is the importance of learning in community.

TEACHERS LEARN IN COMMUNITIES OF PRACTICE

The recent literature on the professional development of teachers has emphasized the importance of community as a context for learning. From a constructivist perspective, theoretical bases for this assumption can be found in the notions of assisted performance, situated cognition, and communities of practice, as well as many others. Building and sustaining a community of practice as a context for professional development has been one of the most important guiding principles that has influenced my work with teachers.

In a community of practice, teachers come together for a specific purpose that is defined by the community. The specific purpose is typically related to critically examining pedagogy. Communities of practice are characterized by three aspects: (1) mutual engagement, (2) engagement negotiated by members of the community, and (3) development of shared repertoire.

Teachers participate in mutual engagement, or activity, that supports learning. The activity becomes the context in which teachers socially construct emerging understanding about teaching and learning. The activity may include reading books and articles, observing the members of the community teach, and examining student artifacts. The mutual engagement can occur at grade levels, in a building, across an entire district, or beyond district boundaries.

The second aspect of community of practice is that the engagement is negotiated by the members of the community. This is particularly noteworthy given the reality in most districts that teachers participate in district-level mandated professional development that is often disconnected from their practice and needs. In a community of practice, the teachers decide the focus of their learning and how they will structure the engagement to support that learning.

Finally, teachers as members of a community of practice develop a shared repertoire. Teachers engage in conversations about their practice, and each other's practice. They talk about students as also being members of communities of practice. Teachers and students are engaged in the mutually supportive activity recognizable by a shared repertoire.

Teachers have made it very clear to me that learning with others is the most powerful aspect of any given professional development experience, regardless of the content. It is amazing to me that the literature on professional development is so clear on this point, yet policies and practice have not taken this seriously. Teachers for the most part still teach in isolation, with little

opportunity for learning from others. There is hope, however, that this is changing. Before I turn to the future, I would like to describe a few ways in which I, and others with whom I have worked, have structured professional development to support the development of authentic communities of practice.

Initial Immersion Experiences

It is critically important to begin any professional development experience with an event that communicates to the participants that they will be engaged as members of a community. If the professional development experience has a clearly demarcated beginning and an end, such as a funded project, then initial and culminating events are appropriate. If the experience is ongoing, such as teachers forming a school community, then the events must be ongoing and authentic.

I have started and ended many grant-funded initiatives with a two-day retreat in a location some distance from where the participants live. A retreat provides the opportunity for intensive immersion and distancing activities, as well as time for conversation and relationship building over meals. From a constructivist perspective, retreat activities must be designed to engage the participants in constructing their initial understanding of the focus of the initiative in the company of and with the assistance of others.

One example of a retreat that was designed from a constructivist perspective was the beginning event for Staff Development 2000, the initiative described above focusing on the exploration of study groups and facilitation. We were fortunate in that the group in this initiative was rather small. Twelve persons joined the group: one principal, two technology coordinators, two staff development coordinators, and seven teachers. My cofacilitators and I wanted to model for the participants ways of facilitation that respected the processes of learning as well as the product. We also wanted to emphasize the importance of trust among group members in a learning community.

Our first activity as an evolving community of learners was a meal, a cornerstone of all community activity. In addition to common mealtime, the retreat activities included generating questions about study groups and facilitation and allowing the participants to address these questions from knowledge and previous experience. Acknowledging where learners are is a foundational principle of a constructivist theory of learning. Posing questions and processing current thinking about those questions provided a starting place for our construction of meaning about study groups and facilitation.

Another powerful activity during the retreat was the Rope Activity, which was designed to build trust and community among the Staff Development 2000 participants. During this activity, the participants were placed in two groups, each with a designated leader. All participants were required to wear blindfolds. Once all had been given blindfolds, the group leaders were taken to another room. The group members were told that they could not speak during the activity, they must hold on with at least one hand to a rope, and they must remain blindfolded throughout the entire activity. The group leaders were also given instructions. They, too, were blindfolded and remained silent throughout. Their task was to guide their respective group members into forming a square while holding onto a rope.

After the groups had accomplished their task of forming a square, everyone removed their blindfolds and shared their thoughts about the experience. Many talked about how they had been uneasy since they could not see and could not talk. Some felt that it was a trick and that others were able to remove their blindfolds. Some were worried they would lose their balance. But, despite the individual feelings of distrust, unease, and discomfort, all responded that the touch of the group leader and the connection to group members through the rope sustained them during the moments of darkness and silence. Many of the participants used the words *trust* and *teamwork* to express the elements of the process. This activity, as well as the entire retreat, was powerful as an initial immersion experience to form community for the SD 2000 participants.

Sustained Engagement of Community Over Time

From a constructivist perspective, the initial forging of community is critical to professional development experiences that will have lasting power for teachers. These initial experiences, however, are useless if they are not followed by sustained engagement. The prevailing professional development venue is a brief, often less than one day, workshop that is unlikely to have any impact on practice. These short workshops are based on a transmission model of learning that suggests if you just give information and tell people what to do, then they will have learned it and applied it as well. As we know, this is not the case for children as learners, nor is it the case for adults as learners. Deep understanding requires deep and sustained engagement. Teachers must have time to grapple with existing belief systems and explore how shifting belief systems translate to practice. *Cadre for Authentic Education* and *Staff Development 2000* both extended over eighteen months and some teachers from both of these initiatives continued to meet beyond the funded initiative. They held regular meetings, either during the day (Cadre) or in the evening (SD 2000) over a school year. In both of these instances, as the year and the initiatives unfolded, the participants identified themselves by a name for their group. The *Cadre for Authentic Education* group came to call themselves simply “Cadre,” the *Staff Development 2000* group came to call themselves the “Thursday Night Group” because our meetings throughout the year were held on Thursday nights.

The point I would like to emphasize here is that in both of these instances, educators from different school districts and highly varied experiences forged a learning community over time. These communities were safe places to take a risk, as all learning involves somewhat of a risk. The Cadre participants attempted new ways of teaching that reflected constructivist principles, and they had the opportunity to share their attempts and what they were learning about constructivist pedagogy during facilitated monthly meetings. They continued to explore pedagogy through reading, videos, and team teaching.

The Thursday Night Group also found the engagement over time to be an essential aspect of their professional development. This group began forging their community during a retreat in August and met twice a month following that retreat. During these monthly meetings they explored study groups as a medium for professional learning with the knowledge that they would be facilitating a study group of their own for the final months of the school year. During the culminating retreat at the end of the initiative, one of the participants commented: “I, well, I guess I really feel, that for the most part, there, there’s something that happened between us all. That we don’t want to lose in some way.”

In summary, community is an important feature of professional development from a constructivist perspective. I have found that it is critical to the success of professional development to provide opportunities for the development of communities of practice, including an intensive initial experience and sustained engagement over time. I now turn to the last principle from a constructivist perspective that I have incorporated into professional development design, providing for intentional assistance.

TEACHERS LEARN THROUGH ASSISTED PERFORMANCE

We all learn with the help of others. Young children take their first steps holding onto the hands of another. Cultures across the world provide examples of how members of society are apprenticed into roles. Novices study with accomplished members of professions. These examples demonstrate that humans learn by watching, doing, and receiving feedback. It is sad to note, however, that mechanisms for providing assistance to practicing teachers are weak, at best, and often nonexistent. Yet we know from the literature that competent assistance in the context of authentic tasks provides powerful opportunities to improve teaching.

One promising development in this arena is emerging in schools across the United States. That is, many schools are identifying accomplished teachers and designating a portion of their time, often full day, to coach teachers in improving pedagogy. In some cases, this practice focuses on entry-year teachers as part of statewide mentoring programs for novice teachers. In other cases, districts have placed literacy and mathematics coaches in buildings to support improved pedagogy in literacy and mathematics.

I am currently involved in a State of Ohio professional development initiative, the Literacy Specialist Project, which began in 2000. Faculty from several universities across Ohio work with groups of literacy specialists, or coaches, who, in turn, work with groups of teachers in their buildings or districts. In my work with the coaches I have been very interested in supporting and examining how coaches provide assistance to teachers. One of the ways we have been able to capture and analyze this process is through taped conversations between teachers and coaches in which they systematically analyze a transcript of a lesson that the teacher had previously taught. The coach-teacher dyads analyze the instruction for evidence of instructional features as well as evidence of how the teacher scaffolds the children toward the instructional goal. An excerpt of one such conversation follows. Susan is the coach; Connie is the teacher. They were analyzing a transcript of a lesson Connie had taught in which the instructional focus was on retelling a story.

Susan: I got the sense that they didn't know exactly how to go about retelling a story with puppets. Since I wasn't there, I got the sense that they were doing things with the puppets so they were thinking and therefore engaged at the thinking level with the story, but not at the level you wanted them to be where they actually going to talk . . . the purpose of this lesson to engage them in dialogue.

Connie: Exactly, exactly.

Susan: What do you think? Do you have any ideas about how that might?

Connie: I know that my next story, and I already know what I want to do, will be done differently. As I read it to them, I will engage them in the responses of the little red hen, and so when they say "not I" said the cat, "not I" said the dog, we will already begin rehearsing it before we do the retelling.

Susan: So you're going to use a more predictable book?

Connie: Yes.

Susan: I think that will probably be a good start with them. The other thing I was wondering about is perhaps you might want to consider reading them the story the session before and what do you think about actually modeling the retelling with the stick puppets so they could actually see what a retelling looks like.

In this brief excerpt, we can see that the coach opened with specific feedback and followed with suggestions to the teacher related to what she might do in future lessons to support the children in being more successful in retelling a story.

Transcript analysis is one way in which coaches assist teachers in improving their teaching. Coaches also go into classrooms to model practice, assist teachers in planning lessons incorporating the desired practice, and observe teachers during instruction. This time and labor-intensive professional development is powerful because it is situated in the context of practice. Teachers receive feedback in the moment and can make adjustments in their instruction immediately. The teacher has multiple opportunities to make sense out of the interaction with the coach in nonthreatening and supportive ways.

So, to summarize these thoughts on professional development from a constructivist perspective, I would suggest that the teachers as learners must be central to the design of professional development. We must first acknowledge teachers are learners, and provide ample and meaningful experiences through which they can construct their own understanding of the content of the professional development. Second, building communities of practice is critical for teachers to continue to learn throughout their professional career. Participants in every professional development effort I have facilitated emphasize the importance of learning with others. Finally,

opportunity to situate the learning in practice through expert assistance is fundamental. Other professions have recognized this goal and have embedded those opportunities within the career cycle. Why should teachers, who in many respects represent the future in what our children will become, be denied that same opportunity? We know how to create these experiences. The challenge is to structure schools so that they can be.

TERMS FOR READERS

Assisted Performance—What a learner, child or adult, can accomplish with the support of more capable others; of the environment; and of objects, or tools, in the environment. That point at which the learner can successfully accomplish a task, whether it be physical or cognitive, is identified at the zone of proximal development. Assisted performance, then, is teaching within the zone of proximal development.

Community of Practice—Persons who come together for a specific purpose that is defined by mutual engagement. The mutual engagement is what defines the community. For a group of teachers who have come together for professional development, the mutual engagement is learning and professional growth. The second aspect of community of practice is joint engagement negotiated among the members. The third aspect of community of practice is the development of a shared repertoire. (see Wenger (1998) for further descriptions)

Constructivism—A theory of learning that draws from philosophical, psychological, and social origins that posits that persons create (construct) their own understandings of the world through an interaction between what they know and believe and with what they come into contact. Some theorists have emphasized the individual interacting with the environment as the source for knowledge construction. Other theorists have emphasized the importance of those encounters occurring in social settings. The fundamental point of agreement, however, is that the learner is engaged in the active construction of knowledge.

Distancing—Reflecting on an experience for the purpose of making connections to one's context and practice. From a constructivist perspective, distancing from an experience provides the opportunity to actively construct knowledge and shape beliefs through that experience.

Immersion—Deep and substantive engagement in some activity or experience that is connected to a learning goal. Immersion can take many forms: reading a text, viewing a video, teaching a lesson, or constructing a physical representation of classroom practice are but a few examples.

FURTHER READING

- Kinnucan-Welsch, K., and Jenlink, P. M. (1998). Challenging assumptions about teaching and learning: Three case studies in constructivist pedagogy. *Teaching and Teacher Education*, 14(4), 413–427.
- Lave, J. (1996). Teaching, as learning, in practice. *Mind, Culture, and Activity: An International Journal*, 3, 149–164.
- Richardson, V. (Ed.). (1997). *Constructivist Teacher Education: Building a New World of Understandings*. London: The Falmer Press.
- Tharp, R. G, and Gallimore, R. (1988). *Rousing Minds to Life: Teaching, Learning, and Schooling In Social Context*. Cambridge, U.K.: Cambridge University Press.
- Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*. Cambridge, U.K.: Cambridge University Press.

CHAPTER 39

Constructivist/Engaged Learning Approaches to Teaching and Learning

CYNTHIA CHEW NATIONS

The author facilitated a class entitled “Inquiry-Based Instruction.” The main objective of the class was to transform teacher leadership in instructional planning and implementation of learner-centered pedagogy. This goal was accomplished through reading case studies, employing effective learning experiences in the classroom, in-class activities and discussion, and writing in a reflective journal. This writing includes teachers’ voices as expressed in these reflective journals. (Permission was granted by students to use excerpts from their journals; students’ names are not disclosed.)

In order to provide our children with the skills they need to function in today’s society, constructivist theory and engaged learning practices and approaches have emerged as educators struggle with questions about how to improve teaching and learning. This chapter will describe teachers’ experiences and reflections as they examine their own fundamental belief systems about teaching and learning.

Scenario 1: *Forty-two middle school teachers are attending a professional development session centered on changing paradigms in education. In their groups, the teachers are asked to divide a large chart tablet in two columns. On one side they are asked to draw and describe the child of yesterday and discuss how school, learning, the family environment, teachers, the community, and society, were “back then.” In the second column, the teachers were asked to draw and describe the child of today—how schools operate, how we learn, family environments and situations, teachers, the community, and our society of today.*

Scenario 2: *A group of fourth-grade teachers are working together to discuss instructional improvement. The question about English Language Learners frequently surfaces, “If research tells us it takes three to ten years to become proficient in reading and writing, why is it there a state mandate for them to take THE TEST in three years? What can we do to help our students?”*

Scenario 3: *A group of thirty graduate students are taking a course—“Inquiry-Based Instruction.” Their task on the first evening of class is to build a parachute. They are divided into six groups of five. Each group is provided with a set of directions, and materials to build the parachute are provided on a large table in the center of the room. They are to follow the directions, be able to demonstrate how their parachute works, and discuss the creative processes they experienced in their groups. The*

directions provided to each group were different—ranging from specific directions, to some direction, to no direction at all (just build a parachute).

What do the three scenarios have in common? Teachers experience similar situations as they struggle to examine classroom practices and to improve learning for all students. There are many external political, economic, and social influences that effect education. Teachers work with children in a world different from the world they experienced as a child. Students come to school from different cultures and backgrounds. Students come to school with family problems and differences in first language and English literacy levels. How do we teach students who are marginalized by their background, socioeconomic status, language, lack of academic achievement, and lack of support? How can we best serve these students? Do we really believe “all students can learn?”

CHILDREN OF THE TWENTY-FIRST CENTURY AND CHANGING TEACHING AND LEARNING

It is necessary for educators, society, and families to understand the world in which our children live before we can identify the need to change our pedagogical practices. For children in past generations, knowledge was *finite* and limited. Teachers passed on their own knowledge while students sat, passively listened, and did not have opportunities to explore and expand their learning. In traditional learning environments today, the teacher continues to direct and lead the instruction following structured lesson plans. In traditional lessons, skills are taught sequentially and lower-level skills are “mastered” before students are allowed to participate in activities that involve evaluation, synthesis, or analysis (higher-level activities). Students work individually on specific skills and objectives, and they are evaluated with end-of-chapter and end-of-book tests, six weeks content tests, and other standardized tests that are designed to evaluate the content delivered to them by the teacher.

For children growing up in today’s society, knowledge is *infinite*. Our perceptions about what schooling should look like are a mismatch with the reality of today’s children. With the need to create effective and engaging pedagogy that addresses the learning needs and styles our students, we look to learning models that provide student-centered instruction, interactive learning environments, and alternative assessment practices. In constructivist and engaged learning student-centered approaches to learning, lessons are less formal and rigid; lessons are more individualized and skills are relevant to students’ experience and prior knowledge; students are provided with opportunities to participate in higher- and basic-level skills during the activities; group work is encouraged; and alternative methods of testing and assessment are used. Family and societal support go hand-in-hand with school support as required contexts for necessary changes in teaching and learning.

Classroom learner-centered instructional issues are the focus of school improvement discussions. What is constructivism and engaged learning? Why are these methods difficult to implement in classrooms? How do we assess learning for understanding? How do we focus on learner understanding while preparing them for norm- and criterion-referenced testing that is a requirement in our current accountability systems? Will students be successful? Do we believe all children can learn? What systems need to be in place in order to improve our classroom practices? How do we become transformative teachers?

WHAT IS CONSTRUCTIVISM AND ENGAGED LEARNING?

Constructivism and engaged learning will be used synonymously due to the similarities of the activities utilized in classroom practices. Similar philosophies include: problem-based learning

and project-based learning. Engaged learning includes collaborative and cooperative, as well as individualized, activities. When engaged learning experiences are utilized in the classroom, students become independent thinkers and learners who participate in, and extend, their own learning processes. Students develop life-long skills and strategies that help them apply knowledge in situations outside the classroom. Students are actively involved in their own learning.

Journal entry: I have always considered myself to be a good teacher; however, my goal is to be an effective one. I consider myself a life-long learner who attends workshops and reads educational material to improve my craft. Administrators and teachers have always complimented me on my classroom management, and parents would request me for their children because of my structured environment in the classroom. My test scores on the state test were always impressive because I taught what needed to be taught in order for students to be successful on the exam. Now, I realize there are holes in my teaching, gaps between what my students need to learn at the moment and what they need to learn to become life-long learners. I don't want my students to learn something that will benefit them for the moment; I want them to acquire knowledge which they can utilize the rest of their lives.

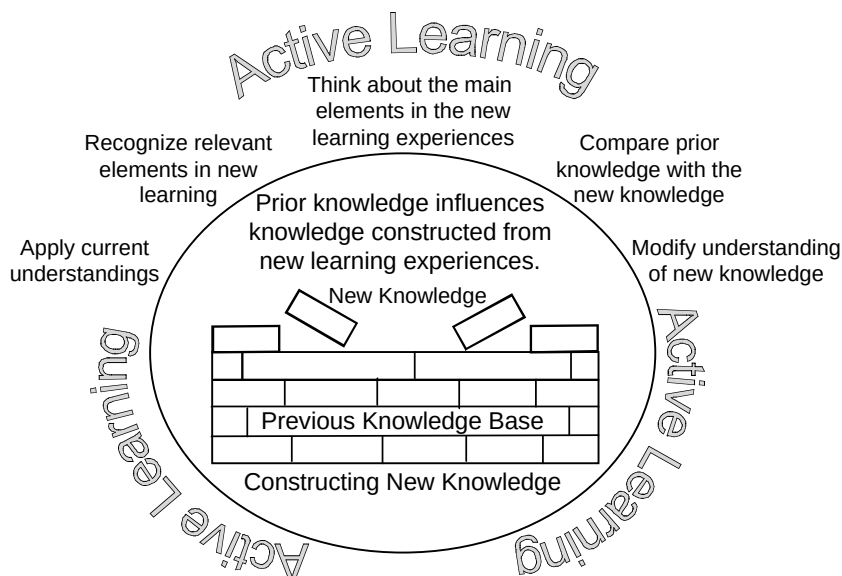
As instructional issues are discussed and debated in schools today, big differences exist between constructivism, a theory about knowledge and learning in the information age, and traditional practices of teaching and learning. The traditional learning model views the teacher as the source of knowledge and the students as the receptacles of knowledge. While the students listen, the teacher is center stage, following the didactic model of teaching in which content information is provided by the teacher. Students are required to listen and “learn” (memorize) the content. In traditional teaching the previous background and experiences of students are not taken into account. Students sit still and absorb the information presented by the teacher, and students usually work alone. If they do work with others, groups are usually formed placing students of similar abilities together.

This notion of teaching and learning contrasts with the constructivist/engaged learning model (Figure 39.1) that emphasizes the creation of active learning environments promoting learner-centered critical thinking, collaboration, and discovery. The constructivist model of teaching and learning focuses on the student. The teacher designs student-centered lessons and facilitates student learning during the lesson. Students are provided with opportunities to think, problem-solve, investigate, and explore; and they are allowed to individually and collaboratively construct their own understanding of the content. As students collaborate, discuss, and share their prior knowledge and experiences with each other, they learn the content of the lesson.

Journal entry: After the presentation of the history of constructivism, I realized the theory is not new. It has been around for hundreds of years. It's interesting that it's been hundreds of years since constructivist learning was first introduced, and we are still working on ways to implement these strategies. I feel there are several reasons for this. It is very difficult for teachers to let students be responsible for their own learning. It is easier for students to depend on their teachers to “spoon-feed” the information.

In order to provide children with the skills they need to function in today's society, educators are examining different teaching and learning models that differ from traditional approaches used in the past. Constructivist education empowers student learning through the construction of meaning in a learner-centered inquiry environment. Learning in constructivist terms is both the process and the result of questioning, interpreting, and analyzing information; using this information and thinking process to develop, build, and alter our meaning and understanding of concepts and ideas; and integrating current experiences with our past experiences and what we already know about a given subject. Engaged learning and the constructivist learning model

Figure 39.1
Constructing New Knowledge



are in direct contrast to traditional methods in which teachers provide students with unchanging knowledge they are to memorize.

Journal entry: I thought I knew what constructivism was, but the more I learn, the less I know. I guess that this is true of most things in life. I think an important word here is disequilibrium. To have to examine and reflect on my practices and beliefs of education has had an unbalancing effect. I guess I thought I had it all together before I discovered constructivist approaches to use in my classroom.

If we are to meet students' needs and help them to be successful now and in the future, classroom planning, instructional practices, and the way we assess will undergo changes. Some recommendations include:

1. recognizing, planning, and creating learning experiences that cover the skills that are to be learned at every grade level *versus* teaching lessons that do not follow the recommended curriculum
2. planning learning experiences that will increase self-directed learning *versus* teacher-directed learning
3. planning for learning that is collaborative and communicative *versus* individual learning
4. the use of different instructional methods and grouping *versus* traditional whole-class instruction
5. instructional planning that recognizes student differences *versus* addressing differences after students have failed
6. using multiple forms of diagnostic assessment (formative and summative) before, during, and after the lesson *versus* summative assessments at the end of the lesson
7. recognizing and believing all students can learn *versus* sorting students out (tracking) to provide them with different learning experiences that might not be at grade level or up to the standard.

Teachers want to improve classroom practices, but have doubts about utilizing learner-centered approaches in their classrooms.

Journal entry: I do believe that many of us have tried to implement this kind of classroom environment where the students work on hands-on projects and develop their critical thinking skills while conducting their own research and investigations. I find it very rewarding to see the students' anticipation and excitement when I present them with the next unit of study in which they will be engaged. I have really tried to empower them to construct their own learning, and I've seen a difference even in the students that don't usually seem excited about doing schoolwork. I believe that half the battle is won when a teacher manages to engage and excite the students about learning.

WHY ARE ENGAGED LEARNING METHODS DIFFICULT TO IMPLEMENT?

In spite of a growing body of evidence that supports constructivism and engaged learning methods, teachers and students do not adjust easily to different ways of learning and teaching. A dichotomy exists between traditional (directed/didactic) approaches to learning and teaching and constructivist and engaged learning approaches. The way we learn and teach has shifted from a purest, cognitive traditional approach that has been present since the Industrial Age to more problem- and inquiry-based, learner-centered, constructivist approaches.

Constructivist and engaged learning practices represent a significant departure from teachers' established teaching philosophies, their own experience in school, and the way teaching was modeled for them in their student teaching experience. Also, in many instances, support and understanding from administration, school boards, parents, the community, and other teachers do not convey support for implementation.

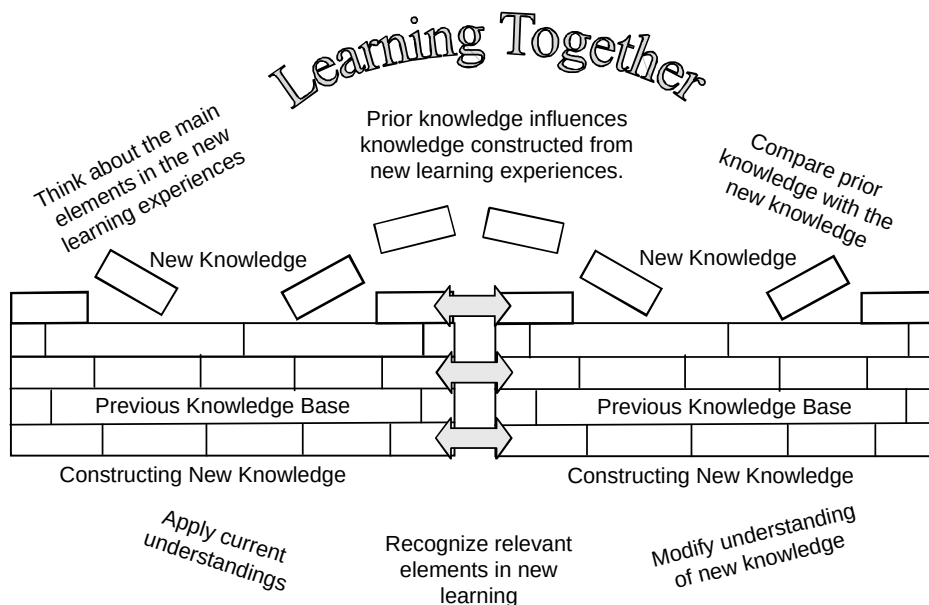
Journal entry: I believe that all of us want to achieve these goals, but due to outside influences such as time management, reluctant administrators, and an uncooperative staff, we are constantly discouraged and thrown off our paths.

Journal entry: It is difficult to implement new ways of teaching and learning because of several major changes that have taken place at our school. One is that we are working very closely with our colleagues at school. I believed it would be a welcome change to work with individuals who felt as I did, but this is simply not the case. We are learning about progressive education and critical pedagogy, and these concepts are really difficult since everything we read points to the fact that education is not an isolated action that takes place in the classroom. It has been disheartening that not all teachers recognize and agree with this while some of us do.

Change is slow, and one recommendation for implementation is for teachers to "ease" in to experimenting with different approaches. In the traditional model of learning and teaching, students' experiences, background knowledge, and practical knowledge of the content is not considered when designing classroom learning activities. Students are required to learn book knowledge that is often unrelated to the practical knowledge they experience in their own lives. When teachers acquire knowledge about engaged learning and constructivist approaches to lesson design, they are often willing to try new approaches. It is important not to dive in to the water at warp speed! Rather, wading into the waters gradually would be a better beginning and will lead to sustained practice. When designing lessons, teachers can include constructivist/engaged learning activities and assessments in their lessons to see how the process works. Reflection is encouraged:

1. Were the students successful?
2. Did students know about the content to be learned, how they were going to learn it, and how they would be assessed?

Figure 39.2
Learning Together



3. How did I feel about trying out new approaches?
4. Did I "let go" and allow students to explore the content and think for themselves?
5. Were students allowed to work collaboratively and share their own knowledge of the content with each other?
6. Did I assess in different ways before, during, and after the lesson?

How can a teacher start designing lessons that will engage learners? Learning experiences are designed to provide students with opportunities to explore and investigate. In constructivist/engaged learning lesson designs, the responsibility for learning is shifted to the learner. Materials and resources, in addition to the textbook, are provided. Students are allowed to explore and find answers on the Internet in addition to texts and resources found in the classroom. Using hands-on, manipulative materials facilitates the investigative and discovery process for students. The teacher designs and models learning experiences that provide students with opportunities to evaluate, analyze, predict, discover, and create in collaborative groups or individually (Figure 39.2). Students are encouraged to provide explanations and reasons for their learning, and constant dialogue is encouraged.

Teachers have found that trying new approaches can open new doors to the way they plan and assess lessons.

Journal entry: (Written before developing, writing, and facilitating an engaged learning unit in a mathematics class) I want my students to be independent and have the desire to learn more. I want to feel confident that after they have left my classroom, I have made an impact. I am often called the "cool teacher" or the "fun teacher," but I have rarely had the compliment of, "I learned so much in your class." My students are doing the minimum, because that is all that is required.

Journal entry: (Written after describing a 3-week unit on the structure and properties of cubes and rectangular prisms) Looking back on the activity, I am pleased. Sure, we experienced some difficulties during the lesson, but I think the students learned a lot and will retain more of the information because of it. Perhaps some of the difficulties came from the fact that this was out of character for me. The students were actually having fun, and learning something meaningful as well. All year long, I dictated the learning. . . I'm inspired and up to the challenge of "thinking outside the box."

HOW DO WE ASSESS LEARNING FOR UNDERSTANDING?

How do we focus on learner understanding while preparing for norm- and criterion-referenced testing that is a requirement in accountability systems?

A dichotomy between traditional and constructivist/engaged learning assessment practices and methods also exists in current learning and teaching practices. In a traditional environment, assessment of student learning is separate from learning experiences and is usually provided in the form of tests given at the end of the lesson. Traditional tests of student learning and knowledge usually cover the "basics." In addition to the basics, today's students need to be able to think critically, to predict, analyze, and make inferences about the content. Changes in the way students are assessed are necessary in order to help our students develop these skills.

Constructivist and engaged learning environments call for the use of authentic assessment practices before, during, and after the learning experience(s). Teachers ask the question, "If I use engaged learning and constructivist approaches in my classroom, will students meet accountability requirements as measured by state testing?"

Journal entry: As a teacher I am conflicted about the best teaching practices to use. I'm hoping I will learn and use effective teaching strategies to incorporate in my classroom. I also realize that I am accountable to the state test, which, in my opinion, contradicts learner-centered instruction.

Assessment in traditional approaches includes grading daily student work, end of chapter/unit tests, six weeks tests, semester tests, etc. These are all summative assessments—assessments that take place at the end of the learning experience. Ideally, assessment practices in constructivism and engaged learning environments would eliminate grades and standardized testing; however, this is not the reality of accountability systems in schools.

How do we combine accountability systems with constructivism and engaged learning approaches? School accountability systems are required to measure student learning. Currently, standardized tests are a part of every accountability system. There are ways to look at results to help improve instruction for children. If the test is aligned with the standards set at each grade level, teachers can use the results to examine areas in which students excel and areas in which students are not successful. Teachers can look at each objective, see how individual students performed, and adjust instruction accordingly. Teachers can then use this knowledge to make improvements when planning teaching, learning, and assessment activities.

Journal entry: In our grade level we have analyzed the results of last year's tests. In mathematics, for example, we know the objectives in which students need more help. We teach these concepts more, and we design our lessons so students will gain deeper understanding of the content. We also teach these concepts using different approaches. After they understand the concept, we show them what it might look like on a test. Understanding the concept first has really helped our students' performance on the test. It takes a little longer for us to develop and prepare the lessons, but we have worked together to save time and energy, and our students have shown improvement.

Standardized testing is a reality of assessment practices in schools. Standardized testing procedures have followed teach-and-test models, and testing formats require specific answers in multiple-choice formats. Practicing teach and test models over and over during the school year provides gains in achievement scores in some schools. When examining teach and test models, important questions should be asked: (1) Are we providing children with the critical thinking and problem-solving skills needed to be successful in life? (2) Are students really understanding the content, and will they be able to apply the knowledge gained from the content in life situations? There is a need to look further than test results to know what our students understand.

Performance-based assessments that address national and state standards provide a way educators can design and utilize more balanced assessment practices. Assessments that include not only the summative forms of assessment (norm-and criterion-referenced tests, end of chapter tests, daily quizzes, etc.), but also include formative assessments, provide balance in evaluation practices. It is important for students to be involved in formative assessment practices that include: student journals, student portfolios, the use of higher cognitive demand questioning strategies, student inquiry and investigation projects, activities in which students design a product, debates, science projects, video and technology productions, etc.

Journal entry: Using higher cognitive demand questioning strategies develops and fosters critical thinking, evaluation, and knowledge. I would like to learn more so I will be able to further develop this strategy in my classroom. As we were discussing questioning strategies, I shared how I have my students develop their own questions while they read. The students become the teacher as they share their questions with the rest of the students. They normally work in groups of two and help each other develop the questions. There is a sense of pride when they ask the question. We avoid the yes/no answers.

Students remember these learning and assessment activities, and these activities help them practice critical thinking habits and become lifelong learners.

Journal entry: Every morning of each school day, my students have to solve a mathematics “Problem of the Day.” The problem consists of a challenging word problem in mathematics. One strategy I recommend is for students to ask themselves questions about the problem. These questions include: What is the question asking me? What information do I know? What information do I need? By utilizing this strategy for each problem, student success increases. The answer is much more meaningful when these questions are asked. This strategy has become an incredible learning tool.

The role the student plays in his or her own understanding of the content is an important part of assessment. If teachers ensure students know the objectives and goals of the lesson from the beginning, they will be able to see the direction of the lesson and will be able to tie the content to the goals through practical and engaging learning experiences.

Journal entry: Learner autonomy can be equated to independence, self- motivation, and an intrinsic desire to learn. Instilling the value of autonomy in the learner comes in many shapes and sizes. It is a result and a process, exposing students to a different way of acquiring knowledge, and being held accountable for the newly acquired knowledge. I do not believe it means independent work all the time. I believe the focus should be on accountability (the responsibility) to learn.

The goals and objectives are the roadmap of the lesson, and if everyone knows the direction, they can help each other arrive at the destination.

WILL STUDENTS BE SUCCESSFUL?

Constructivism and engaged learning practices emphasize learner-centered instruction. The focus is not on what teachers teach, but on what learners learn. The focus is on the individual learning experiences. The teachers know their students and plan a safe, nurturing environment for learning. This caring learning environment sets the stage for not only the content that will be taught on that day, but also for future motivation to learn. In this process the teacher provides opportunities and time to listen to students. Students talk about what they want to learn, how they are learning, how they work with their peers, questions they have about the content, and questions they have formulated as the result of their learning.

Journal entry: The reading and discussions this week really drove home the importance of encouraging students to construct their own learning based on their own background and experiences. I realize it's "easier" to plan traditional lessons and have the students work on a series of isolated tasks that go from one content area to the next, but it's much more interesting and exciting, not only for the students, but for the teacher as well, to develop a well-rounded unit surrounding one major theme that the students can dig their teeth into. Their level of interest soars, as does their reading, writing and, yes, research abilities, when they are faced with open-ended questions that they must research and analyze. The theory of constructivism works very well because the students really become responsible for their own learning.

Students do not come to school knowing how to think critically, evaluate, ask good questions, work with their peers, conduct investigations, and think logically. In engaged learning environments, teachers model these processes for students. A gradual shift occurs from teacher-centered to student-centered practices. Teachers work to plan lessons centered around the content knowledge and skills students are to learn and the best way to facilitate the learning process so each student will be successful.

DO WE BELIEVE ALL CHILDREN CAN LEARN?

Included in many school mission statements is the phrase, "all children can learn." Do we believe all children can learn? Individual teachers and administrators have different perspectives and beliefs about children concerning the nature of intelligence, socioeconomic status and learning, English language proficiency levels and learning, minorities and learning, gender equity and learning, and special needs and learning. Ability tracking systems, the way we serve our special needs students, our remedial programs, our gifted and advance placement programs, and gender biases, are evidence of belief systems in schools.

Journal entry: Tonight's class was very uplifting. I made the comment about our AP (Advanced Placement) curriculum, and my thinking was challenged by the professor. She's right. We should give all our students the same opportunities. I will have to work on this idea and be more aware as we continue to write the curriculum map for the non-AP students. I will also try to be more thoughtful and positive (as a life-long pessimist who is having a hard time taking a walk on the constructivist side)!

No matter how effective current practices are in some classrooms, schools, and districts, there is always room for improvement. In order to believe all children can learn, teachers study and learn about different learning paradigms, try different approaches in their classroom, examine their own belief systems about teaching and learning, and recognize their own shift in instructional practices. An important part of this shift in the teaching and learning paradigm is for teachers to establish a partnership in learning with their students. Students are given a "voice" in planning and extending learning; their voice, opinions, and ideas are valued in the learning process.

WHAT SYSTEMS NEED TO BE IN PLACE IN ORDER TO IMPROVE OUR CLASSROOM PRACTICES?

Districts require teachers to attend professional development days during the school year. Traditionally, these days consist of “sitting and listening,” “making and taking” (activities for the classroom), learning to implement a program, or trying a few new instructional strategies that make no connections to the content. Rarely do teachers have opportunities to learn new approaches to teaching and learning; try new strategies in their classrooms related to content; and, think, reflect, discuss, and continuously make instructional improvements. Without continuous support and dialogue, teachers do not change classroom practices. If teaching practices are to change, systems are in place for teachers to have strong content knowledge of their subject matter, opportunities to discuss and observe new practices, and experiment with them in their own classrooms.

Journal entry: The greatest benefit to this different approach to learning is that I, too, am becoming an autonomous learner. As I have begun to engage in the reflective practices of my craft, teaching, I have been able to see my areas of strength, as well as areas of teaching that I need to learn more about, need to improve on and refocus on. I have the end in mind when I apply a new concept to my teaching. Sometimes, I can return to school after a night of reflection with colleagues and make immediate changes to benefit the children. Other times, I need to put a notation in my journal and realize, next year I will be better. I am a life-long learner and would like my students to feel this fulfillment one day.

Having the desire to create understanding of the content for all students and provide a caring environment where students are not afraid to discuss their thoughts about their learning, will help to enhance and improve instructional practices.

Journal entry: How will I keep learners engaged in my classroom? I think I have already started the process thanks to these classes and sharing experiences with my peers. I am using author studies, genre studies, rubrics, readers/writers workshops, and developing my own inquiry-based lessons. What I have learned is how to reflect as the facilitator in this way of learning. I feel I have become a better “reflector.” I have the students reflect on their learning, and usually I write myself notes on what has worked and what hasn’t, and I have learned to begin to ask myself some “harder” questions about my teaching. Questions that help me reflect on my beliefs and best practices. The “why” of what I am doing, not just the “what” and the “how.” I have learned to “inquire” and dig below the “What went wrong?” or “What went well?” questions. Now I dig deep into “WHY I even attempted the lesson, unit, and different instructional approach.”

In most areas, beginning or intern teachers have a mentor who assists them by modeling lessons by helping them know about the different programs in the school, by observing them teach, and by showing them how to do the required paperwork. In many cases, the mentor teacher does not have enough time to spend with the intern teacher.

Journal entry: It is my responsibility to create a caring environment for those I mentor. Collaborative learning among teachers is one of the ideas I would like to bring to our school. I would like to provide a more caring environment for our in-service teacher candidates. The first day of internship, the fear and apprehension is very evident in the intern’s eyes. Putting them at ease and providing them with a sense of belonging is our obligation as teachers. They come with fresh ideas and high expectations only to be crushed by some of us who have forgotten that we too were new to the profession at one time. The environment we provide is probably the most important beginning for the intern’s career. Collaborating by sharing the new and the seasoned ideas creates a strong and successful partnership.

If mentor teachers were trained to be good mentors, if they were provided with some time to work with the intern, and if they could focus on sharing ways to effectively teach the content,

these teachers-in-training would enter the teaching profession better equipped to implement better instructional practices in the classroom.

How will we improve instructional practices for a diverse student population? Teachers are involved in learning about diversity through university classes, professional development programs, and other courses. Information concerning social, racial, ethnic, religion, gender, and language diversity is provided. While the teachers are provided with the information, the focus is not on looking at every child individually and treating all children equally.

Journal entry: I cultivate diversity in my classroom by having the children work in small groups so they will mingle with all their classmates and not just with their friends. We mix the English language learners with the English speakers and they work on projects together. As I reflect on my teaching, I ask myself the following questions: Do I model the very virtue I am teaching my students? Are they accepting their classmates and their individuality? Are my students setting high expectations for themselves? Do my students feel a sense of family in our classroom?

When addressing diversity, teachers understand every student and consider his or her needs. Students are treated equally, they share ideas, they are engaged with the content, and they participate in the content lessons that are designed for all students.

HOW DO WE BECOME TRANSFORMATIVE TEACHERS?

There has been a shift in the understanding of constructivist and engaged learning approaches in schools. More teachers realize we have only been minimally successful in the way we approach instructional improvement. We are trying these new approaches, and we are reflecting on our practices and participating in more conversations with our peers about teaching and learning. There is nothing easy about becoming a transformative teacher.

Journal entry: The idea of becoming a transformative teacher is a daunting one for me. I am definitely committed to my own journey of professional growth, and I always try to collaborate with my colleagues in group studies, etc., but I honestly have never really engaged in school reform. My personality is reserved and I find it quite difficult at times to speak publicly, even though I know I have something valuable to say.

Journal entry: So far we have looked at ourselves and reflected on our teaching practices. I never really thought about taking this philosophy and sharing it with the school community. I realize we are covering a lot of material concerning inquiry and change will take time. I see the transformative teacher as one who has spent a considerable amount of time reflecting on teaching practices and really has a sound base in best teaching practices. Also, a transformational teacher is very confident in who she/he is and truly believes reform will be a positive step in the professional lives of her/his colleagues.

We are faced with the challenge of understanding the best way to go about the business of teaching and learning. In classrooms, teachers and students work together to make meaning of content and to make sense of our world in a variety of ways. We use cognitive strategies; we are social in our learning; we reflect on our learning and form our own ideas and opinions about content; and we communicate and share with others as we are learning. Understanding the balance between traditional practices and the many dimensions of constructivism and engaged learning practices will assist us as we face this challenge. As this work is accomplished, it is important to keep in mind our joint goal—providing the best education that fulfills the needs of all children.

TERMS FOR READERS

Constructivism—A philosophy of learning in which we construct our own understanding of the world we live in through reflection on our experiences and sharing and building ideas with others.

Content Standards—The themes, big ideas, and content objectives related to and important to the content to be studied.

Engaged Learning—Classroom practices that focus on making connections and creating new understandings; extensive student-student dialogue; open-ended inquiry; focus on making the student process of analyzing, interpreting, predicting, and synthesizing visible; learning is collaborative; tasks of learning are challenging and authentic; teacher is the facilitator of learning.

Formative Assessment—Assessment that takes place before, during, and after the lesson; assessment is part of the learning process; students take part in their own assessment and know the goals of the standards; assessment is performance-based.

Pedagogy—The principles and method of instruction; the activities of educating or instructing or teaching; activities that impart knowledge or skill to learners.

Problem-based Learning—A learning experience in which students work together to solve problems that are meaningful to them. Students work collaboratively by testing possible solutions to the problem, and they look for answers from different resources.

Project-based Learning—A learning experience in which a big, important, real-world question is posed, and students work collaboratively to explore, investigate, and collect data in order to draw conclusions concerning possible answers to the question.

Summative Assessment—The test given at the end of a chapter, a final exam, a quiz, a standardized test, etc.

FURTHER READING

- Bruner, J. (1966). *Toward a Theory of Instruction*. Cambridge, MA: Harvard University Press.
- Gruber, H. E., and Voneche, J. J. (Eds.). (1995). *The Essential Piaget: An Interpretive Reference and Guide*. Northvale, NJ: Jason Aronson Publishers.
- Henderson, J. G. (2001). *Reflective Teaching: Professional Artistry through Inquiry* (3rd ed.). Upper Saddle River, NJ: Merrill Prentice Hall.
- Kohn, A. (1999). *The Schools Our Children Deserve: Moving Beyond Traditional Classrooms and Tougher Standards*. Boston, MA: Houghton Mifflin Company.
- Marlowe, B., and Page, M. (1998). *Creating and Sustaining the Constructivist Classroom*. Thousand Oaks, CA: Corwin Press, Inc.
- Vygotsky, L. (1978). *Mind in Society*. Cambridge, MA: MIT Press.

CHAPTER 40

Creative Problem Solving

JULIA ELLIS

It is interesting to listen to how people talk about creativity or “being creative.” Often, people will say that they are not creative because they do not write poetry, paint pictures, or engage in the performing arts. In so doing, they dismiss the creative ideas they generate to improvise solutions to everyday problems such as revising a recipe, making a child’s costume out of too little of the needed materials, or planning an event that will accommodate the diverse needs and interests of a group of people. Creativity has been the focus of much research and debate. People have argued about whether the word, “creative,” should be awarded to the person or the process, or reserved for the product. Maybe some people are creative only some time. And maybe some people are creative but never accomplish anything of broad social significance. Nevertheless, through all the research and debates we have come to better appreciate the nature of the creative process and the attributes, habits and processes of people who are capable of generating a creative response to the challenging events of life or work. Through this work we have become more attuned to the conditions that make creative responses more possible or likely. In this chapter I hope to share a few ideas about how we can support students in classrooms in being creative throughout their lives. I will begin with an autobiographical reflection highlighting key events in my own journey with creativity and creative problem solving. Then I will present some specific suggestions for how to engage students in creative problem solving in the classroom. Finally, I will highlight some of the happy side effects of using such practices in the classroom.

MY JOURNEY WITH “CREATIVITY”

Although I didn’t yet have the word, creativity, in my vocabulary, my appreciation of it first emerged when I realized how much I enjoyed companions who made me laugh. Laughter makes you feel wonderful and connects you to the people you laugh with. The friends we laughed with when we were ten are still so easy to relate to forty years later. The conceptual playfulness that gives rise to wit and humor are manifestations of the creative process.

Still without the word, creativity, as a focus, I found in English literature courses in my undergraduate program. I wondered most about the authors of the pieces we read. How could they do it? What was the process? How had they become the process?

At the end of my undergraduate program, I took a drama course in which the majority of the time was spent doing dramatic improvisations. Through our weekly exercises I found myself inducted into a new way of being. In the dramatic improvisations, a person had only one task: pursue one's assigned objective—for example, sell brushes—as resourcefully as possible. To be resourceful, one had to make sense of what everyone else in the improvisation was trying to do. If straightforward attempts at pursuing your objective were not successful, it was expected that your strategies might become more and more bizarre. We were all Mr Beans in the making. The experience in this class made me a more hopeful person. I finally realized that in any challenging situation in life, I had only to assign myself an objective and pursue it resourcefully. I also realized that I could complicate my objective to ensure acceptable consequences or conditions—for example, “I want to sell brushes, but in a way that doesn't involve annoying people and doesn't require too much of my time.”

In my teacher education program I took a course on gifted education and then became involved as a researcher working with the classes of gifted grade 4 and 5 students who were using creative problem solving as an enrichment approach. The teachers used the *Covington Crutchfield Productive Thinking Program* for language arts and thereby introduced students to a broad range of strategies and meta-cognitive skills for creative problem solving. The program was based on a story about two children who were set problems by their uncle who was a detective. They learned to use strategies to explore all possibilities in order to eliminate all possible hypotheses except for the one right answer in “whodunit” fashion. Each week, a fellow graduate student and I visited the classes and invited the students to use group creative problem solving approaches with playful, everyday life problems. In this way, we endeavored to support their work with developing creative products or plans with open-ended problems as opposed to only “one right answer” problems.

During my doctoral work with creative problem solving in the early 1980s, I read a broad range of literature about creativity and creative problem solving. I learned that creativity was understood as an important aspect of mental health and had consequences for physical health as one aged. This is not surprising given its association with characteristics such as flexibility, tolerance for ambiguity, being able to delay closure, openness to inner and outer experience, humor, being nonjudgmental, playfulness, intuitiveness, optimism, being self-accepting, and being willing to take risks.

Through reading research on the processes used by adults who were recognized as being creative problem solvers in their work, I learned that they had an awareness of process and could monitor their own steps to ensure the opportunity to develop creative solutions. The literature was also replete with stories about how people access the rhythm of creative thinking when needed in their everyday lives. A key dynamic seemed to be preparation and then incubation. Preparation typically involved gathering all the information and related ideas pertaining to the problem and clarifying the attributes of a solution that would satisfy. It was important to refrain from attempting to develop solutions until preparation was completed.

Once preparation was completed, one had to know how to enable and access one's incubation processes. Incubation usually involves some form of relaxation, becoming quiet, and refraining from trying to solve the problem consciously. We have all heard stories about the ideas that come when one is in the bathtub, in bed, or driving. Even the 10-year-old children in my doctoral study were able to tell me about the process. As one boy said, “I think and I think as hard as I can. And then if I can't think of anything I just wait for the idea to come.” Many of the children specifically mentioned breathing and relaxation and having a special place where they sit quietly and relax while they wait for their ideas.

When ideas start to come, it's very important to refrain from considering the ideas with skepticism. It's as though there's a little man in the back of your head who has figured it all out while you've been sleeping. He has made an answer, is trying to offer it, but will freeze up or run

away if he meets with suspicion. When the ideas come you have to start scribbling them down and just keep scribbling, trusting that the whole package will be there. Relaxation, openness, and optimism are absolutely necessary. The ideas may seem silly or strange at first appearance, so a playful, exploratory attitude is particularly important when getting started with the scribbling down. Evaluation and tweaking come into play much later.

In the creativity literature I also read about people who, having worked their way up to middle management, were dismayed to find that after years of doing things exactly the way others wanted them done, they could no longer generate creative ideas. They attended creativity workshops hoping to reclaim the creative capacities they recalled having when they were ten. Preschoolers typically have no difficulty using their imagination to invent ideas. As they draw from the materials of their experience to make games, stories, or scripts for make-believe, they keep the door open to the “little man in the back of one’s head,” their preconscious processes. With encouragement and emotional support, young children can maintain their access to the creative process. A ten-year-old girl in my doctoral study reported that her father still insisted on sitting with her and coaxing her to make up a story for him.

Sadly, by the age of seven, many children lose their capacity to create new ideas. As their life experience becomes more concerned with learning “how things are” and less with imagining “how things might be” they can lose their access to the creative process. In my doctoral research I worked with twelve grade 5 classrooms. As one of the activities in each class, I asked students to individually develop original plans for a party they could put on for another class in the school. I displayed an idea tree showing lists of well-known party games, food, decorations, and so forth. In the warm-up or introduction to the notion of developing “unusual activities” for a party, we practiced forcing connections between party themes and favorite party activities. For example, if a student liked the Halloween activity of bobbing for apples but wanted to have a Western theme for the party, how might one modify the apple bobbing activity to have it fit in with a Western theme? Or, if one wanted to serve ice cream at a party with a Dracula theme, how could that activity be modified or elaborated? We worked through several examples like these and in most classes only three or four students were able to offer ideas. All the children were eager to interact with me and I felt compelled to keep offering basic knowledge questions about “how things are” in order to give more students a chance to put their hands up. In one class, where there were in fact seven students who offered ideas during the warm-up, I expressed my delight to the teacher. She, however, expressed her disappointment that it was always only the same seven students who offered ideas in her activities with them.

I wondered whether classrooms at all grade levels could somehow support students’ opportunities for engaging in creative thinking. I taught twelve courses on gifted and enrichment programming with groups of practicing teachers in communities throughout British Columbia, Yukon, and Alberta. In each of these courses I introduced creative problem solving strategies and invited teachers to use them with regular curriculum content. Many teachers used some of the strategies and came back each week to show us what the students had done and to confer about where to take the activities from there. In the second section of this chapter, I present a number of the strategies and discuss some of the ways they might be used in the classroom.

Later, I worked with 150 pre-service teachers each year for four years at the University of Toronto, in a one-year after degree teacher education program. Each year I asked the students to use creative assignments and creative problem solving strategies with their practicum classrooms. I also asked them to systematically study the students’ products or performances and to give a report on these in class. These written and oral reports alerted me to many of the unanticipated positive benefits of such activities. I will relate and discuss a number of these in the third section of this chapter.

CREATIVE PROBLEM SOLVING IN THE CLASSROOM

In this section I present some strategies for creative problem solving and discuss ways to incorporate these in classroom life. Using such strategies and activities would give students the following opportunities:

- Develop their fluency and flexibility in generating ideas.
- Practice being conceptually playful with ideas.
- Develop their analytic abilities.
- Deepen their awareness of and confidence with the creative process.
- Organize the content of curriculum units and intensify their work with this content.
- Develop meta-cognitive strategies that will support their autonomous work.

A number of the strategies entail using “trees” or charts to organize ideas or information. Creative thoughts result from the reorganization of existing knowledge (i.e., principles, ideas, information, images, etc.) In order for such knowledge to be reorganized, it must be brought into focus, activated, and made available throughout the problem solving stages. To be truly available for manipulation or recombination, all elements of a problem must be free of any constraining conditions arising from previous contexts (Blank, 1982). The visual organizers discussed in this section help to make knowledge visually available and the procedures discussed provide structure and focus for recombination.

Some of the strategies or sample activities outlined in this section are intended to set up a good opportunity for incubation to work well. As mentioned briefly in the first section of this chapter, preparation—identifying all information and pertinent ideas—should be completed before any attempts are made to generate a creative product or plan. After preparation, students should try to solve the problem in more than one way. Then they should be prepared to “leave it alone” but with confident expectation that an even better idea will come to them either spontaneously or the next time they sit down with this work (Parnes et al., 1977).

BRAINSTORMING “HOW THINGS MIGHT BE”

I can still remember the first time I invited a class to engage in brainstorming in my practicum at a secondary school. First I established the following ground rules:

1. Produce lots of ideas.
2. No criticism of others’ ideas.
3. It’s okay to piggyback on other people’s ideas.
4. It’s okay to offer silly or playful ideas.

I was new at this so I fumbled a bit, but they did not. They were excited and were clearly enjoying giving me all their ideas and seeing them recorded on the chalkboard. When one student offered an idea that made me realize he misunderstood the topic for the brainstorming I wanted to interject and clarify this for him. The class, however, stopped me and reminded me of the rule about “No criticism.” They got it! They knew this would interrupt the flow.

Teachers often ask a class to brainstorm what they know about “how things are.” This typically takes place at the beginning of a unit as teachers ask students to brainstorm everything they already know about the new topic of study. This is very different from brainstorming for ideas about “how things might be.” Some students cannot participate if they don’t have a lot of knowledge about the topic. There is also an awareness that some contributions might be incorrect.

When we have students brainstorm ideas about “how things might be,” we can also use this activity to teach them a strategy for generating more ideas. We can call this strategy, *Brainstorm-Categorize-Brainstorm*, and the product that results can be called an *Idea Tree*.

MAKING AN IDEA TREE

To introduce the procedures for making an Idea Tree, it is good to use a topic for which students are likely to have many ideas. Let’s say for example, that a teacher is anticipating having the students write stories about a horse that becomes a hero. The teacher could begin by having the class brainstorm ideas for names for horses. This would be the process.

1. *Brainstorm.* The teacher asks the class to tell her all the different names that people might give to a horse. All the names offered are recorded on the chalkboard. Maybe these would be the first names offered:

Silver	Black Beauty	Daisy
Star	Princess	Spend-a-Buck
Flash	Sam	Spot
Pegasus	Thunder	Lightning
2. *Categorize.* After several contributions, the teacher pauses, draws circles around two or three of the names, and asks the class how those names are similar to each other, for example, “How are Lightning and Star and Thunder the same? Where do those names come from, or what are those names about?” After getting a “category” from students, the class would be asked to identify other pairs or groups of names that could belong together in categories. All the categories and associated horse names would be transferred to an Idea Tree. The students would be told that it is okay for the same name to belong to more than one branch or category.
3. *Brainstorm.* After all the initial horse names had been categorized and transferred to the Idea Tree as shown in Figure 40.1, the students would be asked to brainstorm both additional categories and more examples of possible names in each category.

Before students began work on writing their stories about how a horse became a hero, the teacher could have them use any of a number of different strategies for generating ideas about how a horse might become a hero. The first one we will look at here is called an *Analogies Chart*.

MAKING AND USING AN ANALOGIES CHART

The teacher could let the class know that she expected that they could all write very different stories about how a horse became a hero. To support them in coming up with a large number of ideas they would use an *Analogies Chart*. To complete a chart such as that shown in Table 40.1, the teacher would supply the left column and have the students do research and/or pool their knowledge to complete the right-hand column. Once the chart was completed, the teacher would have students practice *Forcing Connections*.

FORCING CONNECTIONS

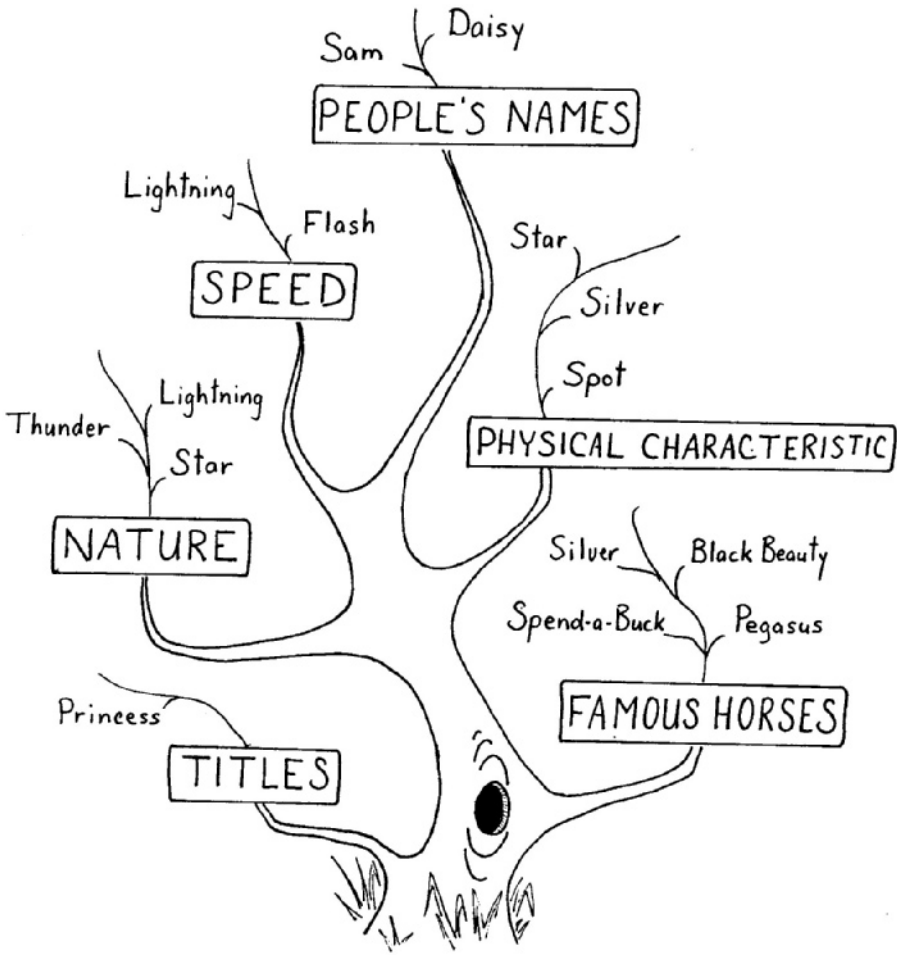
To practice forcing connections, students would randomly select ideas from the right hand column of the Analogies Chart and try to use these in story prompt questions. For example:

How could a horse become a hero in a way that involved *carrying messages*?

How could a horse become a hero in a way that involved *having magic powers*?

How could a horse become a hero in a way that involved having *unusual skills*?

Figure 40.1
Idea Tree for Names of Horses



The teacher would invite the whole class to offer ideas in response to each of these story prompts. Then students would work in small groups or individually with three more randomly selected ideas from the chart. The teacher would talk to the students about *incubation* and tell them to expect to have an even better idea occur before they started working on the stories the next day.

ONE, TWO, THREE, GO!

It is important for students to learn to develop at least two or three alternate approaches or big ideas for their project or product. If they make themselves think of at least two or three possibilities, then “the little man in the back of their heads” will keep asking “Yes, and what else could be?” If students stop with their first idea and try to develop that, the “little man” shuts down. Students can then find themselves stuck if that idea doesn’t work out well. Similarly, incubation

Table 40.1
Analogies Chart for How a Horse could Become a Hero

Kinds of Heroes	How They Became Heroes
People	Saved lives Invented things Broke records Explorers/discoverers Artistic excellence Athletic excellence Changed the world Took risks Winning in the Olympics Helped people
Animals	Carried messages Found their way home Performed difficult tasks Loyalty Carried/served important people Won prizes
Fairy tale characters	Granted wishes Cast spells Had magic powers Were very big Were very clever Saved someone Tricked someone
Fictional characters	Have super powers Have unusual skills Always win

will also work better if the students have first consciously entertained multiple possibilities for how to do their projects.

ATTRIBUTES TREE

As an additional or alternate strategy for generating ideas for the “horse-as-hero stories,” the teacher could have the class make and use an *Attributes Tree* as shown in Figure 40.2. To make the tree, the teacher would begin by asking students:

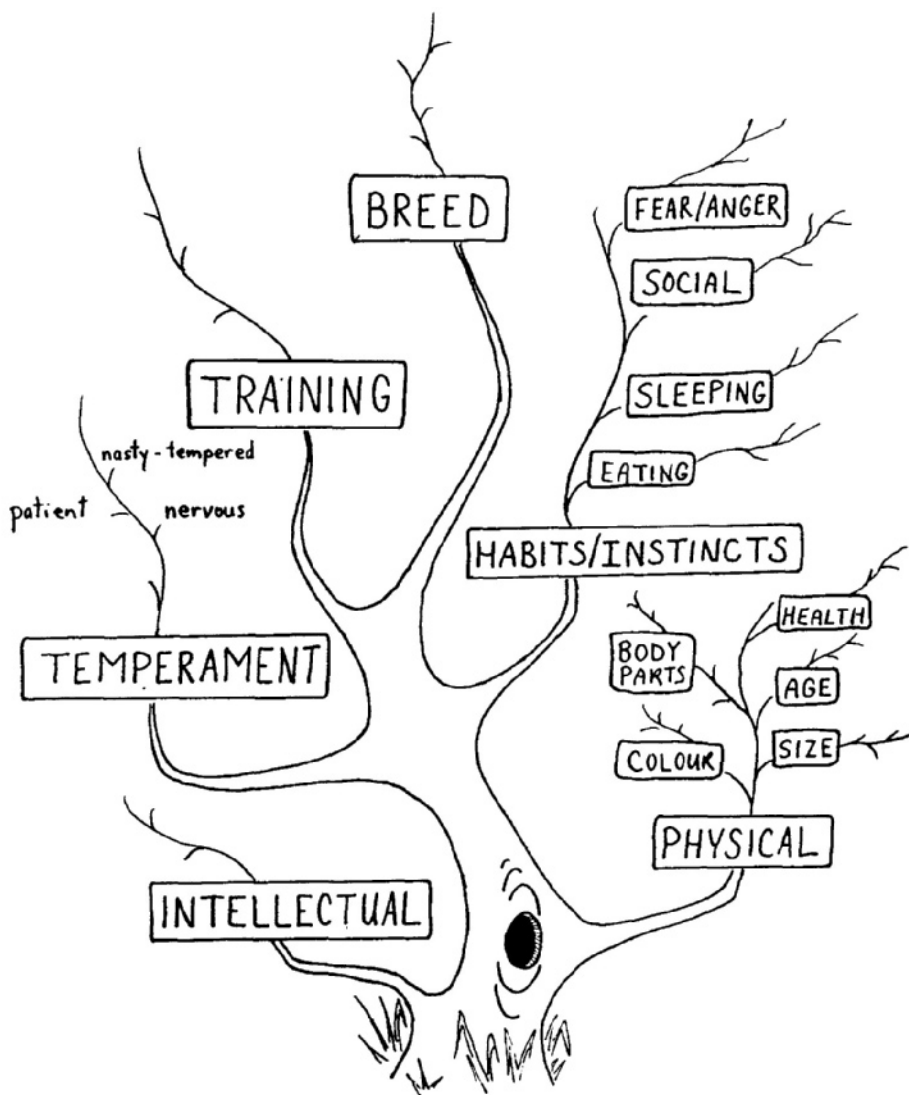
“What are all the ways that horses can be the same or different from each other?”

Students’ answers might look like these:

How fast they run

What color they are

Figure 40.2
Attributes Tree for Horses



If it's a pony

If they're mean

The teacher would work with these kinds of initial responses to move the students to an awareness of general attributes through comments such as:

Yes, some horses are mean and some are calm or friendly. What do we call that part or that aspect of horses?

Table 40.2
Attributes—Implications Chart for Horses as Heroes

Characteristics of My Horse	Implications for How it Might Become a Hero
Nasty-tempered	
White in color	
Likes to eat apples	

Once general attributes were identified and labeled on an Attributes Tree, examples of possible values for each attribute would be added to the branches as “twigs.”

FORCING CONNECTIONS

Once the Attributes Tree was completed, the teacher would have students practice forcing connections by randomly selecting “twigs” from the Attributes Tree to form story prompt questions such as these:

How could *being a pony* enable the horse to become a hero?

How could *being nasty-tempered* enable the horse to become a hero?

How could *being gray in color* enable the horse to become a hero?

The teacher would ask for three different possibilities in response to each question. Then students would practice the same process with additional randomly selected twigs in small groups. They could use an *Attributes – Implications Chart*, such as that shown in Table 40.2, to record their ideas. They would be reminded about incubation and be told to expect an even better idea to come to them before or when they started work on the stories on another day.

IMPOSING CONSTRAINTS OR ASSIGNING A CENTRAL FEATURE

Sometimes the challenge for students is not a lack of ideas but a surplus. For example, it might be difficult to get started on the assignment, “Write a poem about nature,” because there are too many possibilities. Similarly, students might have so many ideas for “horse-as-hero” stories that it might be difficult to find a focus and get started. That’s when it might be helpful to use the strategy called *Imposing Constraints*. Here are two examples of what Imposing Constraints could look like.

In the “write poem about nature” assignment, the teacher might say that each line in the poem has to start with the same letter and that she would arbitrarily assign a letter to each student.

In the horse stories assignment, the teacher might assign each group of students a different location or setting for the story as an imposed constraint: an island, in the mountains, on a desert, in our neighborhood/town/city, in a park.

An arbitrarily imposed constraint helps students to get started because it eliminates many possible ideas but is at the same time a source of ideas. In group work, a stimulating imposed constraint can help the group to focus and get started. If an imposed constraint is to ignite novel ideas, it is important that it *not* be logically related to the problem. The locations for “horse-as-hero stories,” for example, did not include sites such as farms, ranches, or racetracks.

Table 40.3
Future Projection Chart for a Lost Horse in the Neighborhood

When	What Could Be Going Right?	What Could Be Going Wrong?
After one hour		
After one month		
After one year		

FUTURE PROJECTION

Another idea generation strategy is called *Future Projection*. Let’s imagine that a teacher simply wanted to have students write stories about what might happen if a lost horse was found in their own neighborhood. To develop possible ideas for the story, the teacher could have the students work in small groups to brainstorm entries for the *Future Projection Chart* shown in Table 40.3. The teacher would insist that the students try to generate three ideas for each cell in the chart.

“WHAT IF . . .” ASSIGNMENTS

Sometimes teachers may wish to give students the opportunity to engage in playful, imaginative thinking and the production of ideas without taking time to use any of the strategies presented above. This can work well and be valuable if the assignment is well chosen for the students’ interests and knowledge base. Here are some examples of “What if . . .” assignments.

What if the power went out in our city? Prepare a news report highlighting many of the things that would happen.

What if the story/novel we have just read took place in a different location? Pick a location, imagine how the story would be different, and draw and color a picture to show a key scene in the story.

What if you could have your own studio apartment? Draw a diagram or picture of the apartment, showing how everything in it would reflect who you are, your interests, values, and so forth.

What if the Teddy Bears could have a party? Work together to make a mural to show everything that would happen at the party.

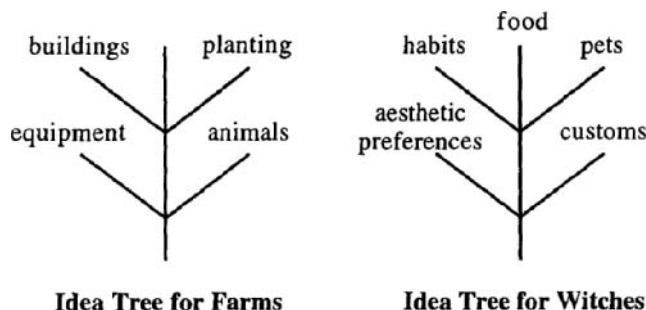
What if a monster lived in its own house? What would the house be like? Make a three-dimensional construction of the house to show your ideas.

What if there were special celebrations for Ground Hog Day in a French speaking community? What songs would they sing, what dances or games? Make some up and teach them to rest of the class. (In the context of a second language class, i.e., French)

What if you could make your own fort in the woods? Draw a picture or labeled diagram of what you would construct. Write a description of how you would build it.

These kinds of activities keep students using imaginative thinking, drawing upon the materials of their experience, and enjoying showing others their ideas. When students produce their own ideas in these kinds of activities and products they are motivated to write and speak about their ideas. When these playful “What if . . .” assignments are group activities, they serve to enhance relationships among students. These benefits and others will be discussed further in the third section of this chapter.

Figure 40.3
Idea Trees for Witches' Farms



USING CREATIVE PROBLEM SOLVING STRATEGIES IN CURRICULUM UNITS

Teachers can offer students creative assignments or have them use creative problem solving strategies in a variety of ways in curriculum units. A number of examples are shown in Table 40.4. In this subsection I will discuss ways of using these in culminating assignments, at the beginning of units or topics, or in other subject areas.

Culminating Assignments. If teachers use a creative assignment—a playful or fanciful activity—as a culminating project for a unit, this can create a purposeful context for reviewing and organizing a great deal of the material from the unit. It can also give the class a shared knowledge base with which to be conceptually playful. Here are three examples:

In an accounting class, the teacher asked students to imagine that they won a \$1,000,000 in a lottery. They were to brainstorm a list of ideas for how they would want to use the winnings. Then they were to prepare financial statements to show all transactions and summaries one year later. The students were asked to complete Future Projection Charts to generate ideas for entries in their statements.

In a word-processing course, students were asked to develop application forms/templates for potential life partners to complete.

In a grade 2 or 3 classroom, as Halloween approached and the class was concluding a unit on farms, the teacher had students work in groups to make floor murals of witches' farms. To produce ideas for their witches' farms, the teacher had the class force connections between an Idea Tree about farms and an Idea Tree about witches. Figure 40.3 shows such trees with only the main branches labeled.

The culminating assignments do not always have to be extensive or time-consuming. It is mainly important that students find them engaging and that they provide a reason for reviewing the material in the unit and using strategies to generate conceptually playful ideas. For example,

After a unit on Halloween safety rules, the teacher might ask the students to each make a poster that uses a Halloween character to teach a safety rule. Each student makes only one poster to advertise one rule, but in the process of doing so considers all the safety rules there are to choose from. The students' posters collectively reiterate all the safety rules as well.

Playful or fanciful activities can take the form of creating games, dramatic performances, murals or three-dimensional constructions, posters, news reports, story plot lines. Being aware of themes, preoccupations, or activities of high interest to students can help teachers to imagine suitable creative assignments.

At the Beginning of Units or Topics. There can be many benefits to having students make Idea Trees or Attributes trees at the beginning of a unit. Here are two examples:

Table 40.4
Examples of Using Creative Problem-Solving Strategies in Curriculum Units

Context	Examples
At the beginning of a topic	Have students work in groups to make an Attributes Tree showing all the ways that the topic of study—<i>animals/cities/plants/geographic regions</i>—can be same or different from each other. All groups contribute to a master <i>Attributes Tree</i> the teacher makes for the whole class. The tree is used by students as an organizer for researching specific animals/cities, etc. Before starting a new topic in <i>grammar</i>, the teacher of the target language has the class work together to make an <i>Idea Tree</i> showing everything they already know about grammar in the language being learned. Prior to <i>reading a story</i> about a student who moves to a new school, the teacher has students complete <i>Future Projection Charts</i> to imagine all the things that could go right or wrong when moving to a new school.
As conceptually playful assignments in other subject areas	Imagine that you are a sports commentator for your favorite sport. Using as many words as you can from our unit on <i>weather</i>, report what happened in a game or pretend to describe a few minutes of play. Use the terminology we learned in our unit on <i>electricity</i> to explain the “circuitry” of friendships.
As culminating creative projects to conclude units	We have studied the five <i>geographic regions</i> of our province or state. Your group will be assigned one of these geographic regions. Imagine that, on a family trip, the family pet gets lost while in this region. Develop a storyboard outlining all the adventures the pet might have while lost there for three days. We have studied three popular models of <i>science fair projects</i>: experimental, descriptive/analytic, and active demonstration or working model. Before starting on your own favorite idea for a project, please generate two ideas for each model. Each idea should somehow be related to the idea of “beauty” (imposed constraint). We have just finished reading a particular <i>play/story/novel</i>. Pretend that this is a true story. Plan a television documentary program about these dramatic events (e.g., interviews with characters, witnesses, and “experts”; show footage of reenacted key moments.) Design a game that will give players the opportunity to practice their <i>addition and subtraction skills</i>. The game must use empty milk cartons (imposed constraint) in a central way. Using activities and objects we have been working with in our <i>gymnastics</i> unit, plan presentations for the school assembly. You can use music and costumes. We will brainstorm possible themes and pick one. To conclude our unit on <i>ecology</i>, work in a group to design an imaginary settlement in a bubble submerged in the ocean (imposed constraint). Show your ideas on a large mural.

To begin a unit on nutrition, a teacher leads the class in making an Idea Tree about everything that comes to mind when they think of the word, “food.”

To begin a unit on fractions, the teacher has the class make an Idea Tree about all the activities and objects in their lives that involve fractions.

Through such activities, the teacher can learn what is already salient to students with regards to the topic. Students share their knowledge and ideas with each other. The class has an opportunity to create shared meaning for some of the important concepts pertaining to the topic. What the teacher learns about the students’ related interests and experience can be a source of ideas for activities within the unit. The teacher can show students where the unit of study will fit in with the bigger picture of the Idea or Attributes Tree they have created. If Attributes Trees are produced, students can then use these as meaningful organizers for individual research within the unit. And best of all, students find it very motivating to brainstorm their ideas in such activities.

“What if . . .” assignments can also be used to advantage at the beginning of a unit. When students produce something imaginative, their assumptions and preconceptions slip out sideways. Thus the assignment can invite the use of imagination, get students thinking about the new topic of study, and also reveal students’ misconceptions, gaps in knowledge, or related concerns. For example:

Design a James Bond type briefcase containing special gadgets that would help the mayor with his or her job. (This would be at the beginning of a unit on municipal government.)

Imagine that you were the President/Prime Minister. What would you try to do in the first year of office? (This would be at the beginning of a unit on federal government.)

In Other Subject Areas. Sometimes teachers can use the knowledge students have been acquiring in one curriculum unit as a base for a conceptually playful activity in another subject area. Teachers might draw from current topics in science, social studies, or even math to design “What if . . .?” assignments in language arts or art. Here are two examples:

What if you had to make a picture of a flower (or an automobile) using only two randomly selected shapes? (Students have been studying shapes in geometry in math class.)

Work in a group to design an imaginary machine (diagram or three-dimensional construction) that would somehow help with pollution problems. Have each member of the group participate in an oral presentation to explain the design. (The students are studying pollution problems in science. Each group would be assigned a different imposed constraint. “Your group’s machine must be small enough to fit in your pocket/use lots and lots of hose/have lots of blue ribbons/make a very loud or high-pitched noise/make a ticking sound/have a smiley face as a central feature.”)

Activities such as these keep students interacting purposefully with the material from the unit of study while also encouraging conceptual playfulness. Students are usually excited about the ideas they have produced and are motivated to communicate these through speaking, writing, or other forms of representation.

This section has presented a number of strategies and suggestions for using creative problem solving in the classroom. The conceptual playfulness of the activities can enable students to extend their capacities for generating ideas and accessing preconscious processes for creative thought. By having creative assignments linked to curriculum content, students have an inviting and purposeful context for revisiting and working with material in a curriculum topic or unit. As students acquire experience with using the visual organizers and procedures from creative problem solving, they also become more autonomous and self-directed with topics of personal interest. In the next section of this chapter, I discuss a number of additional benefits of using creative assignments and creative problem solving strategies in the classroom.

BENEFITS OF USING CREATIVE PROBLEM SOLVING IN THE CLASSROOM

Over a four-year period, 450 preservice teachers were invited to use creative assignments and creative problem solving strategies in their practicum classrooms. They studied their students' processes and products and gave oral and written reports in our classes on campus. Through their reports, it was learned how such activities contribute to the quality of life and learning in the classroom.

RELATIONSHIPS

"Creative assignment" activities quickly and easily warmed up or ignited relationships among students or between students and student teachers. Student teachers were thrilled that students at all grade levels were so eager to approach them to show their work with these activities. They noticed with interest that students who didn't usually interact with each other eagerly shared and compared their products. And they were happy and relieved to see that once "loners" worked in a group on "creative assignment," they began to hang out with the same students at recess and at assemblies.

Engagement, Pride in Work, and Social Competence

Although the "creative assignments" may seem playful or fanciful, they have the wonderful effect of evoking the most serious work from students. Students at all grade levels were serious about their work on these projects and took the work of other students seriously. They shared scarce materials, negotiated diplomatically, and collaborated and cooperated with ease. Their greatest concerns were to have opportunities to continue working on their projects and to "finish them right." Both student teachers and cooperating teachers were delighted to observe that when students worked on creative assignments, there were no avoidance strategies or "behavior problems."

Writing and Speaking

Student teachers were surprised and pleased to witness the richness of oral language and the skillful writing that resulted from work on "creative assignments." When students worked in groups to make murals or other constructions to show their ideas, every member of a group was able and eager to give an oral presentation explaining all the ideas in the project. When students were asked to give written explanations or stories about their projects, the quality of the writing was much better than usual. Often, through the use of brief "What if. . ." activities, student teachers were able to help students discover preoccupations or ideas they would be motivated to write about.

Talents, Recognition, and Belonging

Because many of the creative assignments are open-ended and complex, they create space for students to draw upon diverse skills, talents, or knowledge to contribute to a project. Even in kindergarten, children quickly divided up various aspects of group projects according to each child's skills and interests. Sometimes, within group projects, students who lacked strength in the subject area but had leadership ability had the opportunity to experience their classmates' and teachers' appreciation. Because the creative assignments often entail a visual presentation or performance, they provide excellent opportunities for students to have their contributions recognized.

Students' Interests, Concerns, and Preoccupations

Student teachers got to know their students so much better through the creative assignments. Through listening to the students while they worked or through studying their completed products, they learned what students know, believe, and care about. Many student teachers were able to incorporate students' interests and concerns in the remainder of their practicum planning.

My experience with practicing teachers and student teachers using creative problem solving in the classroom has clarified for me the many benefits of structuring students' curriculum work within the context of imagining "how things might be." Teachers are energized by seeing students' "unconventional" or non-adult ideas about how to understand and approach problems and possibilities. Students show that they can "contain" themselves very well when they are freed to use everything they know and can imagine to produce and share ideas. Creative assignments give students a safe and supportive place to remain engaged with generating ideas. Creative problem solving strategies help all students to push themselves further and to see how to work creatively with curriculum content. I hope that more teachers may entertain the use of these strategies and assignments. I believe they can help students and teachers to experience the classroom as a more welcoming and spirited place for being engaged with positive possibilities.

This chapter suggests that regular opportunities for creative work be built into the curriculum of all students rather than being treated as "different" methods of instruction for "different" populations. It makes no sense to say that creatively talented students prefer open-ended methods of instruction and to imply that closed-structure learning experiences that emphasize products rather process and teacher-oriented assignments are fine for everyone else. If classroom experiences were reconceptualized to make open-ended, creative activities for students commonplace, all children would have on-going opportunities to both find their creative selves and to bring everything they know from their out of classroom experience—culture, lifestyle, interests, hobbies, talents—into their classroom work. Critical and creative higher-order thinking skills have traditionally been a concern of programs for gifted and talented students. Even there, they are often treated in isolation as skills that can be modeled and taught through joyless exercises. Students can develop higher order thinking skills more spontaneously in the context of meaningful activities such as those discussed in this chapter. Programs for gifted students also need to be reconsidered for their role in either supporting or impeding students' creativity. While such programs typically provide for some acceleration, enrichment, and advanced topics they do not always provide regular opportunities for students to develop and present original ideas. Instead programs for gifted often cultivate pressured, competitive, grade-conscious climates in which ambiguous assignments would only be a source of anxiety. This chapter on creative problem solving is intended to invite consideration about educators' responsibilities to more holistically support students' growth and learning and to cultivate classroom climates in which students can experience each other as a source of support and affirmation.

REFERENCES

- Blank, S. (1982). *The Challenge: Encouraging Creative Thinking and Problem Solving in the Gifted*. San Diego: San Diego Unified School District.
- Parnes, S., Noller, R., and Biondi, A. (1977). *Guide to Creative Action*. New York: Charles Scribner's Sons.

CHAPTER 41

Creativity

JANE PIIRTO

Creativity is fashionable these days. Everyone uses the word. Yet creativity is confusing. By late 2003, the term was used in over 16,500 references to titles of scholarly books and articles. Topics included creativity in business, creativity in psychology, creativity for parents, creativity and spirituality, creativity and teaching, creativity and aging, creativity and the arts, creativity and the sciences, creativity and mathematics, creativity and problem solving, creativity and problem finding.

This phenomenon of interest in creativity is a truly postmodern perplexity, for little is tangible, all is one, one is many, everything is true, and nothing is true. However, few can get an authoritative and comprehensive handle on creativity. The terms *chaos*, *fracture*, and *split*, fit the creativity enterprise well. Yet the plethora of purported experts on creativity suggests that creativity is slippery, porous, and resistant to definition, quantification, and access. Just when one thinks one knows everything about it, one realizes that one cannot possess it.

By 1999, creativity had been so imbued into the psychological, educational, and business culture that a two-volume *Encyclopedia of Creativity* was published. Topics ranged from the esoteric (Perceptogenesis, Matthew Effects) to the idiosyncratic (Fernando Pessoa, Robert Schumann). Each was written by a scholar in the field. I myself wrote two entries, one on Poetry, and one on Synchronicity. The encyclopedia's two volumes are the latest and most comprehensive summary of creativity research and thought.

CREATIVITY AND PSYCHOLOGY

Creativity has been a topic of discussion and of research in the field of psychology for approximately fifty years. Psychology, the scientific study of mental operations and behavior, asks, What makes people creative? How can creativity be measured? How can creativity be enhanced? What can we learn from creative adults that will help us raise more creative children? Is creativity an aptitude? Is creativity an ability? Is creativity a domain? Is creativity acquired? Is creativity innate? What happens in the mind while a person is creating? What are the conditions for creative production? What inhibits creative production? What does the social setting contribute

to creativity? Is creativity a solitary or community activity? All these, and more, are questions psychologists have sought to study with regard to creativity.

The idea of domain and field is pertinent here. A domain is part of a field with special organization, rules of practice, and body of knowledge. Mathematics is a field, but algebra, geometry, number theory, are domains. Literature is a field, but poetry is a domain. Education is a field, but educational research is a domain. Educational psychology is a hybrid domain that crosses two fields, education and psychology. Each domain has ways of knowing and representation that are unique to it. This is done through symbol systems special to the domain, including a special vocabulary and special technologies used only within that domain. A field is transformed through individual creators pushing the boundaries of their domains. People working within the domain, and connoisseurs of the domain decide what creative products are to be valued. In order to transform a field, the creator, must have mastery of the theory, the rules, the ways of knowing of that field, and also of the domain that is being used to transform it.

Psychology has several threads of research into creativity. *Psychometricians* (Guilford, Torrance), *developmentalists* (Feldman, Gardner, Csikszentmihalyi); *social psychologists* (Simonton, Amabile); *personality psychologists* (Barron, MacKinnon, Gough, and the other researchers at the famous Institute of Personality Assessment and Research); *humanistic psychologists* (Rogers, Maslow, May) *cognitive psychologists* (Sternberg, Ward, Perkins); *psychoanalysts* (Freud, Jung, Panter, Rothenberg, Weisberg); *domain psychologists* (Benbow, Bloom, Piirto) have all contributed work to psychological research on creativity. Educational psychology, however, has, to its detriment, concentrated on the psychometric approach to understanding creativity, to the exclusion of the others listed above.

PSYCHOMETRIC APPROACHES TO CREATIVITY

In 1950, J. P. Guilford, who was then President of the American Psychological Association, gave a speech that is often called the beginning of the modern interest in creativity as a measurable phenomenon. Guilford was the developer of a theory called The Structure of Intellect, where he theorized that there are 120 kinds of measurable intelligence factored across five operations, four contents, and six products. One of the five operations was divergent intellect.

J. P. Guilford differentiated between “convergent” and “divergent” intellect. “Convergent” intellect is a way of thinking that emphasized remembering what is known, being able to learn what exists, and being able to save that information in one’s brain. “Divergent” intellect is a mode of cognition that emphasized the revision of what was already known, of exploring what would be known, and of building new information. People who prefer the “convergent” mode of intellect supposedly tend to do what is expected of them, while those who prefer the “divergent” mode of intellect supposedly tend to take risks and to speculate. Here are Guilford’s original psychometric terms: (1) Fluency, (2) Novelty, (3) Flexibility (4) Synthesizing ability, (5) Analyzing ability. (6) Reorganization or redefinition of already existing ideas (7) Degree of complexity, and (8) Evaluation. He developed ways to measure each of these, and called them *divergent production*. Divergent production has been confused with creativity. Whole industries of exercise books, curricula, assessment systems, and suggestions have been based on the psychometrically measured Guilfordian “operation” of divergent production.

Taking up Guilford’s call, researchers at the University of Chicago did several studies in the 1960s. Among the most frequently cited were those by Getzels, Jackson, Wallach, and Kogan. They were trying to quantify creativity, to make tests of divergent production. These studies were widely interpreted to mean that those with high creative potential need a certain *threshold of intelligence*, about one standard deviation above the mean, but not necessarily the highest intelligence (two or more standard deviations above the mean). This separation of creativity

and intelligence has led to much confusion. However, by the early 1970s, Wallach said that the most fruitful researches would probably be into the areas of creativity within domains. Bloom, in the 1980s, was one of the first psychologists to study creativity in domains. He and his colleagues explored the patterns in the lives of research neurologists, pianists, sculptors, mathematicians, and tennis players. Likewise, a multitude of studies done at the Study for Mathematically Precocious Youth (SMPY) by Benbow, Brody, and Stanley have exposed the paths that lead to high mathematical creativity and its cousin, scientific creativity.

Another educational psychologist, E. P. Torrance, set out to create and validate tests that would identify creative potential. His Torrance Tests of Creative Thinking (TTCT) have been used in schools, to select students. These tests were similar to the Guilford tests of divergent production, and tested the ability to be fluent, flexible, and the like. The higher the score, the more potentially creative the child was. The logical fallacy was engaged. Scoring high on a *divergent production* test meant that a student was called *creative*. Torrance and his colleagues continued, until his death in 2003, to publish follow-up studies and refinements on his tests. He also invented many activities and exercises meant to help people be more creative (again, a logical fallacy, for they were mostly exercises in divergent production, which may be a part of creativity, but which was taken for creativity).

Two other psychologists have influenced the education enterprise. Educational psychologist Joseph Renzulli came up with a definition of giftedness, which said that a gifted person had three characteristics: above average intelligence, creativity, and task commitment. Renzulli insists that the gifted person must have “creativity,” and not simply a high IQ. Renzulli and his colleagues developed a widely used creativity checklist used to identify creative children. The checklist has three of eleven items that feature the presence of a sense of humor. For schools to say that “creative potential” is *measurably* separate from having academic ability or high academic achievement has produced identification systems for creative thinking, based on a threshold of intelligence test scores and using divergent production tests or creativity checklists.

Cognitive psychologist Howard Gardner’s theory of multiple intelligences and creativity was explicated in a book (1993) illustrating that creativity is possible within each of his first seven intelligences (he has since added an eighth), and he explicated this using case examples of a famous writer (T. S. Eliot), painter (Pablo Picasso), social reformer (Gandhi), scientist (Darwin), dancer (Martha Graham), composer (Stravinsky), and psychoanalyst (Freud). Gardner’s intelligences are abstractions that have to meet eight criteria, including being psychometrically measurable. These intelligences are not domains of creativity. For example, bodily kinesthetic intelligence is related to the domain of dance, but it is not dance. However, a dancer needs other types of Gardner’s intelligences, for example, spatial intelligence. None of the intelligences exists in a pure form in human creators.

Educational Psychology and Creativity

Domain-based creativity emphasizes that the domain itself (literature, visual arts, science, mathematics, music, theater, dance, and the like) defines what products are creative and what people are creative. The creative person is creative in *something*, not just generally creative. Creativity in domains is task specific, idiosyncratic to the domain. Creativity enhancement programs must modify their tasks to be specific to the domain. For example, brainstorming is a common divergent production fluency technique, but it should be used to enhance creativity within the domain. People in business can brainstorm about business-related problems; people writing a comedy show can brainstorm about ideas for the next episode; people in a dance troupe can brainstorm with their bodies, ideas for new dances.

Successful creators have similar patterns of education and familial influence, depending on the *domain* in which the creativity is practiced. Domain-based creativity is featured in a recent book (Kaufman and Baer, 2004). The researchers have studied persons by domain of creativity rather than by general creativity aptitude, with a view to how their life paths can inform the educational process. Studies of creative people within domains of achievement have led to some of the best evidence of what behaviors and situations predict the likelihood of creative productivity in adulthood. Each domain has its own rules of accomplishment and paths to achievement.

CREATIVITY AS CREATORS IN DOMAINS PRACTICE IT

Many books of exercises in fluency, flexibility, elaboration, and the like, exist. A popular technique taught in creativity enhancement classes is SCAMPER (Substitute, Combine, Alter, Modify, Put to another use, Eliminate, Reverse). They are based on the Guilfordian psychometric model, and they do not go far enough in describing the creative process as practiced by real creators in the domains. Real creators in real domains, as demonstrated in their memoirs, biographies, and interviews, do not talk about fluency, flexibility, elaboration, or SCAMPER. In their creative process, they seem to demonstrate several core attitudes (Piirto, 2004). These are an attitude of *naïveté*, of self-discipline, of risk-taking, and of group trust if in collaboration.

Core Attitude of Naïveté

Naïveté means openness, and refers to the fact that creative people pay attention to the small things, and are able to view their fields and domains by seeing the old as if it were new. Naïveté is an attitude of acceptance and curiosity about the odd and strange. Naïveté includes the ability to notice and to remark differences in details. Igor Stravinsky called it “the gift of observation.” He said, “The true creator may be recognized by his ability always to find about him, in the commonest and humblest thing, items worthy of note.”

Core Attitude of Self-Discipline

When one studies the lives of creators, one often finds they have created many, many works, even though they are only known for one, two, or a few. This self-discipline leads to the great productivity of creators. Van Gogh wrote to Theo, “I am daily working on drawing figures. I shall make a hundred of them before I paint them.” Choreographer Agnes de Mille, noted that “all artists—indeed all great careerists—submit themselves, as well as their friends, to lifelong, relentless discipline, largely self-imposed and never for any reason relinquished.” Most well-known creators are known for only a few of their voluminous numbers of creative works, produced through great self-discipline over a period of years. Expertise research says that one cannot contribute anything new to a domain unless one has been working in the domain for at least ten years.

Core Attitude of Risk-Taking

Risk-taking in creative people has been noticed since creativity began to be studied at the Institute of Personality Assessment and Research in the 1950s. Risk-taking enables one to try new things. While introverted and shy creators may eschew physical risk-taking, professional risk-taking in creators may be manifested in trying new forms, styles, or subjects. The kind of courage they have is the courage to stumble, fail, and, after rejection, to try again. Creative courage is finding the new, providing the vanguard’s warning of what is about to happen in the culture, showing in image and symbol, through their imaginations, what is possible. The creative

artists and scientists threaten what is. That is why, in repressive societies, those creators who speak out in image and in symbol are jailed or exiled. This requires courage in the presence of censure and rejection.

Core Attitude of Group Trust

In collaborative creativity, which is the kind used in team efforts, the group must have some modicum of trust. The comedy writing team, the business innovation team, need to create in a climate where the unorthodox, the unusual, the zany, the unconventional, are valued and not put down or ridiculed. Group trust is also important in dance, and in the theater. Working in a group creates an interdependency, as each member has a role to play, and a job to do, and they cannot be egotistical or selfish, or the whole project will suffer. One person cannot dominate; everyone must play and experience together. Trust is necessary among the members of the group.

THE SEVEN *PS*

Here are some further aspects of the creative process as really practiced by real creators in the arts, sciences, and business (Piirto, 2004).

Inspiration

All creators talk about inspiration. Literally, inspiration is a taking in of breath. In terms of creativity, inspiration provides the motivation to create. Inspiration is a breathing or infusion into the mind or soul of an exaltation. Several types of inspiration are discussed by creators in domains.

The Visitation of the Muse: The Inspiration of Love. Being inspired by regard for another has been called the visitation of the muse. Muse originally meant “reminder.” Today, when we speak of the muse, we speak of the inspiration of love, or Erato, the muse of love. Inspiration often comes in response to a feeling for someone, quite possibly a sexual feeling, certainly an emotional identification. Everyone has written a secret love poem whether the love is requited or unrequited. Poets write love poems, as Elizabeth Barrett Browning did with her sonnet, “How do I love thee? Let me count the ways.” Choreographers make ballets for their muses, as Balanchine did for Suzanne Farrell, Maria Tallchief, and his other ballerina wives. Visual artists paint nudes, as Picasso did for each of his many muses (and then he painted them as monsters after the relationships ended). Many of these works are efforts to express eroticism within the boundaries of the medium within which the artists are working. The creator longs for the muse, and in the process of longing, creates a song, a play, a poem, a theorem. Many creators throughout history have claimed they take dictation from a muse and claim no relationship between their own selves and the selves they create on paper. The muse possesses the creator.

Creators often speak as if what they write was sent from something within but afar. Inspirations “come.” Some creators feel as if they are go-betweens, mediums. Some mysterious force impels them, works through their hands, wiggles through them, shoots from them. This type of inspiration also applies in theater. For example, some actors speak of being receptacles for their characters’ souls, of being possessed. Today actors talk about “getting into” the character. Athletes talk of putting on their “game face.” They often have preperformance rituals for entering the state of mind necessary. This might include putting on their makeup, meditating, or being alone for a period of time.

Einstein envisioned the theory of relativity kinesthetically, through his muscles; Tesla saw the design of the alternating current generator in a vision; Gauss could calculate complex formulas

instantly; the uneducated mathematical genius, Ramanujan said that his genius came in dreams from a goddess named Namagiri. Brahms said that the inspiration for his music flowed into him from God, and that he could see them in his mind's eye. The inspirations arrived in the following.

The Inspiration of Nature. The inspiration of nature, of trees, brooks, skies, birds, and other flora and fauna is a well-known venue for breathtaking writing. The poets of the T'Ang Dynasty of eighth century China influenced countless modern poets with their natural scene setting. The English romantics used nature as inspiration, and decried the industrial revolution as in Wordsworth's sonnet, "The world is too much with us; late and soon, / Getting and spending, we lay waste our powers; / Little we see in nature that is ours."

To grow dizzy from contemplation and in-taking of natural glories is so commonplace in the creative process that it almost goes unnoticed. What causes youngsters to want to become scientists, especially biologists? The inspiration of nature. What inspires Sunday painters to stand by the seashore dabbling away? The inspiration of nature. Surely nature inspired the art of Audubon, the books of Roger Tory Peterson, and the musical compositions of Jean Sibelius.

Inspiration through Substances. The use of substances—alcohol, drugs, herbs—has a long and respectable reputation within the literature on the creative process in writers, artists, and others. Aldous Huxley wrote about the influence of mescaline; Samuel Taylor Coleridge about the influence of opium; Jack Kerouac about amphetamines; Edgar Allen Poe about absinthe; the seventh-century Chinese Zen poet Li Po about wine; Fyodor Dostoevsky about whiskey; Allen Ginsberg about LSD; Michael McClure about mushrooms, peyote, and also about heroin and cocaine.

The list of substances used could go on and on. The altered mental state brought about by substances has been thought to enhance creativity—to a certain extent. The partaker must have enough wits about self to descend into the abyss to reap what is learned there, but to also be able to return and put it aside. The danger of turning from creative messenger to addicted body is great, and many creators have succumbed, especially to the siren song of alcohol.

After taking drugs, Allen Ginsberg had a vision of William Blake. "I had the impression of the entire universe as poetry filled with light and intelligence and communication and signals. Kind of like the top of my head coming off, letting in the rest of the universe connected to my own brain." Ginsberg viewed the initial vision as the most important, most genuine experience he ever had, and he spent many years trying to recapture it through drugs and meditation.

Inspiration by Others' Creativity, Especially Works of Art and Music. Many creators are inspired by others' creativity, especially by works of art and music produced by other artists. Art inspires. Music also inspires. Friendships between artists of different genres abound in biographical literature.

Artist Juan Miró described his neighborhood in Paris on Blomet Street from 1921 to 1927. He said that Blomet Street was a crucial place at a crucial time for him. The street represented friendship and a lofty exchange of ideas and discoveries among a superior group of creative people. Miró and his friends listened to music, talked, drank, and were poor struggling artists together. They also read Rimbaud and Lautreamont, Dostoevsky and Nietzsche. Other friends included writer Antonin Artaud, visual artists Jean Dubuffet and Juan Gris, and surrealists Andre Breton and Paul Eluard. His friend Ernest Hemingway bought his major breakthrough painting, "The Farm."

Thinkers and scholars routinely get inspiration from reading the works of others. French philosopher Michel Foucault found inspiration for his work *The Order of Things* in the works of Argentine playwright and novelist Jorge Luis Borges, who was making up an incongruous classification of animals from a fictional Chinese encyclopedia. Borges's audacious invention of this reference work inspired Foucault to consider the very nature of taxonomies, which to him

were ceremonial categories that did not have life or place. His philosophical works have become must reading for postmodern thinkers.

In physics, the creation of the Manhattan Project put scientist Neils Bohr, Joseph Carter, Enrico Fermi, Richard Feynman, Hans Bethe, and Robert Oppenheimer, among others, together in a remote location in New Mexico, where they inspired each other to perfect the atomic bomb that was later dropped on Hiroshima and Nagasaki.

Inspiration from Dreams. Many creators trust their dreams. The other side, the dark side, the night side, is very important to the creative process. Dreams have inspired many creative works. People who are highly creative often believe in their dreams. Dreams can have secret, esoteric symbols and meaning. Dreams can help them with their inventions and with creating art. Dreams can predict the future. They believe they can program their dreams. Creative people also try to remember their dreams, and they believe their dreams help them to solve problems.

The Surrealists encouraged creators to use their dreams as inspiration. Freudian psychology had a great influence on the Surrealists. Both Freud and Jung wrote extensively on the significance of dreams. Freud believed that dreams are wish fulfillment and Jung asserted that dreams capture the collective unconscious—the primitive archetypes lost to us in our waking state. Creators don't seem to care to use dreams' jolly, whimsical, dark, or brooding content for material.

The Inspiration of Novel Surroundings: Travel. Travel seems to facilitate the creative process, perhaps because the novelty of sensory experience is inspirational, and a sense of naiveté is easy to maintain. Shifting our perspective by going to a new milieu, seeing how others do things differently, sleeping in strange rooms, eating exotic food can usher in great creative explosions.

Imagery

Imagery is also part of the creative process. The term *imagery* is psychological, the ability to mentally represent imagined or previously perceived objects accurately and vividly. Imagery is an attribute of imagination. Imagery is not only visual, but also auditory, tactile, olfactory, and gustatory. Three types of studies of creativity and imagery have been done: (1) biographical and anecdotal studies of creators telling about their personal imagery and how it inspired them; (2) studies which compared people's ability to create imagery and their scores on certain tests of creative potential; and (3) studies about creative imagery and creative productivity.

Guided imagery training goes on in schools and in business and industry. This training attempts to help people learn to manipulate images in their minds. Imagery is essentially spatial, and as such, concrete evidence of the mind's power to construct. Coaches teach athletes to image their performances before they do them; they visualize the ski run, the football play, or the course for the marathon. Studies have shown that athletes who use imagery perform better.

Imagination

Imagination in the creative process refers to a mental faculty whereby one can create concepts or representations of objects not immediately present or seen. The philosopher Aristotle, considered works of the imagination such as poetry, drama, and fiction, more true than history because the artist could fabricate truth from the elements of history rather than exhaustively tell all the facts. The artist is able to tell the truth on a deep level, being able to see the patterns, and the overarching themes, using the imagination. Working from the imagination is both stimulating and entertaining. Visual imagination is not the only kind that creators use. Composers imagine works in their "mind's ear," and mechanics imagine problems in their physical, spatial, array. Imaginative thought is also called daydreaming, and may be called night dreaming, as well as being called fantasy.

Of importance to educational psychology, children's play is the seed ground of adult imagination. Preschool children engage in make-believe. Story lines begin to develop in children's play as they grow toward kindergarten age. Games with rules follow, during the primary years. Then symbolic play continues, into adulthood, with video games, gambling, amateur theater, or the vicarious enjoyment of stories in books, movies, and on television.

Intuition

Intuition is part of the creative process. Intuition is having a hunch, "just knowing," having a gut feeling. Creative people trust and prefer to use their intuition. Everyone has intuition, but many don't trust intuition. Intuition is ambiguous, nebulous. Biographical information, testing, historical and archival research, and experimental studies have shown that creative people use intuition in doing their work.

Intuition is not verifiable by scientific or empirical means. Intuition seems to be a personality preference on the Myers Briggs Type Indicator (MBTI) for artists, scientists, writers, entrepreneurs, mathematicians, actors, and composers. The place of intuition in creating has long been honored. Plato thought that what we intuit was actually remembered from ancient imprints of the ideal, the true. Jung thought that intuition was a message from the collective unconscious of the archetypes of the deep human experience. The importance of intuitive perception of the world, of a nonconcrete but still tangible apprehension of underlying truth informs the creator's view of life.

Insight

Insight in the creative process is the ability to see and understand clearly the inner nature of things, especially by intuition. Several types of insight have been researched by cognitive psychologists. The studies have shown that insight has the appearance of suddenness, requires preparatory hard work, relies on reconceptualization, involves old and new information; and applies to ill-structured problems.

Insight involves restructuring the problem so that it can be seen in a different way. Many notable creative works have originated from insights. When insight happens, we just have to say "Aha! So that's how it works. So that's the answer. So that's what it's all about. So that's what the pattern is." The most famous image of insight is that of Archimedes rising from the bathtub, saying "Aha!" and running down the street, after he discovered the principle of the displacement of water. The "Aha!" comes after knowing the field really well, and after incubation.

Incubation

Incubation as a part of the creative process occurs when the mind is at rest. The body is at rest. The creator has gone on to something else. The problem is percolating silently through the mind and body. But somewhere, inside, down there below the surface, the dormant problem is arising. A solution is sifting. Incubation was one of the steps in Wallas's four-part description of problem solving. Psychologists speak of an "incubation effect," which may be caused by conscious work on the problem, and afterwards, overwhelming fatigue, where what doesn't work has been forgotten. While resting, the mind works on putting unlike things together. All the ideas may be assimilated through this time period. Then awareness comes and the answer is there. Experiments have shown that if people are given a problem and told to solve it right away, they solve it less successfully than if they are given the problem and told to go away and think about it. People often incubate while driving, sleeping, exercising, even showering.

Kary Mullis, a Nobel-prize winner, came up with PCR (Polymerase Chain Reaction) while driving.

Improvisation

The importance of improvisation in the creative process cannot be understated. To play your musical instrument without music in front of you is frightening to some who have learned to trust in their reading ability and not in their intuition and musical memory. The idea of “play” in improvisation is a necessity. Think of children making up the game as they go along, lost in imagination, forming teams and sides in a fluid all-day motion generated by the discourse of the moment.

Improvisation seems to be a key part of the creative process. Some writers say that writing is like playing jazz. The poet James Merrill used automatic writing as an improvisational technique; William Butler Yeats used automatic writing as inspiration for work. Improvisation underlies all creativity, but in music and theater, the performer cannot revise the work as writers or painters can. Improvisation in theater and music is almost always collaborative, and requires instant communication between people in the improvisation group. Improvisation reveals inner truth. Dance choreographers rely almost universally on improvisation in order to begin to make a dance. Martha Graham would begin to dance, outlining the pattern she wanted, and her dancers would imitate her. Then she would work on fixing the gestures so that the dancers would be moving together.

OTHER ASPECTS OF THE CREATIVE PROCESS

In the studies, biographies, and memoirs, several other aspects of the creative process seem apparent (Piiro, 2002, 2004): (1) the need for solitude, (2) creativity rituals, (3) meditation, and (4) creativity as the process of a life.

The Need for Solitude

The core of the creative process is solitude. Modern society believes that people are their best selves when they are in human relationships. People who don't have human relationships, who are not married, or in love, or in a family, are viewed as somehow sick. In creative people's lives, their work is often the most important thing. Creative people may be solitary, but that doesn't make them neurotic or unhappy. These experiences that take place when a person is alone need not occur with external stimuli, but there is something transcendental about such experiences. When the person is suddenly alone and able to concentrate, she is able to decipher what may have seemed too puzzling, and to unite ideas that may have seemed too different. Not being able to achieve solitude is a huge frustration for many creative people.

Solitude induces reverie. The state between sleeping and waking is relaxed, allowing images and ideas to come so that attention can be paid. What is important is a state of passivity and receptivity. Some people achieve this while cooking, cleaning, or sewing alone, walking in the woods, or during a long, boring drive. Virginia Woolf called solitude “real life” and went on to say, “I find it almost incredibly soothing—a fortnight alone.” Visual artist Audrey Flack said that solitary working, helps the artist see her destiny. “When you are working, you are alone with yourself. You get in touch with your own destiny. Like entering a dream state, the tendency is to disbelieve that that state has validity. But that is the true reality.”

Creativity Rituals

Ritual is repetitive practice. Ritual involves special places, special procedures, and special repetitive acts during or before creating. Rituals are sometimes personal. The artist Marlene

Ekola Gerberick described going to her studio, creating a circle, pacing around the current work she is making, lighting candles, picking up stones and feathers, all the while getting herself from the world of her outside life to her inner world of creating.

Ritual serves to remove the creator from the outer and propel her to the inner. Some people walk or exercise before creating, and they often get their best ideas while doing it. Some people go for a long drive. Some arrange their rooms or desks a certain way. Some like to work at a certain time of day. The approach to the work is ritualistic, and the work itself could be called, perhaps, the ceremony.

Meditation

Like creativity, meditation is in. A look at the books on the shelves at the local bookstore reveals an ongoing curiosity about eastern religions that continues from the 1960s. An astonishing number of writers, for example, have embraced Buddhism (Piirto, 2002). One suspects this is because of the attention paid to meditation, to solitude, to the going within oneself of that religious faith. Here is a partial list: Allen Ginsberg, Robert Bly, W. S. Merwin, Anselm Hollo, Anne Waldman, Gary Snyder, Jane Augustine, John Cage, William Heyen, Lucien Stryk, and Philip Whalen. Rock poet Leonard Cohen spent several years in a Buddhist monastery.

The vehicles for discovering one's self are breath control, meditational technique, visualization, imagery. Often the creative work follows the meditation, and the meditation is a preparatory ritual for the creative work. Creative people, mystics, and ascetics of all religions have known that meditation helps creativity.

Creativity as the Process of a Life

Others have viewed the creative process not merely as an altered consciousness, an immense concentration, an attainment of solitude, but as more. That is, we can look at the process of a creative person's life. The creative process is viewed these days as the province of every human being, and not just of the Einsteins, O'Keeffes, or Darwins of the world, or of those who make creative products such as music, or poems, or mathematical formulas. People's lives are their creative products.

In enhancing people's creativity, new age teachers sometimes use methods such as visualization, imagery, metaphorization, chanting, and the formulation of affirmations. People hold sacred objects such as quartz crystals and sit beneath pyramids. They go on vision quests and bang drums, chant in tones, and dance like dervishes, seeking inner peace and the guidance for living a creative life. Creativity is intertwined in the feeling of awe, of closeness to the essential, that results.

Other, less exotic methods such as writing in journals (Julia Cameron, Ira Progoff, and Natalie Goldberg), drawing (Betty Edwards and Peter Jones), crooning and engaging with the Mozart effect (Don Campbell), or dancing (Gabrielle Roth) are also employed in teaching people to be more creative, and thus to enhance the process of their lives. Again, the educational psychology of divergent production is notably absent.

An outgrowth of the humanistic psychology movement and of the work of such humanistic psychologists as Rogers, Maslow, and Perls, this quest for inner meaning has even made it to public television stations, where fund-raising is led by former high school guidance counselor, Wayne Dyer. The Open Center and the Omega Institute in New York, offer creativity-focused sessions such as intensive journal workshops, dream, singing, empowerment, improvisational theater, and dance workshops. Almost all the teachers of these workshops have written books that tell us how to enhance our creativity. All have in common the probing of the inner psyche,

making one's life a work of art, and the attainment of inner peace through auto-therapy done by making creative products.

Thus, the postpositivist educational psychological idea that divergent production, the teaching and testing of Guilford's cognitive operations is creativity, has given way to the new educational psychology of creativity, a consideration and practice of what real creators in domains do when they are being creative.

TERMS FOR READERS

Creativity—The root of the words “create” and “creativity” comes from the Latin *creatus* and *créare*. This means, “to make or produce,” or literally, “to grow.” The word also comes from the Old French base *kere*, and the Latin *crescere*, and *creber*. Other words with these same roots are *cereal*, *crescent*, *creature*, *concrete*, *crescendo*, *decrease*, *increase*, and *recruit*. “Creativity” is a relatively new noun. The word does not appear in the 1971 *Oxford English Dictionary*. That creativity is an *ability* has been a false assumption made by educators since the early 1950s. The noun “creativity” seems to have origins in psychology. *The Dictionary of Developmental and Educational Psychology* in 1986 defined creativity as “man's capacity to produce new ideas, insights, inventions, or artistic objects, which are accepted as being of social, spiritual, aesthetic, scientific, or technological value.”

Psychometrics—Testing and assessment of mental processes.

FURTHER READINGS

Gardner, H. (1993). *Creating Minds*. New York: Basic Books.

Guilford, J. P. (1967). *The Nature of Human Intelligence*. New York: McGraw-Hill.

Kaufman, J., and Baer, J. (Eds.). (2004). *Creativity in Domains: Faces of the Muse*. Parsippany, NJ: Lawrence Erlbaum.

Piirto, J. (2002). *“My Teeming Brain”: Understanding Creative Writers*. Cresskill, NJ: Hampton Press.

———. (2004). *Understanding Creativity*. Scottsdale, AZ: Great Potential Press.

Simonton, D. (1995). *Greatness: Who Makes History and Why?* New York: Guilford.

CHAPTER 42

Reclaiming Critical Thinking as Ideology Critique

STEPHEN BROOKFIELD

Critical thinking is a contested idea, one with a variety of meanings claimed by different groups—including the subdisciplines of psychology—for very different purposes. Show up at a conference session on critical thinking and you will find yourself in the company of people who locate criticality within contradictory intellectual traditions. What count as examples of critical behaviors can be defined in terms that represent almost completely opposed political and economic interests. To a group of executives thinking critically could be the process by which they discover the unchecked assumptions underlying a faulty marketing decision that has reduced corporate profits. To union or community activists it may imply an unequivocal critique of capitalism and the fight for worker cooperatives or factory councils. Thinking critically in this latter view involves action, specifically that of galvanizing opposition to the relocation of U.S. factories to non-unionized countries with no inconvenient pollution controls. Clearly, then, how the term *critical* is used inevitably reflects the ideology and worldview of the user.

In American educational psychology it is the tradition of analytic philosophy that most strongly frames how critical thinking is currently conceived and taught. From this perspective to be critical is to be skilled at conceptual and argument analysis, to recognize false inferences and logical fallacies, to be able to distinguish bias from fact, opinion from evidence, and so on. This kind of relentless critique of unexamined and possible faulty assumptions is perhaps most famously articulated in the scientific method's principle of falsifiability where intellectual effort is devoted to investigating erroneous aspects of scientific procedures. The analytic philosophy tradition comprises a set of valuable, even essential, intellectual functions, but it focuses on critical thinking solely as a cognitive process requiring a facility with language or mathematical games. Criticality here neglects social and political critique. By way of contrast, critical psychologists evaluate the theories and practices of educational psychology in terms of how they maintain an unjust status quo.

This chapter takes as its starting point a provocative essay by Kincheloe (2000), "Making Critical Thinking Critical." Kincheloe argues that criticality is grounded in the critical theory tradition but that its political and ethical dimensions have been forgotten. In Kincheloe's view critical thinking is really "the ability of individuals to disengage themselves from the tacit assumptions of discursive practices and power relations in order to exert more conscious control

over their everyday lives” (p. 24). This kind of critical distancing from, and then oppositional reengagement with, the dominant culture is the central learning task of life, according to the Frankfurt School, who used the term *ideology critique* to describe this activity. If we accept this conceptualization of critical thinking then educational psychologists concerned with its investigation would be compelled to research the degree to which learners were aware of power relations in the school (and wider community) and the ways in which learners attempted to challenge these relations when they were perceived as unfair or abusive. Obviously this makes educational psychology’s assessment of critical thinking a much more complex task than simply administering a standardized test such as the CAAP Critical Thinking Test or Watson-Glaser Critical Thinking Appraisal. Assessing critical thinking that is conceived as ideology critique has a much closer connection to political economy and ethnography than it does to administering paper-and-pencil multichoice tests.

When I talk of critical thinking in this chapter, it is the ideology critique tradition I am chiefly invoking, particularly the work of theorists such as Gramsci, Althusser, and Marcuse. As a learning process ideology critique describes the ways in which people learn to recognize how unjust dominant ideologies are embedded in everyday situations and practices. As an educational activity ideology critique focuses on helping people come to an awareness of how capitalism shapes social relations and imposes—often without our knowledge—belief systems and assumptions that justify and maintain economic and political inequity. Conceptualizing critical thinking within this tradition unites cognition with political consciousness to define it as the ability to recognize and challenge oppressive practices. When informed by ideology critique one could argue that a prime indicator of critical thinking would be skepticism of the very standardized critical thinking tests generally used to assess it! Such tests would be investigated for the extent to which they were culturally skewed sorting devices that neglected sophisticated forms of everyday cognition and reproduced within the school those power relations taken for granted in the outside world.

Critical thinkers in the ideology critique tradition would also be engaged in action. A critical educational psychology does not separate the political from the cognitive. It views critical thinking as transformative in that it exists to bring about social and political change. Teachers who educate for critical thinking attempt to provide people with knowledge and understandings intended to free them from oppression. The point of critical thinking in this tradition is to generate knowledge that will change, not just interpret, the world. In this way, critical thinking qualifies for that most overused of adjectives, *transformative*. There is no presupposition of thought being distanced from social intervention or political action. On the contrary, the converse is true. Critical thought requires such intervention. Its explicit intent is to galvanize people into replacing capitalism with truly democratic social arrangements. One important measure of critical thinking, therefore, is its capacity to inspire action. In the evaluation literature this is referred to as consequential validity; that is, validity that asks for assessments of who benefits and who is harmed by an inquiry, measurement, or method. The knowledge it produces can be considered useful to the extent that it helps change the behavior of its unit of analysis (disenfranchised and alienated citizens acting in society).

Critical thinking as ideology critique therefore entails informed action in the world to fight ideological brainwashing and create democratic practices. In this tradition students who are critical thinkers can be recognized by their opposition to the lies their history texts tell them and by their alertness to those times when the media function as a mouthpiece for Conservative policy (as in Fox News’s “fair and balanced” coverage of the American invasion of Iraq). Critically thoughtful students will most likely be challenging teachers to justify their actions, in particular the choice of certain curricula or evaluative procedures that are deemed to produce “official” knowledge. Ideology critique recognizes the expression of critical thought in students’ calling school strikes, demonstrating in support of innovative teachers whose contracts are not renewed,

and organizing to dismiss teachers who bully, either physically or symbolically. Critical thought is not the blind dismissal of the school status quo with no consideration as to what might replace it. It is thinking manifest in active claims by students of the right to be involved in shaping the classroom practices to which they are subject. On a broader level it is thinking through how schools might become sites that challenge dominant ideology and exclusionary practices. And on a macro-societal level it is thinking used to abolish the exchange economy of capitalism that commodifies human relations and turns subjects killed in foreign incursions into “collateral damage.”

At the very heart of critical thinking is the skeptical analysis of dominant ideology. Ideology is viewed as an illusory system of false ideas that prevents people from correctly perceiving their true situation and real interests. If they are to free themselves from social repression, therefore, people must rid themselves of ideological illusion. In the critical theory tradition learning to resist ideological manipulation is the chief sign that someone can think critically. This tradition builds on Marx’s views that the relations of production and material conditions of society determine people’s consciousness. Blatantly unequal political and economic systems would endure unchallenged if the ruling class could get its ideas broadly accepted as the “objective” commonsense view of the world. In Marx and Engels’s view the ruling class aims to represent its interest as the common interest of all members of society. It strives to universalize its ideas; that is, to convince the masses that ruling class conceptions of the world are the only rational, universally valid ones. When conceived as ideology critique, critical thinking educates people to recognize and oppose this kind of ideological manipulation. Critical thinkers view ideology as inherently duplicitous, a system of false beliefs that justify practices and structures that keep people unknowingly in servitude. If critical thinking is regarded as a form of ideology critique then the focus of its curriculum—the thing we are being critical about—is ideology. An early task of education for critical thinking, therefore, is to get learners to understand the concept of ideology.

Defined briefly, ideology is the broadly accepted set of values, beliefs, myths, explanations, and justifications that appears self-evidently true, empirically accurate, personally relevant, and morally desirable to a majority of the populace, but that actually works to maintain an unjust social and political order. Ideology does this by convincing people that existing social arrangements are naturally ordained and obviously work for the good of all. Its very normality and unremarkableness is a profound barrier to any critique. It is so hard to detect because it is embedded in language, social habits and cultural forms that combine to shape the way we think about the world. Ideology is equated with commonsense, a given, rather than being seen as a set of beliefs that are deliberately skewed to support the interests of a powerful minority. In recent years post-structuralists such as Foucault (1980) have clarified how knowledge and power entwine to create regimes of truth; that is, the collections of dominant ideas, frameworks of analysis, and forms of discourse that shape what we think are self-evidently obvious truths.

Strongly influenced by Marx and also by Gramsci’s notion of hegemony, the French philosopher Louis Althusser deepened the understanding of ideology in his influential essay on ideology and ideological state apparatuses (1971). For Althusser ideology was a systematic form of thought control that ensured that people at all levels of the economic and social system accepted the system’s basic reasonableness. Ideology intentionally obscured the fact that the system was based on certain values that furthered some interests over others. If ever the possibility of alternative values was seriously countenanced, then the system could be challenged. But if the system was accepted as a natural phenomenon needing no explanation or justification (because its essential rightness was so obvious) then the possibility of resistance evaporated.

Althusser believed that people lived naturally and spontaneously in ideology without realizing that fact. He argued that those who are ideological believe themselves by definition outside ideology. Consequently, one of the effects of ideology is the denial of any ideological influence

by those laboring under such influence. Ideology never says, “I am ideological.” In Althusser’s view we can claim in all sincerity to be neutral, objective, and free of ideological distortion when this is really impossible. This conviction of their own nonideological nature extends even to those who manipulate the ruling ideology in the cause of exploitation and repression. To Althusser it was obvious that ideological managers such as educators would sincerely and strenuously deny the ideological character of their work. They would say “I’m just here to teach basic skills” or “I’m just here to teach the content/syllabus.” Being immersed in ideology prevented them from stepping outside it and perceiving its social functioning.

How can people be so steeped in ideology without being aware of that fact? Althusser argued that this was made possible because an ideology always exists in an apparatus, and its practice, or practices; in other words, ideology is expressed in actions, not just in words. Ideology lives and breathes in our daily decisions, routine behaviors, and small-scale interactions. This takes into the world of Goffman’s presentation of self in everyday life and also to Foucault’s emphasis on the inscription of disciplinary power in the practices of daily life. Intimate gestures, routinized professional conduct, and conversational conventions all reflect a wider ordering of power relations that is unconsciously confirmed in these practices. The most subtle forms of ideology are buried in the modes in which concrete, day-to-day practices are organized. Ideology thus becomes less a clearly identifiable system of ideas and more a participation in actions, social games, and rituals that are themselves ideologically determined.

In the critical theory tradition coming to understand and challenge the workings of ideology is the core critical thinking process. If we think critically, so the argument goes, we stand a better chance of acting on the basis of instincts, impulses, and desires that are truly our own, rather than implanted in us. Since capitalism will do its utmost to convince us that we should live in ways that support its workings, we cannot be fully human unless we use critical thought to unearth and challenge the ideology that justifies this system. This is critical thinking’s project. When we think critically we learn that the inclinations, biases, hunches, and apparently intuitive ways of experiencing reality that we had previously regarded as unique to us are, in fact, socially learned. We learn that what we thought were our idiosyncratic perspectives and dispositions are actually ideologically sedimented. Critical thinking as ideology critique helps us understand how we learn political ideals, morality, and social philosophy within the institutions of civil society such as schools, associations, clubs, families, and friendship networks. It shows us that the constructs and categories we use instinctively to understand our daily experiences are ideologically framed. What Williams (1977) calls our “structures of feeling” come to be seen as socially induced, learned from the cultural group and social class to which we belong. So critical thinking involves people learning how ideology lives within them as well as understanding how it buttresses the structures of the outside world that stand against them. What strikes us as the normal order of things is suddenly revealed through ideology critique as a constructed reality that protects the interests of the powerful.

CRITICAL THINKING AS COUNTER-HEGEMONY

One of the most important extensions to the understanding of how ideological control is created and maintained is Antonio Gramsci’s analysis of hegemony. Hegemony describes the way that people learn to accept as natural and in their own best interest an unjust social order. In one of Gramsci’s most invoked phrases, “every relationship of hegemony is necessarily an educational relationship” (1995, p. 157). People learn to embrace as commonsense wisdom certain beliefs and practices that work against their interests and serve those of the powerful. If hegemony works as it should then there is no need for the state to employ coercive forms of control—heavy policing, curfews, torture, assassination squads—to maintain social order. Instead of people opposing and

fighting unjust structures and dominant beliefs they learn to regard them as preordained, part of the cultural air they breathe. In many ways hegemony is the conceptual bridge between the Marxist notion of dominant ideology and Habermas's idea of the colonization of the lifeworld by capitalism and technical rationality. It emphasizes how the logic of capitalism and the process of commodification seeps and soaks itself into all aspects of everyday life—culture, health care, recreation, and even intimate relationships.

Critical thinking to uncover hegemony requires a tenacity and commitment. As conceived by Marx and Engels ideology is taught by the ruling class who attempt to universalize their worldview. In hegemony, however, we teach ourselves dominant ideology, so that we become our own enthusiastic controllers. The subtlety of hegemony lies in the fact that it is very difficult to peel away layers of oppression to uncover a small cabal clearly conspiring to keep the majority silent and disenfranchised. If there is any conspiracy at work here it is the conspiracy of the normal. The ideas and practices of hegemony—the stock opinions, conventional wisdom, and commonsense ways of behaving in particular situations that we take for granted—are part and parcel of everyday life. It is not as if these are being forced on us against our will. Hegemony's dark irony, its cruelty, is that people take pride in learning and then acting on the beliefs and assumptions that work to enslave them. In learning diligently to live by these assumptions people become their own jailers. By incorporating the concept of hegemony into the analysis of ideology Gramsci widens our understanding of how ideology contributes to the maintenance of social control. The emphasis shifts from understanding how the state or sovereign imposes a view of the world on a neutral, skeptical, or resentful populace, to understanding how people are willing partners with the ruling group actively colluding in their own oppression. Indeed, persuading people to accept their oppression as normal, even desirable, is the central educational task of hegemony.

Gramsci viewed critical thinking as the core process of education and something that all students could learn. For him the point of critical thinking is to help workers become aware of their oppression and organize for political transformation. The revolutionary party then becomes the educational agency charged with fostering this learning and transformation. Learning this kind of critical thinking is not easy since it involves adults deliberately distancing themselves from their childhood experiences and coming to see these as culturally constructed. But since in his view all humans are intellectuals—reasoning beings guided by dimly sensed philosophical beliefs—it is simply a case of making critical an already existing activity (i.e., thinking).

In his analysis of how we become critical across the lifespan Gramsci argues that it is in childhood that consciousness is socially, and relatively uncritically, formed. The child's consciousness is not an individually produced phenomenon; rather, it reflects the sector of civil society in which the child participates, and the social relations which are formed within family, neighborhood, and community. Thinking is always a social process in his view and the ruts and patterns of our cognitive pathways are etched by the pressure to conform to the ideas prevailing in our class, racial, ethnic, and gender groups. Gramsci writes that in acquiring a conception of the world we always belong to a particular grouping in which the majority shares the same mode of thinking and acting. For him childhood is a period of uncritical cultural immersion with true critical thinking more of an adult learning process.

Learning to recognize and challenge hegemony—the core critical thinking process for Gramsci—is linked to the development of political movements that fight class oppression, racism, sexism, and homophobia. Thinking critically is not an isolated internal decision or private mental act made by individuals somehow abstracted out from the world in which they move. It is a socially framed decision and, in Gramsci's view, linked to membership of a revolutionary party. The content of critical thinking (recognizing and contesting ruling class hegemony), the process of critical thinking (the methods and approaches people use to learn how hegemony works and how

it can be countered), and the cognitive components of critical thinking (the concepts, categories, and interpretive forms that help people understand how hegemony works) all reflect the learner's situation—in contemporary terms, his or her location or positionality.

The major critical thinking project that consumed Gramsci's attention was the way in which workers developed a revolutionary class-consciousness and the way they then learned to act on this to change society and create a proletarian hegemony. This form of critical thinking involved two activities recognizable to educational psychologists today; learning to challenge common sense perceptions of the world (which he felt were often organized to reflect the dominant group's ideas) and learning to think independently (which happened as workers tried to distance themselves from prevailing habits of mind). If this learning occurred, Gramsci argued, people would be in a good position to blend revolutionary theory and practice. He studied these learning processes as they were lived out in the struggle for working-class revolution, and the learners he was most concerned with were political activists and organizers inside and outside the Italian Communist Party. But his analysis of learning has a contemporary resonance. Learning to think critically, for example, required the learner to work out consciously a particular conception of the world and then to engage in informed civic action based on that conception. For him critical thinkers were their own guides, refusing to accept passively and supinely from outside any molding of their personality.

How do people learn to do this? To Gramsci the elementary phase of developing critical thinking is found in the sense of being "different" and "apart." This feeling of separation provides an instinctive feeling of independence that progresses to the development of a single and coherent conception of the world. Here we can see the lexicon of self-directedness familiar within educational psychology, but of self-directedness as a deliberate break with, and a standing apart from, dominant ideology. A precursor to any form of authentic critical thinking, therefore, is the person's perception of herself as an outsider. The exercise of independent critical thought can have powerful political effects since an independent thinker often has more influence than a cadre of university academics. Gramsci is careful to point out, however, that independence of thought is not necessarily the same as the creation of original knowledge. One can experience critical thinking in a powerful way, even if what is being learned is already known to others. To discover a truth by oneself, without external suggestions or assistance, is to be authentically creative, even if the truth that is discovered is an old one. This independent critical coming to truth that others have already discovered (such as the realization that we collude in our own oppression) represents an important phase of intellectual maturity necessary to the discovery of new truth. Developing a critical awareness of how hegemony works, therefore, is the necessary precondition to learning how this state of affairs might be changed.

The elementary phase of critical thinking identified by Gramsci involves learning a basic sense of independence and separateness. This phase is then followed by a consciousness of one's own place in a hegemonic or counter-hegemonic group. Gramsci wrote that working people had two theoretical consciousnesses (or one contradictory consciousness). One of these was superficial and explicit, inherited from the past and uncritically absorbed from dominant authority. This superficially explicit conception of the world comprised the dominant ideas of the time. It worked to induce a condition of moral and political passivity that effectively nullified any serious political challenge to the established order. This first, superficial form of consciousness was hegemonic—a form of ideological control producing quietism and conformity. When circumstances conspired to have a group or class form itself into a movement to fight oppression, then the second consciousness—critical consciousness—began to emerge. It was to the furtherance of this second consciousness that critical thinking was directed. Thus, for Gramsci, critical thinking involved a struggle of radically different conceptualizations of the world and the creation of a radically different social system.

This is an unequivocal location of critical thinking in political struggle. Gramsci is saying that criticality is learned in the context of working-class activism and that a truer conception of reality is realized as working people understand their common situation and the need for collective action. Through critical thinking a worker comes to a consciousness of his solidarity with other workers. Critical thinking unites workers in a collective, practical transformation of the world. In Gramsci's analysis, the chief agent of facilitating critical thinking is the workers' revolutionary party. It is the party that organizes the workers' movement, triggers critical thinking and in so doing ensures political transformation. In this analysis educators are party members and activists, not classroom teachers who happen to have an interest in political change.

CRITICAL THINKING AS NECESSARY NEGATIVITY

A common theme in critical theory is that critical thinking begins with a rejection of what currently exists. This rejection is not seen as nihilistic or destructive, but rather as a necessary negativism. In an exploitative, falsely positive world, being negative is a hopeful act. One of the chief proponents of this view is Herbert Marcuse, who in *One-Dimensional Man* (1964) argued that we live in a society characterized by the cynical manipulation of needs by vested economic and technical interests. These needs are created by the dominant capitalist order and then internalized by us until they are indistinguishable from our most basic desires. We come to define ourselves, and the attainment of a fulfilled life, in terms of these needs. In such a society it is hard to identify revolutionary forces, since to be dissatisfied is taken as a sign of inadequacy or psychological disturbance. When the administered life becomes equated with the good life then the intellectual and emotional refusal to go along with dominant expectations appears neurotic and impotent. Thought that protests the given order of things is effectively anaesthetized by defining it as irrational or simply reframing it to fit the prevailing worldview.

Marcuse hypothesized that if we live in a society in which thought is circumscribed within certain limits that justify the correctness of the existing order, then critical thought must by definition exist outside of, and in opposition to, these limits. He argued that true critical thinking is necessarily distanced from the false concreteness of everyday reasoning. In his view an irreducible difference exists between the universe of everyday thinking and language on the one side, and philosophical thinking and language on the other. Critical thinking is conceptual in nature and deals with abstracts such as truth, beauty, fairness, or justice. Such abstraction is enhanced by a separation from the material practices of everyday life. Marcuse's equation of criticality with a learned capacity for abstract analysis and philosophical speculation challenges us to rethink our dismissal of conceptual analysis as an irrelevant game played only by ivory tower academics distanced from revolutionary struggle. For him critical philosophical thought is necessarily transcendent and abstract and subversive of the cynical opportunism that rules in everyday language and thought.

Not only does critical thinking operate at a necessary level of abstractness for Marcuse, it is also in an important sense negative. As articulated by Marcuse critical thinking is first and foremost critical negative. This is because critical thinking opposes the self-contentment of everyday common sense that is concerned to embrace the given, taken-for-granted aspects of life. Critical thinking starts with what's wrong with what currently exists, with illuminating omissions, distortions, and falsities in current thinking. In Newman's (1994) terms, critical thinking is about laying blame and defining enemies, both necessary precursors to informed social change. A negative appraisal of contemporary patterns of reasoning is the first step in developing a positive vision of the kind of thought that could replace what now exists. So what in the short term seems negative is in the long term positive. Marcuse argued that before we have the great liberation and the creation of what is to be, we need the great refusal, the rejection of what is. Those

participating in the great refusal “reject the rules of the game that is rigged against them, the ancient strategy of patience and persuasion, the reliance on the Good Will in the Establishment, its false and immoral comforts, its cruel affluence” (Marcuse, 1969, p. 6). Saying no to a culture of domination is critical thinking as an act of hope.

What kind of education can prepare learners to think critically in the necessarily abstract and negative manner proposed by Marcuse? Based on his analysis it will be first and foremost a conceptual education. Marcuse was certainly very ready to give all kinds of strategic advice on direct political action, but he never left behind his fundamental conviction that learning to think conceptually was as much a part of the revolution as creating new political and economic structures. In the administered society of one-dimensional thought, any kind of conceptual abstract reasoning that challenges the emphasis on false concreteness is by definition critical. Hence, a fundamental task of education is to provide students with the conceptual instruments for a solid and thorough critique of contemporary culture, particularly the equation of happiness with consumer affluence.

Marcuse’s insistence on people learning to think conceptually challenges practices lionized in progressive education. In particular, his position seems to stand against the celebratory aspects of experiential learning. In Marcuse’s view living in a one dimensional society means that most people’s experiences are falsely concrete; that is, focused chiefly on the acquisitive pursuit of material luxuries via short-term, instrumental action. Celebrating and dignifying these kinds of experiences—even integrating them directly into the curriculum—only serves to legitimize existing ideology. Following a Marcusean line of analysis, experiential learning has meaning only if it focuses on deconstructing experiences and showing their one-dimensional nature, and if it avoids the uncritical celebration of people’s stories. Experiential learning conducted in a Marcusean vein is learning to recognize how the ways we perceive and construct experience have been colonized by the dominant language of consumerism. Marcuse implicitly questions the wisdom of “starting where the students are,” long a prized tenet of the progressive education canon. If “where the students are” is living a falsely concrete existence, then we need to get as far away from where they are as is possible, chiefly by insisting on conceptual analysis. The struggle to think conceptually is, therefore, inherently critical. It is also always a political struggle to Marcuse, not just a matter of intellectual development. Political action and cognitive movement are partners here in the development of revolutionary consciousness.

CONCLUSION

If critical thinking is a form of ideology critique then teaching critical thinking is a form of political practice. A curriculum focused on helping people learn to think critically in this way would consider a series of questions. How can learners be helped to understand the omnipresence of dominant ideology? How can they learn forms of reasoning that challenge this ideology and that question the social, cultural, and political forms it justifies? How can they learn to unmask the flow of power in their lives and communities? How can they learn of the existence of hegemony—the process whereby people learn to embrace ideas, practices, and institutions that actually work against their own best interests—and of their own complicity in its continued existence? And, once aware of it, how do they learn to contest its all-pervasive effects?

The 2003 unilateral American invasion of Iraq provides a powerful example of what happens when critical thinking is discouraged and when a critical questioning of dominant wisdom is labeled as unpatriotic, un-American. Here was the case of a superpower proposing to invade another country and establish an occupying army on the argument that at some time in the future the country concerned might pose a threat to the superpower’s interests. No matter that no unequivocally convincing evidence had been produced to demonstrate this possibility.

No matter either that most of the rest of the world, and the United Nations, vigorously opposed this action. Had the old Soviet Union engaged in such an act it is easy to imagine the calumny and condemnation we would have heaped on its leaders. Most frightening of all, perhaps, was the extent to which the majority of people had come to accept unquestioningly the subtle (but completely erroneous) suggestion that Iraq had somehow been responsible for the Al Qaeda terrorist attacks of September 11, 2001. Because a critical perspective on the invasion was curiously absent from dominant media a majority of the populace were polled as believing that the pilots of the planes that destroyed the World Trade Center were born or trained in Iraq.

It was not so much that TV companies and major newspapers granted outright approval of the war (the Fox network's enthusiastic propagandizing for "Shock and Awe" and "Iraqi Freedom" being a notable exception), but more that there was so little critical thinking regarding the Bush administration's justifications for it. No stream of public discourse emerged into the country's consciousness, or at least that part of it represented by mainstream media, to debate the wisdom, morality, effectiveness, or potentially fateful consequences of this invasion. To the extent that the decision to invade was made by a handful of people without a full public discussion of the facts or justifications involved—which would necessarily entail the presentation of a range of counterviews—it was undemocratic. A democracy is essentially a continuous conversation a group, community, or society conducts about how it will order its common affairs and about how it will use its members' limited energies and resources. The more people who get to air their preferences on these matters, the more likely it is that the decisions made will be morally acceptable to the majority. The minority who don't like some of these decisions will at least feel that they have had a fair hearing even if their arguments did not win the day. But if the minority feels they were never heard from in the first place, or that their voices when they spoke were not really listened to, then they will conclude, with complete justification, that these decisions are undemocratic.

Progressives have often lionized American public education as a movement to create and build democracy. It has a traditional concern to develop critical thinkers with the responsibility this necessarily entails of countering any process of brainwashing or ideological manipulation. But in 2003 it seemed as if the voices of dissent that one would expect were effectively marginalized. True, outlets such as *The Nation* magazine, or the *Pacifica Radio* network, continued to represent a view that was outraged by the Bush administration's acts. But such expressions of dissent could easily be seen as an example of Marcuse's repressive tolerance (Marcuse, 1965). Repressive tolerance is a tolerance for just enough challenge to the system to be allowed to convince people that they live in a truly open society. This kind of tolerance of a managed amount of diverse views functions as a kind of pressure cooker letting off enough steam to prevent the whole pot from boiling over. When repressive tolerance is in place the apparent acceptance of all viewpoints only serves to reinforce an unfair status quo.

In the context of an administration's determination to invade another country, the critical thinking required does involve some of the cognitive moves approved by educational psychology critical thinking tests such as distinguishing bias from fact, challenging the conflation of evidence and opinion, and recognizing when unwarranted assumptions are being made. But critical thinking as ideology critique frames these moves with a specific purpose. The biases we detect are that what exist must by definition be right and that those in power have the best interests of all at heart. The opinion we challenge is our own, deeply felt opinion that when we act enthusiastically and without apparent forethought we are therefore acting in a way that serves our best interests. And the unwarranted assumption we question is the assumption that being negative is somehow antihuman, pessimistic, and cynical. Education for critical thinking, on the contrary, teaches that negativity is positive and rejection the beginning of hope.

REFERENCES

- Althusser, L. (1971). *Lenin and Philosophy*. New York: Monthly Review Press.
- Gramsci, A. (1995). *Further Selections from the Prison Notebooks, Antonio Gramsci* (D. Boothman, Trans. and Ed.). Minneapolis, MN: University of Minnesota Press.
- Kincheloe, J. L. (2000). Making critical thinking critical. In D. Weil and H. K. Anderson (Eds.), *Perspectives in Critical Thinking: Essays by Teachers in Theory and Practice*. New York: Peter Lang.
- Marcuse, H. (1964). *One-Dimensional Man*. Boston, MA: Beacon.
- . (1965). Repressive tolerance. In R. P. Wolff, B. Moore, and H. Marcuse (Eds.), *A Critique of Pure Tolerance*. Boston, MA: Beacon Press.
- . (1969). *An Essay on Liberation*. Boston, MA: Beacon Press.
- Newman, M. (1994). *Defining the Enemy: Adult Education in Social Action*. Sydney: Stewart Victor Publishing.

CHAPTER 43

Ideological Formation and Oppositional Possibilities of Self-Directed Learning

STEPHEN BROOKFIELD

Educational discourse surrounding the concept of self-directed learning demonstrates, depending on one's viewpoint, either its remarkable conceptual utility, or the co-optation and enslavement by corporate capitalism of a once subversive idea. From being regarded as a vaguely anarchistic, Illich-inspired threat to formal education, self-direction is now comfortably ensconced in the citadel, firmly part of the conceptual and practical mainstream. The marriage between self-direction and formal education seems to have settled into a comfortable and harmonious rut. Epistemologically contradictory approaches to researching self-direction (e.g., quantifying the hours spent in self-study and the number of resources consulted compared to understanding how authentic control is exercised and experienced) coexist like partners who know each others' faults but we have decided that something flawed is better than nothing at all. We can see a phenomenologically inclined naturalism sitting next to an experimental positivism without any visible rancor between them. What contentiousness exists is mostly confined to debates concerning the reliability and validity of measurement scales.

Self-directed learning is, however, one of the jewels in the crown of American ideology. Not surprisingly, then, it is often celebrated by educational psychologists as the culmination of intellectual development. Framed as the task of learning how to think for ourselves, or how to unleash the potential dormant within each of us, it conjures up frontier images of rugged individuals learning to actualize themselves into infinity. The folklore of the self-made man or woman elevates to near mythical status those who speak a narrative of succeeding against the odds through individual effort. This is the narrative often surrounding "adult learner of the year" awards bestowed on those who, purely by force of will and in the face of great hardship, claim their place at the table of higher learning. This is also the narrative that President Clinton's campaign team tapped expertly in its video *The Man from Hope* shown at his nominating convention. That anyone can be President was celebrated as a prized tenet of American culture. That this takes enormous amounts of money and years of courting, and co-optation by, big business interests remained unaddressed. Ultimately, self-directed learning is premised on the notion of individual choice, a crucial component of the ideologies of capitalism and liberty so revered in this culture. As such, an intellectual process viewed by educational psychology as existing solely within the cognitive domain has clear ideological underpinnings.

Self-directed learning also rests on a modernistic, and problematic, conceptualization of the self. A self-directed learner is seen as one who makes free and uncoerced choices from amongst a smorgasbord of enticing possibilities. The choices such a learner makes are held to reflect his or her desire to realize the strivings, dreams, and aspirations that lie at the core of his or her identity. So self-directed learning clearly depends on there being a 'self' to do the learning. This conception of the learner as a differentiated and self-contained individual entity has traditionally been at the core of educational psychology. In recent years, however, a growing body of critically inclined psychological work has questioned this conception. Educators such as Kincheloe (1999a,b) argue that we should talk of subjects rather than selves, and that subjects are produced and continually reproduced by culture and society. Such a conception of the socially produced nature of the self is central both to critical theory and postmodernism. Once self-directed learning becomes viewed as a social phenomenon, a process that is enacted within networks rather than located in the individual cortex, then it ceases to be a series of individualistic, dislocated decisions of interest only to educational psychologists. Instead it traverses the domains of critical social psychology and political economy and becomes of concern to political activists.

To critical educational psychologists the predominance of the concept of self-directed learning illustrates the tendency of humanistic educators to collapse all political questions into a narrowly reductionist technical rationality. From the perspective of a critical educational psychology, the early free spirit of self-direction has been turned (through the technology of learning contracts) into a masked form of repressive surveillance—one more example of the infinite flexibility of hegemony, of the workings of a coldly efficient form of repressive tolerance. What began as a cultural challenge, a counter hegemonic effort, has taken a technocratic, accommodative turn. It is certainly highly plausible to see the technology of self-directed learning—particularly the widespread acceptance and advocacy of learning contracts—as a highly developed form of surveillance. By interiorizing what Foucault (1980) calls the “normalizing gaze” (teacher developed norms concerning what’s acceptable) through their negotiations with faculty, learning contracts transfer the responsibility for overseeing learning from the teacher to the learner. This is usually spoken of as an emancipatory process of empowerment in which educators are displaying an admirable responsiveness to student needs and circumstances. But, using Foucault’s principle of reversal (seeing something as the exact opposite of what it really is) learning contracts can be reframed and understood as a sophisticated means by which the content and methodology of learning can be monitored without the teacher needing to be physically present.

This chapter questions the view that self-directed learning can be studied, and facilitated, as if it were the product of a monological consciousness. It argues instead that such learning is always ideologically framed and never the innocent, unfettered expression of individual preference. Drawing on a critical theory perspective the chapter calls into question the foundational belief of some educational psychologists that people make free choices regarding their learning that reflect authentic desires felt deeply at the very core of their identity. Ideology critique—the core critical thinking process of critical theory—rejects self-directed learning’s ideal of learners making autonomous choices among multiple possibilities. Instead it alerts us to the way that a concept like self-direction that is seemingly replete with ideals of liberty and freedom can end up serving repressive interests. The chapter concludes with a discussion of how self-directed learning can be reclaimed as an inherently critical process. If in 2002 and 2003 there had been widespread self-directed learning projects focused on researching the accuracy of the arguments, justifications, and assumptions regarding the proposed unilateral invasion of Iraq it is unlikely that there would have been so little public questioning of the Bush administration’s justifications for it. In this atmosphere of jingoistic self-justification it seemed as if self-directed learning’s best role was to act as some kind of force for political detoxification. If adults could be encouraged to discuss a range of different perspectives on the invasion it would be much harder for the

administration's supporters and ideological managers to equate criticism of its actions with a lack of patriotism. To this degree, self-directed learning can be the fulcrum of a vigorous democratic discourse.

In educational psychology the image of how self-directed learning works is premised on a particular concept of the self. This views each individual learner as self-contained and internally driven, working to achieve her learning goals in splendid isolation. The self is seen as a free floating, autonomous, volitional agent able to make rational, authentic, and internally coherent choices about learning while remaining detached from social, cultural, and political formations. Viewing the individual learner's self this way allows educational psychologists to administer intelligence tests purporting to measure the IQ possessed by each discrete self. Intelligence itself becomes treated as a static, integrated phenomenon replicable across contexts. A self-contained concept of the self also allows educational psychologists and teachers to set up learning contracts to achieve the ends of self-directed learners. Such contracts are regarded as if they were legally binding arrangements between consenting, self-contained entities. The same conceptualization of the self allows adult educational psychologists to create scales to measure people's self-directed learning readiness as if this were an objectively verifiable phenomenon like one's heart rate or blood pressure. Ehrenreich (1990) writes that in this conception of individualism "each self is seen as pursuing its own trajectory, accompanied by its own little planetary system of values, seeking to negotiate the best possible deal from the various 'relationships' that come along. Since all values appear to be idiosyncratic satellites of the self, and since we have no way to understand the "self" as a product of all the other selves—present and in historical memory—we have no way of engaging each other in moral discourse, much less in a routine political argument" (p. 102).

A critical theory perspective points out three problems with this notion of the self within educational psychology. First, it emphasizes that the self cannot stand outside the social, cultural, and political streams within which it swims. In Kincheloe's (1999a) words self-directed learning should be informed by "a sociopolitical cognitive theory that understands the way our consciousness, our subjectivity, is shaped by the world around us" (p. 5). From this perspective what seem like purely personal, private choices about learning inevitably reflect the contradictory ideological impulses within us. Second, a critical perspective warns that conceiving self-direction as a form of learning emphasizing separateness leads us to equate it with selfishness, with the narcissistic pursuit of private ends regardless of the consequences of this pursuit for others. This is, of course, in perfect tune with capitalist ideology of the free market, which holds that those who deserve to survive and flourish naturally end up doing so.

Thirdly, a critical perspective points out that a view of learning that regards people as self-contained, volitional beings scurrying around in individual projects is also one that works against collective and cooperative impulses. Citing an engagement in self-directed learning, people can deny the existence of common interests and human interdependence in favor of an obsessive focus on the individual. Translated into classroom practices, this conception of self-directed learning supports individual projects, individual testing, and rewards individual merit. It works against collective and collaborative forms of learning in which projects, test results, and merit are cocreated by people engaging with their environment.

A self-directed learning stance focused on the individual as a fully integrated being disconnected from broader social currents also allows wider beliefs, norms, and structures to remain unchallenged and thereby reinforces the status quo. This conceptualization of self-direction emphasizes a self that is sustained by its own internal momentum needing no external connections or supports. It erects as the ideal culmination of psychological development the independent, fully functioning person. Fortunately, this view of a human development trajectory that leads inevitably to the establishment of separate, autonomous selves has been challenged in recent years by work

on gender and critical developmental psychology. This work questions the patriarchal notion that atomistic self-determination is both an educational ideal to be pursued as well as the natural end point of psychological development. In its place it advances a feminist valuing of interdependence and a socially constructed interpretation of identity.

The critical theory tradition unequivocally condemns the separatist emphasis of self-directed learning within educational psychology and demonstrates how this emphasis makes an engagement in common cause—within and outside classrooms—difficult for people to contemplate. A separatist conception of self-direction severs the connection between private troubles and wider social and political trends and obscures the fact that apparently private learning projects are ideologically framed. In the rest of this chapter I wish to explore two contributions to critical theory that inform this critique of self-directed learning. The first is Erich Fromm's (1941) notion of automaton conformity, briefly defined as the self-conscious desire of people in contemporary culture to strive to be as close to an imagined ideal of normality as possible. Although Foucault does not build centrally on Fromm's idea of automaton conformity, I believe Fromm raises issues that are very close to Foucault's own articulations of disciplinary power, self-surveillance, and the technology of the self (Foucault, 1980). The second idea is that of one-dimensional thought as articulated by Herbert Marcuse (1964). Marcuse argued that under contemporary capitalism our thought processes are predetermined by the overwhelming need we feel to avoid challenging the system. One-dimensional thought is wholly instrumental, focused chiefly on making the current system work better. There is little impulse to generate learning projects that challenge the system. If we do feel such impulses we dismiss them as irrational Utopianism or signs of approaching neuroticism. The logic of Marcuse's position is that in a culture of one-dimensional thought self-directed learning projects will be framed to underscore the legitimacy of the existing order. I end the chapter by trying to reposition self-directed learning as an inherently radical process.

SELF-DIRECTED LEARNING AS AUTOMATON CONFORMITY

In *The Sane Society* (1956a) the critical theorist and social psychologist Erich Fromm laid out a character analysis of the personality type required for capitalism to function effectively. At the center of his analysis was capitalism's need for ideological standardization. In Fromm's view modern mass production methods required the standardization of workers' personalities to conform to a particular characterological mold. Capitalism needed people who were willing to be commanded, to be told what is expected of them, to fit into the social machine without friction. Such individuals are educated to crave conformity, to feel part of a mass that feels the same impulses and thinks the same thoughts in synchronization. They devote a great deal of psychic energy to ensuring that they conform to an imagined ideal of what it means to be "normal." This is the basic thesis of *Escape from Freedom* (1941) where Fromm attempts to explain the rise of fascist and totalitarian regimes.

In *Escape from Freedom* (titled *The Fear of Freedom* outside the USA) Fromm argued that the decline of traditional mores and the growth of secularism had made people more and more aware of the fact that they had considerably increased freedom to choose how to live and what to think. However, rather than bringing a sense of pleasurable control this recognition was a source of existential terror to most people. The central thesis of *Escape from Freedom* is that the isolation, insecurity, and alienation of modern life has resulted in many people experiencing a sense of powerlessness and insignificance. Faced with the void of freedom people turned to two avenues of escape—submission to a totalitarian leader, as happened in fascist countries or a compulsive conforming to be just like everybody else.

Of these two avenues it is automaton conformity that is the most subtle and intriguing, and ultimately the most alienating. Individuals attempt to escape the burden of freedom by transforming

themselves into cogs in a well-oiled machine of society. People might be well fed and well clothed but they are not free. Instead they have succumbed to automaton conformity and become cogs in a bureaucratic machine, with their thoughts, feelings, and tastes manipulated by the government industry and the mass communications that they subtly control. Through automaton conformity people escape the anxiety produced by the awareness of their freedom. By imagining themselves to be like everybody else, they are saved from the frightening experience of aloneness. The subtlety of automaton conformity is that the pressure to conform is applied internally, not externally, an example of disciplinary power in action. The authority people submit to by conforming is anonymous—the authority of imagined common sense, public opinion, and conventional wisdom. In pursuing automaton conformity people become their own controllers making sure they don't step out of line by daring to think deviant thoughts or engage in deviant behaviors.

The power of anonymous authority comes from its all-pervasive, yet invisible, nature. Like fish unaware of the water in which they live, citizens swim unsuspectingly in the ocean of anonymous authority. They are surrounded by an atmosphere of subtle suggestion which pervades their social life without them ever suspecting that there is any order which they are expected to follow. Under the enveloping influence of anonymous authority individuals cease to be themselves, adopting entirely the kind of personality offered to them by cultural patterns. Their concern is to become exactly the same as everybody else. Any anxiety people might feel about this kind of existence concerns whether or not they are sufficiently assiduous in pursuing and realizing the pattern of conformity. The automaton conformist's credo can be summarized thus; "I must conform, not be different, not 'stick out'; I must be ready and willing to change according to the changes in the pattern; I must not ask whether I am right or wrong, but whether I am adjusted, whether I am not 'peculiar', not different" (1956a, p. 153).

If Fromm's analysis is correct, then self-directed learning as the expression of individual yearnings through which people realize their core identities is clearly nonsensical. To attempt to measure such yearnings as if they were the authentic product of individual consciousness is also misconceived. These yearnings have been ideologically implanted in us as part of capitalism's desire to produce a personality type that will support its continued functioning. Any desires we experience to learn new skills or explore new bodies of knowledge will, by definition, be framed by our desire to think and learn what we imagine others are thinking and learning. And one of the chief sources for finding out what others are thinking and learning will be the mass media, which themselves are capitalist corporations. In their desire to attract the largest viewing audience—and thereby charge the highest possible rates for advertising—media are careful to offend the fewest possible consumers possible. The images they project, the interpretations of current events they present as self-evident, and the desires they embody, constitute the conformist norm toward which people gear their behavior.

Although Fromm was a social critic he was also a practicing psychologist producing best sellers such as *The Sane Society* (1956a) and *The Art of Loving* (1956b). When he turned his psychologist's eyes on educational practices he professed himself alarmed at the way these underscored the force of automaton conformity. Education had become completely commodified, in his view, with colleges concerned to give each student a certain amount of cultural property, a sort of luxury-knowledge package with "the size of each package being in accord with the person's probable social prestige. Knowledge becomes equated with content, with fixed clusters of thought that students store." In this system teachers are reduced to bureaucratic dispensers of knowledge. This commodified content, transmitted bureaucratically, is alienated from learners' lives and experiences. In contemporary classrooms the students and the content of the lectures remain strangers to each other, except that each student has become the owner of a collection of statements made by somebody else. Educational psychology contributed to this transmission of

canned sensibilities to students by its refusal to consider adequately the undeniable intersection of students' biographies with the ideology of automaton conformity. Indeed, Fromm so despaired of schooling's potential to counter automaton conformity's power that he believed this challenge could only be mounted in adulthood. In his opinion to understand properly how one's identity, potential, and IQ is socially constructed a person must have had a great deal more experience in living than he or she has had at college age. For many people the age of 30 or 40 was deemed to be much more appropriate for learning.

SELF-DIRECTED LEARNING AS ONE-DIMENSIONAL THOUGHT

The second idea from critical theory that informs this chapter's analysis of self-directed learning is Herbert Marcuse's idea of one-dimensional thought. Marcuse argued that in advanced industrial society the most pernicious oppression of all is that caused by affluence. Like Fromm, Marcuse believed that people had been lulled into stupefaction by the possession of consumer goods and believed themselves to be living in democratic freedom. In reality, Marcuse argued, our needs have been manipulated to convince us we are happy. Consequently a condition of disaffection lurks beneath the carapace of everyday life. If we could just see our alienated state clearly we would want to liberate ourselves from it. But we have learned to regard half-buried feelings of dissatisfaction as irrational symptoms of neurosis.

This vision of a society controlled by technological advances and smoothly functioning administration is most fully laid out in *One Dimensional Man* (1964), Marcuse's most celebrated book. One dimensional thought—instrumental thought focused on how to make the current system work better and perform more effectively—is the most pervasive mechanism of control that Marcuse elaborates. When people think this way they start to conceive of the range of possibilities open to them in life within a framework predefined by the existing order. This order then determines the focus of self-directed learning projects. People assume that all is for the best in society, that things are arranged the way they are for a good reason, and that the current system works for the benefit of all. In this system philosophical thought, even of an apparently critical kind, serves only to keep the system going. Paranthetically, self-directed learning projects—even if they appear to be the expression of a robust individualism—are, by definition, subservient to the system's needs. In a one-dimensional culture problems of meaning and morality, such as how we should treat other people, what it means to act ethically, or how we can make sense of death, are defused of metaphysical dimensions and turned into operational difficulties to be addressed by techniques and programs. Thus, operational and behavioral ways of thinking become the chief features of the larger universe of discourse and action.

One-dimensional thought ensures its own continuance by using the educational system to train people to feel a deep need to stay within their existing frameworks of analysis. Any self-directed learning conducted thus becomes geared to reinforcing these frameworks. Although avoiding divergent thinking seems like an individual decision, it is in reality the result of a massive indoctrination effort intended to stop people questioning what they see around them. The purpose of this system-preserving effort is to ensure that the needs and the satisfactions that serve the preservation of the Establishment are shared by the underlying population. The apogee of the administered society is reached when everyone shares the same deep-seated need to preserve the existing social order, but each believes this to be an idiosyncratic feature of his or her own personality. Social control is assured if the conflation of social into individual needs is so effective that they are deemed to be identical. In such a situation self-directed learning has no potential to disturb the system since its projects will have been framed to keep the system intact.

The picture Marcuse paints in *One-Dimensional Man* of the administered society dominated by technology, consumerism, restricted language, and falsely concrete thought processes that

only confirm the correctness of the existing order, is dismal indeed. Scientific management and rational production methods might have improved people's standards of living but at a price—the destruction of nature and diminution of the soul—that people are not so much willing to pay, as completely oblivious to. The administered society has extended its tentacles into the deepest recesses of the psyche to produce a seemingly instinctual concern to toe the line. If there is any truth to this dismal vision then self-directed learning is always co-opted, an expression of our need to make sure things stay as they are. We may genuinely believe ourselves to be generating learning projects that reflect only our particular needs and circumstances, but such projects are, by definition, compromised. The all-pervasive effects of one-dimensional thought have subtly predisposed us to learn things that keep the system intact.

SELF-DIRECTED LEARNING AS AN OPPOSITIONAL PRACTICE

In this section I want to challenge the arguments I have been making up to now by contending that self-directed learning *could* become an oppositional practice if its political dimensions could be made explicit. Despite its accommodative tendencies there is still something intrinsically critical, freeing, and empowering to many people about the idea of self-direction. People understand that embedded in the idea is some strain of resistance that sets learners in opposition to powerful interests and against institutional attempts to mandate how and what people should learn. So I believe that self-directed learning can be reinterpreted with a political edge to fit squarely into the tradition of emancipatory education. The case for reframing self-direction as an inherently political practice rests on two arguments neither of which is adequately acknowledged in educational psychology. The first argument is that at the heart of self-direction is the issue of control, particularly control over what are conceived as acceptable and appropriate learning activities and processes, and that control is always a political issue involving questions of power. The second argument is that exercising self-direction requires that certain conditions be in place regarding access to resources and that these conditions that are essentially political in nature. Let me take each of these themes in turn.

The one consistent element in the majority of definitions of self-direction is the importance of the learner exercising control over all educational decisions. What should be the goals of a learning effort, what resources should be used, what methods will work best for the learner, and by what criteria the success of any learning effort should be judged are all decisions that are said to rest in the learner's hands. This emphasis on control—on who decides what is right and good and how these things should be pursued—is also central to notions of emancipatory education. For example, when talking about his work at Highlander the radical educator Myles Horton (1990) stressed that “if you want to have the students control the whole process, as far as you can get them to control it, then you can never, at any point, take it out of their hands” (p. 152). Who controls the decisions concerning the ways and directions in which people learn is a political issue highlighting the distribution of educational and political power. Who has the final say in framing the range and type of decisions that are to be taken, and in establishing the pace and mechanisms for decision-making, indicates where control really resides.

Self-direction as an organizing concept for education therefore calls to mind some powerful political associations. It implies a democratic commitment to shifting to learners as much control as possible for conceptualizing, designing, conducting, and evaluating their learning and for deciding how resources are to be used to further these processes. Thought of politically, self-direction can be seen as part of a populist democratic tradition which holds that people's definitions of what is important to them should frame and instruct governments' actions, and not the other way round. This is why the idea of self-direction is such anathema to advocates of a core or national curriculum, and why it is opposed so vehemently by those who see education

as a process of induction into cultural literacy. Self-directed learning is institutionally and politically inconvenient to those who promote educational blueprints, devise intelligence measures, and administer psychological tests and profiles that attempt to control the learning of others. Emphasizing peoples' right to self-direction also invests a certain trust in their wisdom, in their capacity to make wise choices and take wise actions. Advocating that people should be in control of their own learning is based on the belief that if people had a chance to give voice to what most moves and hurts them, they would soon show that they were only too well aware of the real nature of their problems and of ways to deal with these.

If we place the self-conscious, self-aware exertion of control over learning at the heart of what it means to be self-directed, we raise a host of questions about how control can be exercised authentically in a culture that is itself highly controlling. Marcuse and Fromm reveal an inauthentic form of control where people feel that they are framing and taking key decisions about their learning, all the while being unaware that this is happening within a framework that excludes certain ideas or activities as subversive, unpatriotic, or immoral. Controlled self-direction is, from a political perspective, a contradiction in terms, a self-negating concept as oxymoronic as the concept of limited empowerment. On the surface we may be said to be controlling our learning when we make decisions about pacing, resources, and evaluative criteria. But if the range of acceptable content has been preordained so that we deliberately or unwittingly steer clear of things that we sense are deviant or controversial, then we are controlled rather than in control. We are victims, in effect, of self-censorship, willing partners in hegemony.

Hegemony describes the process whereby ideas, structures, and actions come to be seen by people as both natural and axiomatic—as so obvious as to be beyond question or challenge—when in fact they are constructed and transmitted by powerful minority interests to protect the status quo that serves these interests so well. A fully developed self-directed learning project would have at its center an alertness to the possibility of hegemony. Those engaged in this fully realized form of self-directed learning would understand how easily external control can unwittingly be internalized in the form of an automatic self-censorship in the instinctive reaction that “I can’t learn this because it’s out of bounds” (that is, unpatriotic, deviant, or subversive). A fully authentic form of self-direction exists only when we examine our definitions of what we think it is important for us to learn for the extent to which these end up serving repressive interests.

I have argued that being in control of our learning means that we make informed choices. Making informed choices means, in turn, that we act reflectively in ways that further our interests. But informed choices can only be made on the basis of as full a knowledge as possible about the different options open to us and the consequences of each of these. This leads me to the second political condition for self-directed learning, that concerning the unconstrained access to resources necessary for the completion of learning projects.

How much control can really be said to exist when the dreams we dream have no hope of being realized because we are struggling simply to survive? Any number of supposedly self-directed initiatives have foundered because those attempting to assume control over their learning found themselves in the invidious position of being denied the resources to exercise that control properly. Being self-directed is a meaningless idea if you are too weary at the end of the day to think clearly about what form of learning would be of most use to you, or if you are closed off from access to the resources necessary for you to be able to realize your self-designed projects. Being the arbiter of our own decisions about learning requires that we have enough energy to make reflectively informed choices. Decisions about learning made under the pressure of external circumstances when we are tired, hungry, and distracted, cannot be said to be fully self-directed.

For learners to exercise control in any meaningful sense they must not be so buried under the demands of their daily work that they have neither time, energy, nor inclination left over to engage in shaping and making decisions about their own development. Action springing from

an immediate and uninformed desire to do something, anything, to improve one's day-to-day circumstances can be much less effective than action springing from a careful analysis of the wider structural changes that must be in place for individual lives to improve over the long term. If the decisions we make for ourselves are borne out of a desperate immediate need that causes us to focus only on what is right in front of us rather than on the periphery or in the future, if we choose from among options that are irrelevant to the real nature of the problem at hand, or if our range of choices has been framed by someone else, then our control is illusory. In this regard, decision framing is as important as decision making in a self-directed learning project. Understood thus, we can see that central to a self-directed learning effort is a measure of unconstrained time and space necessary for us to make decisions that are carefully and critically examined and that are in our own best long-term interests.

It may also be the case in a self-directed project that I decide I want to learn something that I consider essential for my own development, only to be told that the knowledge or skills involved are undesirable, inappropriate, or subversive. A desire to explore an alternative political ideology is meaningless if books exploring that ideology have been removed from the public library because of their 'unsuitability', or, perhaps more likely, if they have never been ordered in the first place. In a blaze of admirable masochism I may choose to undertake a self-directed learning project geared toward widening my understanding of how my practice as an educator is unwittingly repressive and culturally distorted. In doing this I may have to rely primarily on books because my colleagues are convinced of the self-evident correctness of their own unexamined practice. Yet I may well find that the materials I need for this project are so expensive that neither I, nor my local libraries, can afford to purchase them. In an ironic illustration of Marcuse's (1965) concept of repressive tolerance, critical analyses of professional practice are often priced well beyond the pockets of many who could benefit from reading them. Again, I may need physical equipment for a self-directed effort I have planned and be told by those controlling such equipment that it is unavailable to me for reasons of cost or others' prior claims. If I decide to initiate a self-directed learning project that involves challenging the informational hegemony of a professional group, I may find that medical and legal experts place insurmountable barriers in my path in an effort to retain their position of authority. So being self-directed can be inherently politicizing as learners come to a critical awareness of the differential distribution of resources necessary to conduct their self-directed learning efforts.

Self-directed learning is a good example of the process whereby subjugated, radical knowledge, is co-opted or reframed to underscore conformity with the system. Yet I do not believe we should give up on the oppositional potential of this practice. If we can demonstrate convincingly the political dimensions to an idea that is now unproblematic within educational psychology, and if we can prize the concept out of the slough of narcissistic, self-actualization in which it is currently mired, then we have a real chance to use this idea as one important element in rebuilding a critical practice of education. Self-directed learning could become a highly effective, politically charged Trojan Horse.

FURTHER READING

- Belenky, M. F., Clinchy, B. M., Goldberger, N. R., and Tarule, J. M. (1986). *Women's Ways of Knowing: The Development of Self, Voice, and Mind*. New York: Basic Books.
- Ehrenreich, B. (1990). *Fear of falling: The inner life of the middle class*. New York: Perennial.
- Foucault, M. (1980). *Power/Knowledge: Selected Interviews and Other Writings, 1972–1977*. New York: Pantheon Books.
- Fromm, E. (1941). *Escape from Freedom*. New York: Holt, Rinehart and Winston.
- . (1956a). *The Art of Loving: An Enquiry into the Nature of Love*. New York: Harper and Row.

- . (1956b). *The Sane Society*. London: Routledge, Kegan and Paul.
- Goldberger, N., Tarule, J., Clinchy, B., and Belenky (1996). *Knowledge, Difference and Power: Essays Inspired by Women's Ways of Knowing*. New York: Basic Books.
- Horton, M. (1990). *The Long Haul*. New York: Doubleday.
- Kincheloe, J. L. (1999a). The foundations of a democratic educational psychology. In J. L. Kincheloe, S. R. Steinberg, and L. E. Villaverde (Eds.), *Rethinking Intelligence: Confronting Psychological Assumptions about Teaching and Learning*. New York: Routledge.
- . (1999b). Trouble ahead, trouble behind: The post-formal critique of educational psychology. In J. L. Kincheloe, S. R. Steinberg, and P. H. Hinchey (Eds.), *The Post-Formal Reader: Cognition and Education*. New York: Falmer.
- Marcuse, H. (1964). *One-Dimensional Man*. Boston, MA: Beacon.
- . (1965). Repressive Tolerance. In R. P. Wolff, B. Moore, and H. Marcuse (Eds.), *A Critique of Pure Tolerance*. Boston, MA: Beacon Press.
- Morss, J. R. (Ed.). (1996). *Growing Critical: Alternatives to Developmental Psychology*. New York: Routledge.

CHAPTER 44

Literacy for Wellness, Oppression, and Liberation

SCOT D. EVANS AND ISAAC PRILLELETSKY

If there were tests about what constitutes the public good, most of us would fail miserably, including those of us with university degrees. Lack of numerical and verbal literacy is bad enough, but there is another type of ignorance with similar or even greater negative consequences: Moral and political illiteracy. This is the type of ignorance that results from not knowing how to challenge dominant ideas about what our society should be like. If we are to begin questioning the status quo, we need to understand what wellness is, how oppression obstructs it, and how liberation can enhance the former and resist the latter.

We learn more and more about how to control nature but fall short of resolving basic human predicaments. This is not because social problems are insolvable, but because there are powerful groups interested in keeping things the way they are. Unless we educate ourselves about the role of power in wellness, oppression, and liberation, we will never be able to challenge current structures of inequality, a major impediment in human, organizational, and community development.

Psychologists and educators have studied well-being in the narrowest sense of the word. Usually, they have limited their approach to subjective reports of happiness. They have conceptualised wellness in individualistic terms devoid of social context. But if they were remiss in studying wellness from multiple levels of analysis, they have completely ignored questions of oppression and liberation. Power differentials are absolutely crucial in the genesis and transformation of wellness, oppression, and liberation. Without a specific literacy on these topics, the most we can expect from psychologists and educators is slight amelioration of inimical conditions. To encourage the transformation of conditions that lead to suffering and injustice, we discuss wellness, oppression, and liberation at five levels of analysis: personal, interpersonal, organizational, community, and social. Following this conceptual orientation we suggest literacy for wellness and liberation and roles for agents of change, including educators, psychologists, parents, policy makers, community organizations, and youth.

WELLNESS

Wellness is a positive state of affairs, brought about by the combined and balanced satisfaction of personal, interpersonal, organizational, community, and social needs. Notice that our definition

extends beyond the individual. Although the person is the ultimate beneficiary of wellness, he or she cannot attain high levels of satisfaction and fulfilment unless other domains achieve adequate levels of satisfaction as well. Human beings are interdependent on each other and on organizational, communal, and societal structures. Each one of the five domains of wellness must meet certain needs for it to thrive and for wellness as a whole to flourish.

Wellness as a whole takes place when its five components meet certain needs and when they act in concert. This creates a synergy that is hard to achieve without the satisfaction of needs of any one element. Omissions or neglect in any one domain have negative repercussions for that particular domain and for other spheres as well. In this sense, the five nodes of wellness operate as a web in which the weakness of one diminishes the strength of all, and the strength of each enhances the resilience of the whole. Once this view of wellness is adopted, we can no longer define wellness in merely personal or interpersonal terms. It is an interdisciplinary conceptualisation that defies reductionism. From an ecological perspective, wellness can exist but in incipient forms at each of its subcomponents. It is only when they interact and strengthen each other that the synergy of wellness can emerge. The satisfaction of personal needs such as growth and love cannot be fulfilled in the absence of meaningful relationships, which, in turn, are affected by norms of interpersonal violence regnant in the culture—a culture which is reproduced in organizations and communities through social norms and economic determinants such as consumerism, mass media, and the like. The links among the various components of wellness are not hard to discern. It is only when we resort to myopic disciplinary lenses that we miss the big picture of wellness.

In each and every case, components of wellness are units and parts at the same time. Each of the five elements is a unit, in and of itself, and part of holistic wellness at the same time. Arthur Koestler introduced in science the notion of holons. A holon is an entity that is whole and part at the same time. Personal wellness may be viewed as a unit—consisting of physical, psychological, and spiritual domains—but at the same time it is only a part of holistic wellness, which is achieved when personal, interpersonal, organizational, community, and social wellness come together. The wellness of each domain is codependent on the wellness of others. In the following sections we discuss the needs and determinants of the various components of wellness and conclude with illustrations of their synergic properties.

Personal Wellness

Physical, psychological, and spiritual components cocreate personal wellness. Physical needs include health, growth, adequate stimulation for brain development, nutrition, exercise, and an active lifestyle overall. Psychological needs entail a sense of control, self-determination, self-esteem, hope, and optimism. Meaning, development, and transcendence are some of the spiritual needs of personal wellness. A cursory inspection of these needs reveals their dependence on other domains of wellness. For we cannot achieve control over our lives if others deprive us of it, much as we can have little hope in inhospitable communities and war-torn societies.

Interpersonal Wellness

This component of wellness reflects qualities of relationships. Interpersonal wellness occurs when a relationship is based on caring, compassion, respect for diversity, and collaboration and democratic participation. People can experience interpersonal wellness in some relationships but not in others. As with personal wellness, this domain is dependent on others. An organizational climate that promotes participation is more conducive to wellness among workers than one that is dictatorial or repressive.

Organizational Wellness

Organizations achieve different levels of wellness depending on how well they meet certain needs—both for the people who work within the organization and the people who are affected by it in the community. Clear roles, positive climate, balance of economic with social and environmental mission, accountability, effectiveness, and participatory decision-making processes are basic needs organizations must meet for all stakeholders to prosper. An imbalance among the various needs is an ever-present risk. Many corporations put economic interests over and above social and environmental aims, resulting in damage to communities: poor wages, unacceptable working conditions, violation of environmental rules, and others. Organizations are appropriately located at the middle of the various wellness components, as they mediate among persons and society.

Community Wellness

Communities experience varying levels of wellness, depending on the satisfaction of certain needs, such as sense of cohesion, social capital, safety, transportation, adequate housing, access to recreational facilities, well-resourced schools, opportunities for participation in decisions affecting the community, and level of control over what happens in the neighborhood. In the absence of these needs, children suffer from poor educational systems, people are afraid to walk the streets, and isolation ensues.

Social Wellness

We distinguish between community and social wellness in terms of physical proximity and level of policies affecting the population. With respect to the former, the community is proximal to where people live. Society is a larger physical construct than the immediate neighborhood. With respect to the latter, social wellness is largely determined by policies that affect nations as a whole, such as access to universal health care or lack thereof, the presence of safety nets and unemployment benefits or lack thereof, progressive taxation systems or lack thereof. Societies that support the unemployed and single mothers, that offer day care for young children, and that regard health care as a universal right attain higher levels of wellness than societies that discriminate on the basis of economic opportunity. Consequently, social wellness cannot be achieved when the need for universal health care, adequate safety nets, housing, and decent public schools are not met. In summary, these are needs for justice and equality. In their absence, only those with privilege can access services and resources that support personal development.

The Synergy of Wellness

Throughout the various components of wellness we have tried to illustrate how closely connected they all are. Wellness is maximized when individuals enjoy meaningful relationships in formal and informal organizations, when communities are safe and prosperous, and when societies are just and equitable. It is interesting to note that in wealthy societies where the gap between the rich and the poor is smaller, people live longer and are healthier than in less equitable ones. This is but one example of how social policies affect health and well-being. Another example concerns the positive effects of social cohesion on levels of education, welfare, tolerance, and crime. Clear positive effects have been found in states and communities where people volunteer more and are more engaged in civic life.

OPPRESSION

Oppression entails a state of asymmetric power relations characterized by domination, subordination, and resistance, where the dominating persons or groups exercise their power by the process of restricting access to material resources and imparting in the subordinated persons or groups self-deprecating views about themselves. It is only when the latter can attain a certain degree of political literacy that resistance can begin. Oppression, then, is a series of asymmetric power relations between individuals, genders, classes, communities, and nations. Such asymmetric power relations lead to conditions of misery, inequality, exploitation, marginalization, and social injustices.

Oppression is a condition of domination where the oppressed suffer the consequences of deprivation, exclusion, discrimination, and exploitation imposed on them by individuals or groups seeking to secure economic, political, social, cultural, or psychological advantage. Oppression consists of *political* and *psychological* dimensions. We cannot speak of one without the other. Psychological and political oppression coexist and are mutually determined.

Personal Oppression

The dynamics of oppression are internal as well as external. External forces deprive individuals or groups of the benefit of personal (e.g., self-determination), social (e.g., distributive justice), and interpersonal (e.g., collaboration and democratic participation) wellness. Often, these restrictions are internalized and operate at a psychological level as well, where the person acts as his or her personal censor. Some untoward psychological conditions such as low self-esteem and excessive anxiety derive from internalized oppression. Personal oppression, then, is the internalized view of self as negative, and undeserving of resources or increased participation in societal affairs. This derives from the use of affective, behavioural, cognitive, material, linguistic, and cultural mechanisms by agents of domination to affirm their own superiority. Psychological dynamics of oppression entail surplus powerlessness, belief in a just world, learned helplessness, conformity, obedience to authority, fear, verbal, and emotional abuse.

Interpersonal Oppression

This type of oppression derives from relationships where a powerful person dominates another individual or group by restricting their self-determination, opportunities, and growth. This type of oppression is characterized by power differentials and is often called emotional abuse or neglect, although at times it can also be physical or sexual abuse. This type of oppression can take place in families, schools, workplace, or other community venues.

Organizational Oppression

This expression of oppression takes place where repressive norms and regulations deprive workers or people affected by the organization of their rights and dignity. Boarding schools where children have been physically, sexually, and emotionally abused are prototypical examples of oppressive organizations where the powerless (e.g., children) are taken advantage of and dominated by the powerful (e.g., priests, school masters). Work environments can also be oppressive. Employers often take advantage of fearful illegal farm workers and deprive them of basic working conditions.

Community Oppression

Entire communities may be oppressed by discrimination, lack of opportunities, and exclusion. Racism, ableism, and classism exemplify the oppression and unjust treatment of certain groups

in society. As with previous instances of oppression, power differentials and abuse of power characterize this type as well.

Social Oppression

At the broadest level, oppression is the creation of material, legal, military, economic, or other social barriers to the fulfilment of self-determination, distributive justice, and democratic participation. This condition results from the use of multiple forms of power by dominating agents to advance their own interests at the expense of persons or groups in positions of relative powerlessness. Some political mechanisms of oppression and repression include actual or potential use of force, restricted life opportunities, degradation of indigenous culture, economic sanctions, and inability to challenge authority.

The Synergy of Oppression

It is often the case that oppressed individuals become abusive themselves—at home, at work, in the community—thereby perpetuating oppressive cycles. Oppressive cultural norms, work environments, and relationships are often internalized, resulting in personal harm and diminished opportunities in life. In many ways, oppression resembles a chain reaction that starts with oppressive and repressive social policies and ends up with repressed individuals in abusive relationships. History is replete with examples of abominable policies readily embraced by otherwise law-abiding citizens. The Nazi treatment of Jews, the treatment of slaves in the United States and the treatment of Blacks under Apartheid are but few examples.

LIBERATION

Liberation refers to the process of resisting oppressive forces and the state in which these forces no longer exert their dominion over a person or a group. Liberation may be from psychological and/or political influences. There is rarely political or social oppression without a concomitant psychological or personal expression. Repressive cultural codes become internalized and operate as self-regulatory, inhibiting defiance of oppressive rules. Liberation is about overcoming the barriers to defiance. Liberation is the process of overcoming internal and external sources of oppression (freedom from), and pursuing wellness (freedom to).

Personal Liberation

Freedom from internal and psychological sources includes overcoming fears, obsessions, or other psychological phenomena that interfere with a person's subjective experience of well-being. Liberation to pursue wellness, in turn, refers to the process of meeting personal, relational, and collective needs. As we shall note below, the process of personal liberation cannot really start until a certain degree of literacy and awareness has been reached. In the absence of systemic explanations of suffering, individuals blame themselves for their oppression. Emancipation requires a new language, the language of agency, possibility, and opportunity.

Interpersonal Liberation

To liberate oneself from oppressive relationships requires courage and support from others. It is very rare that people leave abusive relationships without social and emotional support. Much suffering occurs because of abusive relationships where the powerful instill hopelessness

in victims. Interpersonal liberation means asserting one's power and exercising more control over one's life. Abused women who liberate themselves from abusive partners have much to teach us about the difficulties of leaving and the joys of having left.

Organizational Liberation

Groups affected by oppressive policies of institutions strive to organize to challenge the status quo. Many stakeholders internal and external to organizations are affected by repressive policies. Unfortunately, we don't know enough about how workers organize to overcome organizational oppression. Much of the literature in this field has been characterized by inadequate accounts of organizational oppression. Wittingly or unwittingly many authors mask real issues of oppression and frame them in terms of incompetent leaders or disgruntled workers.

Community Liberation

Personal suffering and struggles are often explained in terms of private ineptitudes divorced from systems of domination and exclusion. This dynamic often applies to gay, lesbians, ethnic minorities, and other communities subjected to discrimination. In a positive outcome, people discern the political sources of their psychological experience of oppression and rebel against them. However, research on the process of empowerment indicates that individuals and communities do not engage in emancipatory actions until they have gained considerable awareness of their own oppression. Hence, the task of overcoming oppression should start with a process of literacy. It is through this kind of education that those subjected to conditions of injustice realize the sources of their oppression.

Social Liberation

Liberation from social oppression entails, for example, emancipation from class exploitation, gender domination, and ethnic discrimination. Social movements demonstrate the power of large masses united in the pursuit of justice. Such was the case with the women's movement and the civil rights movements in the United States. Through processes of political literacy and political organizing, marginalized groups gained rights and protections that had been hitherto the exclusive province of white males. Unfortunately, social movements today are fragmented by lack of solidarity.

The Synergy of Liberation

The process of liberation starts with political literacy, according to which marginalized populations begin to gain awareness of oppressive forces in their lives and of their own ability to overcome domination. This awareness is likely to develop in stages. People may begin to realize that they are subjected to oppressive norms. The first realization may happen as a result of therapy, participation in a social movement or readings. Next, they may connect with others experiencing similar circumstances and gain an appreciation for the external forces pressing them down. Some individuals will go on to liberate themselves from oppressive relationships or psychological dynamics such as fears and phobias, whereas others will join social movements to fight for political justice.

The evolution of critical consciousness and literacy can be charted in terms of the relationship between the psychological and political dynamics of oppression. The level of critical awareness of a person or group will vary according to the extent that psychological mechanisms obscure

or mask the external political sources of oppression. In other words, the more people internalize oppression through various psychological mechanisms, the less they will see their suffering as resulting from unjust political conditions. Internalized psychological oppression can completely obscure the political roots of oppression.

LITERACY FOR WELLNESS AND LIBERATION

In the introduction to the thirtieth anniversary edition of Brazilian educator Paulo Freire's *Pedagogy of the Oppressed* (1970), Richard Shaull suggests that there is no such thing as a neutral education process. Education functions either to facilitate the younger generation's conformity or to foster their critical reading of reality and their ability to transform it. This is the essence of what we mean by literacy for wellness and liberation. Literacy for wellness and liberation is a worthy goal, not only for oppressed populations, but for the entire population as well. Critical consciousness has the potential to enhance wellness and liberation. Paulo Freire describes critical consciousness, or conscientization, as learning to perceive social, political, and economic contradictions, and taking action against an oppressive reality. Literacy, in this sense, is the understanding of how power dynamics operate to enhance opportunities or to perpetuate oppression in personal and collective life. Education is not about knowledge per se, but about ideas; it is about engaging in dialogue to generate thought, explanation, and understanding. It is a way of knowing.

It is important to discuss the developmental implications of this kind of critical knowing. This level of understanding suggests a cognitive structure that allows individuals to free themselves from the constraints of the present moment. This mature level of understanding involves the capacity for systemic reasoning, or the ability to see interconnections and to critically reflect on them. Various theorists have described this critical stage of development in different ways. Constructivist knowing, postformal thinking, postinstitutional ego system, reflective judgement, informed commitment, cultural literacy, and transformative learning are just some illustrative concepts. Regardless of the precise terminology, the central factors in this type of literacy are the ability to challenge internalized images of established ways of life, and the understanding of synergy of various components of wellness. Although reaching this stage of development is no easy task, it should be, nevertheless, as Lawrence Kohlberg famously wrote, the aim of education.

The history of social movements and positive social change reveals that consciousness-expanding strategies had been amply used to promote critical literacy. Gains around workplace struggles, achievements in peace and justice, and the liberation of minorities, women, and other groups all involved efforts to promote critical consciousness. The context for consciousness raising and human development is everyday activities. Everyday life encounters, purposeful action, and social situations can be valuable contexts for people and groups to challenge assumptions, values, and practices that tend to be taken for granted. The many forms of media that youth and adults are exposed to can also be important tools and opportunities for critical reflection. Literacy can be promoted in these everyday activities through the use of challenging questions, alternative perspectives, and reflective dialogue about the consequences of prevailing social realities.

Critical literacy can also be promoted in the professional practices of teachers, social workers, educational psychologists, and policy makers. Redefining these practices to bring the values of justice, wellness, and liberation to the foreground can have a profound impact on human development and the transformation of oppressive systems. Implementing strategies to redesign these practices is difficult and involves inherent risks. It will require collective commitment and study, experimentation, organizational openness, and systems of support. In the next section, we offer ideas for ways that citizens and professionals can become agents of change.

ROLES FOR AGENTS OF CHANGE

Different people in different roles can promote literacy for wellness. These agents of change can promote wellness and liberation and resist oppression through literacy, not any literacy, but participatory literacy. For each of these groups of people, action presupposes the development of one's own literacy for wellness and liberation.

Roles for Teachers

Classroom teachers can facilitate the development of literacy for wellness and liberation by attending to their own personal and professional development, by the use of critical pedagogy, and by acting as agents of change in their own schools and communities.

In Personal and Professional Development. It is important for teachers to attend to their own development, most importantly, their own critical consciousness. Unfortunately, this is not the central aim of many training programs. Teachers must seek out ways to expand their own awareness of critical events in the world. They should also seek to impart that knowledge to their students. More difficult than learning about external events is reflection about how we, in our personal and professional roles, contribute to injustice and oppression.

In the Classroom. Central to literacy for wellness and liberation, and, for that matter, all effective learning is the "teacher-student" relationship. Teachers need to be skilled at student-centered, constructivist approaches to learning. Additionally, a joyful and participatory environment in the classroom helps students feel respected, valued, and capable. Teaching in this type of setting should inspire personal reflection and consciousness-raising and promote the values of personal as well as collective well-being. Teachers should take care to utilize diverse cultural references, theories, authors, and perspectives as well as intentionally tap into the experiences and wisdom of students.

This requires that teachers cast off any ties to the banking method of education (teacher deposits knowledge into students) and, instead, embrace the problem-posing method of teaching. Through skillful posing of people's problems in their relation with the world, teachers can enter into meaningful dialogue with students who then become joint owners of the process. To quote Freire,

Students, as they are increasingly posed with problems relating themselves in the world and with the world, will feel increasingly challenged and obliged to respond to that challenge . . . Their response to that challenge evokes new challenges, followed by new understandings; and gradually, the students come to regard themselves as committed (p. 81).

There are numerous examples of this in our schools today. In our local community, we often hear stories of problem-posing methods being used to help students learn and apply critical thinking. In one example, a fifth-grade science teacher charged with having to deliver a lesson on endangered species joined with students to research the problem and to explore the issue in depth. This led to the conclusion that humans have played, and continue to play, a major role in the elimination of species. They then explored the possibilities for doing things differently in the world.

In the School. Teachers can also play an important role in creating organizational wellness in their own schools. Schools, unfortunately, are often not settings that promote human development and well-being. Teachers can help to create a school community that is just, participatory, supportive, and caring. They can help reduce power dynamics, especially between the adults and the students in the setting, and can do this by advocating for ways that students can play meaningful roles in the ongoing functioning of the school organization.

In the Community. Teachers can work to break down the barrier between students and community by working to immerse students in the community and by bringing the community into the classroom. Service-learning, field research, and experiential learning are tested ways of increasing student learning in relation to the world. Teachers can also bring the world into the classroom, inviting guests to share their special gifts and expertise with students.

Teachers can also become active agents of change in the school reform process. This might entail bringing their expertise to local planning sessions, school board meetings, parent-teacher-student organizations, and local government. This involvement also requires that teachers become active in their local and national teachers unions. On a larger scale, teachers may choose to join organizations and movements for reform such as Rethinking Schools, Educators for Social Responsibility, Teaching for Change, and the Teacher Union Reform Network, among others.

Roles for Parents. Parents can be agents of change by fostering political and moral literacy at home, and by taking an active role in their child's school. Implicit in these suggested roles is the understanding that parents can best foster the well-being of their children by attending to their own development of political and moral literacy.

In the Home. Parents can have a tremendous impact on the young person's critical consciousness; primordially by helping them to become critical consumers of media. There are many opportunities to dialogue with youth about programs and news we watch on television, and articles we read in newspapers, magazines, and on the Internet. Parents can join with young people in "trying on" alternative perspectives, dialoguing about the content, and exploring what is behind the many messages we receive from the media on a daily basis. Parents and their children can also act by writing letters to the editor and advocating responsible news reporting. Additionally, parents can encourage and support their child's participation in local community organizations, neighborhood groups, and social movements.

In the Community. As difficult as it is, parents need to be active in the schooling of their children. This means participating in parent-teacher-student organizations, attending school board meetings and forums, and getting involved in organizations working toward education reform. Parents can be agents of change by becoming aware of how power impacts the well-being of schools and by working for a more just and equitable allocation of resources in the public schools. As their children get older, parents can ask them to accompany them to various events to help them develop literacy and civic awareness.

Roles for Counselors

Counselors can be agents of change with their counselees, in organizational settings, and in the community.

In Counseling. Counselors should avoid psychologizing problems and victim-blaming approaches. Professional helpers such as psychologists and counselors often prescribe personal solutions to collective problems. Counselors can instead join with their counselees to learn about ways that "societal violence" gets replayed through individuals. A shift in discourse from the medical model to a critical language of oppression and empowerment is needed. We can help students and families trace links between their issues and individual, social, economic, political, and cultural dynamics. Therapeutic methods such as narrative therapy help individuals to externalize the problem and work to reauthor their story based on the new awareness. Counselors can catalyze processes of personal empowerment and liberation, and can enhance literacy by facilitating critical consciousness. The goal is personal and collective empowerment and social change. There is an additional role for counselors in linking students and colleagues to external services, support groups, and organizing groups.

In the Organization. Often overlooked is the role that counselors can play in the development of organizational wellness. Counselors can be facilitators of a caring organizational community. Along with teachers and administrators, they can encourage democratic participation in the settings and include youth in leadership roles. They can mediate differences, help to reduce power differentials, and propose visions of empowerment and justice. They can also help build an organizational culture that promotes people's dignity, safety, hope, and growth and relationships based on caring, compassion, and respect.

In the Community. It is important for professional helpers to disseminate the need for caring and compassion in both the "proximal" and "distal" forms. Distal forms of caring involve work at the system level to help create conditions that promote wellness and liberation. Counselors can speak out in the community to help raise awareness of how power differentials and community conditions impact wellness, oppression, and liberation. Counselors can accomplish this in a variety of ways, including letter writing, contributions to newsletters and trade magazines, "teach-ins" and training, participation in community groups as well as local and national social movements. Proximal forms of caring, in turn, refer to the acts of compassion we engage in with individuals with whom we work or for whom we care in our immediate environments.

Roles for Educational Psychologists

Scan any Educational Psychology textbook, journal, or encyclopedia and you'll generally discover a focus on such concepts as motivation, assessment, comprehension, achievement, cognitive development, learning processes, learning styles, behavioral objectives, and instructional models. Largely missing in the field of Educational Psychology are theories, research, and interventions that address sociopolitical development, moral and political literacy, wellness, justice, oppression, and liberation. What is needed is a *critical* educational psychology that acknowledges the limits of traditional psychology, that challenges power differentials, and that encourages the transformation of conditions that lead to suffering and injustice.

Educational Psychologists can take the lead in researching the ways in which social conditions and oppressive school settings impinge on the learning and well-being of young people. They can be steadfast in their refusal to partial out the context in learning, teaching, and growing. They can develop theories and interventions that enhance the critical consciousness of students and teachers and advocate for settings that foster empowerment and community. In teacher training programs, they can prepare teachers to be agents in fostering literacy for wellness and liberation. Educational psychologists can take the lead in questioning basic assumptions about whether schools as they are currently arranged are the best places for learning to occur. Armed with research, sound theories, and ideas for action, they can then work to impact educational policy.

Roles for Educational Policy Makers

The literacy objectives we have described in this chapter cannot be accomplished under the public schools status quo. Critical pedagogy or teaching for moral and political literacy requires a different commitment and it requires resources. Teachers cannot be expected to do the things we suggest when their classes are overstocked with students, when there are limited opportunities for professional development, when they have to provide money for their own supplies, and when they are unable to take students out into the community. These objectives are not possible in an educational culture that places priority on assessment, universal academic standards, and

authoritarian accountability. Literacy for wellness and liberation requires a whole new approach to educating young citizens.

As long as we consider the status quo as unchangeable, the policies we design will be limited in their effectiveness to create schools that serve a broader purpose in society. Conventional policy formulation is often hindered by prevailing social, economic, and cultural realities. Policies are often formulated with full awareness that they will not deal effectively with the overarching problems. In this case, the problem is a lack of attention to the sociopolitical development needs of young people and the educational system's lack of vision in promoting wellness and liberation. What we advocate for is what Gil (1998) calls radical policy practice. This is a holistic approach that eschews incremental policy adjustments and, instead, suggests transformations of entire policy systems.

Roles for Community Organizations

Community organizations can be partners with schools, parents, and young people in promoting wellness and liberation. Organizations can offer an array of opportunities for people to be engaged in learning about and addressing community problems. They are natural holding environments for the development of critical consciousness, providing opportunities for people to develop a critical awareness of the disempowering social conditions facing them. Additionally, they can help youth and their families channel their frustration and anger, caused by societal ills, into constructive involvement in activities and movements pursuing wellness, social justice and liberation.

Community organizations, along with their members and clients, can make their voice heard in school systems and community decisions. Proactive organizations can look for ways to bring their wisdom, and the wisdom and voice of their constituents, to the table. Community organizations can also play an educative role by holding "teach-ins," speaking and presenting to groups, and partnering with groups to research community issues. They can help raise awareness by providing political and civic education and opportunities for engagement. Organizations can be more proactive by taking a stand on social issues, advocating for meaningful change, and lobbying (within allowed limits) their representatives for policies that enhance well-being and liberation.

Organizations should also pay attention to their own organizational wellness. The work of community-based organizations is difficult and taxing. Special care is needed to create and maintain a workplace that is nurturing, supportive, and participatory. Additionally, individuals in community organizations need opportunities to develop their own literacy for wellness and liberation. Personal and professional development opportunities should abound and leaders can play an important role in developing an open organizational culture that values questioning, diverse perspectives, and creativity.

Roles for Young People

Many social movements were driven by the energy and creativity of young people. Youth can be agents of change. With proper supports and gentle coaching, young people can act as researchers, teachers, consultants, project leaders, committee members, presenters, writers, and experts. Courageous adults can help young people serve as full members on school boards and committees, as well as on community and organizational boards and commissions. Young people can not only act, they can appeal to others to act as well. They can work in solidarity with other youth and adults to raise awareness, write letters, start media campaigns, and generally organize for social change. Young people can fight for and demand roles in the settings that affect their lives. And through their actions, they can remind the community and the world about

the need to live up to the principles outlined in International Convention of the Rights of the Child¹—especially Article 12, which speaks to young people’s right to participation.

The principle affirms that children are full-fledged persons who have the right to express their views in all matters affecting them and requires that those views be heard and given due weight in accordance with the child’s age and maturity. It recognizes the potential of children to enrich decision-making processes, to share perspectives and to participate as citizens and actors of change.

CONCLUSION

To encourage the transformation of conditions that lead to suffering and injustice, we need to develop our own moral and political literacy and work to develop it in others. The critical capacity to challenge dominant ideas about society, reject oppression, and promote liberation is a major pathway to wellness. In this chapter, we have suggested roles for agents of change. Youth, parents, organizations, and educational professionals alike can enhance their personal and collective critical consciousness, a critical precursor in the creation of healthy and just societies.

Educational psychologists can facilitate well-being in schools and communities by paying more attention to the role of power and structures of inequality in their own research and practice. This requires a widening of the disciplinary lens to capture the big picture of wellness. It requires attention to the political as well as psychological dimensions of wellness, and it requires a focus on external as well as internal factors. By making these issues part of the disciplinary dialogue, educational psychologists can move beyond amelioration and begin to transform conditions that lead to suffering. A critical educational psychology may be the first step toward the promotion of this dialogue.

TERMS FOR READERS

Consentization—Learning to perceive social, political, and economic contradictions, and to take action against oppressive elements of reality.

Critical Consciousness—A mental faculty, a way of knowing the world that involves the ability and inclination to pose questions (critical thinking), to disembed from the present and grasp historical themes, and to critically analyze causality in our relationships with specific aspects of reality. It is also characterized by the power to perceive, respond to critical needs, and reconstruct reality through engagement with others and through conscious, responsible, creative relationships with reality.

Liberation—The process of resisting oppressive forces and the state in which oppressive forces no longer exert their dominion over a person or a group. Liberation is about overcoming the barriers to defiance. Liberation is the process of overcoming internal and external sources of oppression (freedom from), and pursuing wellness (freedom to)

Oppression—A series of asymmetric power relations between individuals, genders, classes, communities, and nations. Such asymmetric power relations lead to conditions of misery, inequality, exploitation, marginalization, and social injustices. Oppression is a condition of domination where the oppressed suffer the consequences of deprivation, exclusion, discrimination, and exploitation imposed on them by individuals or groups seeking to secure economic, political, social, cultural, or psychological advantage

Wellness—A positive state of affairs brought about by the combined and balanced satisfaction of personal, interpersonal, organizational, community, and social needs.

NOTE

1. Only two countries, Somalia and the United States, have not ratified this celebrated agreement. Somalia is currently unable to proceed to ratification, as it has no recognized government. By signing the Convention, the United States has signaled its intention to ratify—but has yet to do so.

FURTHER READING

- Freire, P. (1970). *Pedagogy of the Oppressed*. New York: Continuum.
- Gil, D. G. (1998). *Confronting Injustice and Oppression: Concepts and Strategies for Social Workers*. New York: Columbia University Press.
- Mustakova-Possardt, E. (2003). *Critical Consciousness: A Study of Morality in Global, Historical Context*. Westport, CT: Praeger.
- Prilleltensky, I., and Nelson, G. (2002). *Doing Psychology Critically: Making a Difference in Diverse Settings*. New York: Palgrave/Macmillan.

CHAPTER 45

Transformative Learning: Developing a Critical Worldview

EDWARD TAYLOR

There is an innate drive among all humans to understand and make meaning of their experiences. It is through established belief systems that adults construct meaning of what happens in their lives. Since there are no fixed truths and change is continuous, adults cannot always be confident of what they know or believe. Therefore, it becomes imperative in adulthood that we seek ways to better understand the world around us, developing a more critical worldview. As adults, we need to understand how to negotiate and act upon our own meanings rather than those that we have uncritically assimilated from others, gaining greater control over our lives (Mezirow, 2000). Developing more reliable beliefs about the world, exploring and validating their dependability, and making decisions based on an informed basis is central to the adult learning process. It is transformative learning theory that explains this psycho-cultural process of constructing and appropriating new or revised interpretations (beliefs) of the meaning of one's experience.

[It] is a process by which we attempt to justify our beliefs, either by rationally examining assumptions, often in response to intuitively becoming aware that something is wrong with the result of our thought, or challenging its validity through discourse with others of differing viewpoints and arriving at the best informed judgment. (Mezirow 1995, p. 46)

Transformative learning is uniquely an adult learning theory, abstract, idealized, and grounded in the nature of human communication. Despite the keen interest in the field of adult education with transformative learning theory over the last twenty-five years, as a theory and an area of learning it has been overlooked by the literature in educational psychology. Much of this oversight seems to be the result of the field's primary interest in learning of children and the lack of awareness of adult learning. This chapter is an effort to address this concern.

There are multiple interpretations of the nature and process of transformative learning and how it is fostered in the classroom. They range from a view of transformation as a lifelong process of individuation grounded in analytical (depth) psychology rooted in the work of Carl Jung to a cosmological view of transformation involving a deep structural shift of consciousness that alters the way one views and acts in the world within a broad cultural context (O'Sullivan, 2002).

To be consistent with the theme of this handbook, this discussion will focus on defining the varying conceptions of transformative learning and transformative education from a more social psychological lens. These include Mezirow's rational transformative learning model, Freire's (1970) emancipatory view of transformation, and O' Sullivan's cosmological view of transformation. As the reader engages in these different perspectives of transformative learning he or she will see that the centrality of the individual as the object of study becomes less central as the discussion moves from one perspective to another, to the final perspective, where individual change has become more peripheral and change in society becomes more central. In addition, at the end of the section on the various conceptions on transformative learning a discussion will be provided about its relationship to constructivism, illustrating its close connection to the field of educational psychology.

MEZIROW: A RATIONAL TRANSFORMATION

Transformative learning from Mezirow's perspective is a constructivist theory that is partly developmental, but more a rational learning process of construing a new or revised meaning of one's experience in order to guide future action. Transformative learning offers an explanation for change in meaning structures that evolve from two domains of learning based on the epistemology of Habermas' communicative theory. First is *instrumental* learning, which focuses on learning through task-oriented problem solving and determination of cause and effect relationships—learning to do, based on empirical-analytic discovery. Second is *communicative* learning, which involves in understanding the meaning of what others communicate (e.g., ideas, feelings, values). When these learning domains involve critical assessment of significant premises and questioning of core personal assumptions, transformative learning is taking place. Transformative learning attempts to explain how our expectations, framed within cultural assumptions and presuppositions, directly influence the meaning we derive from our experiences. It is the revision of meaning structures from experience that is addressed by the process of a perspective transformation within transformative learning.

Perspective transformation explains the process of how adults revise their meaning structures. Meaning structures act as culturally defined frames of reference that are inclusive of meaning schemes and meaning perspectives. *Meaning schemes*, the smaller components, indicative of specific beliefs, values, and feelings that reflect interpretation of experience. They are the tangible signs of our habits and expectations that influence and shape a particular behavior or view, such as how an adult may act when they are around a homeless person or think of a Republican or Democrat. Changes in meanings schemes are a regular and frequent occurrence.

A *meaning perspective*, on the other hand, is a general frame of reference, worldview, or personal paradigm involving a collection of meaning schemes forming a large meaning structure containing personal theories, higher-order schemata, and propositions. The frame reference provides criteria for judging or evaluating the world adults interact with. The frame of reference is composed of two dimensions, habits of mind and a point of view. Habits of mind are, habitual means of thinking, feeling, and acting influenced by underlying cultural, political, social, educational, and economic assumptions about the world. The habits of mind get expressed in a particular point of view. For example, my point of view as a liberal Democrat are expressed by my emphasis on ensuring rights for those that are often marginalized, the need for family wage, and a more transparent government. This point of view reflects a collection of beliefs and feelings that shape how the learner makes meaning of experiences (Mezirow, 2000).

Mezirow argues that meaning perspectives are often acquired uncritically in the course of childhood through socialization and acculturation, most frequently during significant experiences with parents, teachers, and other mentors. They reflect the dominant culture that we have been

socialized into. Over time, in conjunction with numerous congruent experiences, these perspectives become more ingrained into our psyche and changing them is less frequent. In essence, they provide a rationalization for an often, irrational world and we become dependent upon them. These meaning perspectives support us by providing an explanation of the happenings in our daily lives but at the same time they are a reflection of our cultural and psychological assumptions. These assumptions constrain us, making our view of the world subjective, often distorting our thoughts and perceptions. They are like a “double-edged sword” whereby they give meaning (validation) to our experiences, but at the same time skew our reality.

Meaning perspectives operate as perceptual filters that organize the meaning of our experiences. When we come upon a new experience, our meaning perspectives act as a sieve through which each new experience is interpreted and given meaning. As the new experience is assimilated into these structures, it either reinforces the perspective or gradually stretches its boundaries, depending on the degree of congruency. However, when a radically different and incongruent experience cannot be assimilated into the meaning perspective, it is either rejected or the meaning perspective is transformed to accommodate the new experience. A transformed meaning perspective is the development of a new meaning structure. This development is usually the result of a disorienting dilemma due to a disparate experience in conjunction with a critical reappraisal of previous assumptions and presuppositions. It is this change in our meaning perspectives that is at the heart of Mezirow’s theory of perspective transformation—a worldview shift. A perspective transformation is seen as the development of a more inclusive, discriminating, differentiating, permeable, integrative, critical worldview. Although less common, it can occur either through a series of cumulative transformed meaning schemes or as a result of an acute personal or social crisis, for example, a death of a significant other, divorce, a natural disaster, a debilitating accident, war, job loss, or retirement. Often these experiences are stressful and painful and can threaten the very core of one’s existence. A perspective transformation can be better understood by referring to an example given by an individual who experienced a perspective transformation as a result of living in a different culture. Harold, an American, describes his change in perspective (worldview) in response to living in Honduras for two years as a Peace Corps volunteer:

I definitely see the world in a whole different light than how I looked at the world before I left. Before I left the states there was another world out there. I knew it existed, but didn’t see what my connection to it was at all. You hear news reports going on in other countries, but I didn’t understand how and what we did here in the States impacted on these people in Honduras, in South America, Africa, and Asia. Since I did not have a feeling for how our lives impacted their lives. It was as if the U.S. were almost a self-contained little world. After going to Honduras I realized how much things we did in the States affected Hondurans, Costa Ricans. How we affected everyone else in the world. I no longer had this feeling the U.S. was here and everybody else was outside. I felt that the world definitely got much smaller. It got smaller in the sense of throwing a rock in water it creates ripples. I am that rock and the things I do here in the States affect people everywhere. I feel much more a part of the world than I do of the U.S. I criticize the U.S. much more now than I would have in the past.

Mezirow has identified phases of perspective transformation based on a national study of women returning to college who participate in an academic reentry program after a long hiatus from school. The study involved in-depth interviews of eighty-three women from twelve programs in Washington, California, New York, and New Jersey. From the data, he inductively identified a learning process that began with a disorienting dilemma, such as returning to school, to include a series of experiences, such as a self-examination with feelings of guilt or shame, critical assessment of assumptions, the sharing of this discontent with others, exploration and experimentation with new roles and ideas, developing a course of action, acquiring new skills

and knowledges, taking on roles, building competence, and ultimately the development of a more inclusive and critical worldview.

Transformative learning is also seen as way of thinking about the education of adults. Fostering transformative learning in the classroom includes the most significant learning in adulthood, that of communicative learning. Communicative learning involves critically examining the underlying assumptions of problematic social, political, cultural ideas, values, beliefs, and feelings—questioning their justification through rational dialogue. Mezirow does not see fostering transformative learning as an “add-on” educational practice or technique. He views it as the very essence of adult education, such that the goal of transformative learning is to help learners become more autonomous thinkers so they are able to negotiate the meaning-making process rather than uncritically acting on the meaning of others. Ideal conditions to strive for when fostering transformative learning in the classroom include: (a) a process that ensures learners have information that is thorough and valid; (b) a classroom environment that is safe, free from oppression and coercion; (c) learners who are encouraged to be open to varied and contested perspectives and are willing to assess and validate these perspectives as objectively as possible; (d) methods that promote and encourage critical reflection about the inherent underlying assumptions and related consequences; (e) an equitable opportunity to question, dialogue, and reflect on the various issues; and (f) and an overall goal of striving for objectivity and rational consensus.

This approach to education rests on the belief that there is inherent purpose, logic, and ideal associated with transformative learning. Significant learning in the classroom involves the transformation of meaning structures through an ongoing process of critical reflection, discourse, and acting on one’s beliefs in relationship to the larger sociocultural context. It is this approach that provides a rationale for educators in choosing the best practices for fostering transformative learning.

PAULO FREIRE: AN EMANCIPATORY TRANSFORMATION

Paulo Freire (1970) was a radical educational reformist from Brazil (Latin America), who portrayed a practical and theoretical approach to emancipation through transformative education. His work is based on experiences with teaching adults who had limited literacy skills in the Third World, where he used an educational method that was such a threat to those in power he was exiled from Brazil in 1959. Freire wanted people to develop a theory of existence, which views people as subjects, not objects, who are constantly reflecting and acting on the transformation of their world so it can become a more equitable place for all to live. This transformation, or unveiling of reality, is an ongoing, never ending, and a dynamic process. Unlike Mezirow’s emphasis on personal transformation and the choice to act politically, Freire is much more concerned about a social transformation via the unveiling or demythologizing of reality by the oppressed through the awakening of their critical consciousness, where they learn to become aware of political, social, and economic contradictions and to take action against the conditions that are oppressive. This awakening or kindling of one’s critical consciousness is the consequence of his educational process. In Freire’s (1970) words: “[The] more radical he [sic] is, the more fully he enters into reality so that, knowing it better, he can better transform it. He is not afraid to confront, to listen to see the world unveiled. He is not afraid to meet the people or enter into dialogue with them. He does not consider himself the proprietor of history or of men [sic], or the liberator of the oppressed; but he does commit himself, within history, to fight at their side” (pp. 23–25).

The latter quote reflects most accurately the intent of his work, that of fostering an emancipatory transformative process. The process is *conscientização* or conscientization (Freire 1970), where the oppressed learn to realize the sociopolitical and economic contradictions in their world and take action against its oppressive elements. For Freire education is never neutral. It either inculcates through assimilation of unquestioned values of the dominant group reinforcing the

status quo or it liberates by encouraging critical reflection (ideological critique) of the dominant values and taking action to improve society toward a more just and equitable vision.

Like Mezirow, Freire sees critical reflection central to transformation in context to problem posing and dialogue with other learners. However, in contrast, Freire sees its purpose based on a rediscovery of power, while more critically aware learners become, the more they are able to transform society and subsequently their own reality. Essentially Mezirow's view of transformation does not go far enough, such that personal transformation is seen as in and by itself, sufficient. He links himself conceptually to Freire (conscientization is critical reflection), but draws back at the concept of acting for social change and justice. For Mezirow, a transformation is first a personal experience (confronting epistemic and psychological distorted assumptions) that empowers persons to reintegrate (not questioning the dominant assumptions) or act on the world (confronting sociolinguistic distorted assumptions), if they choose. However, for Freire transformation is more of a social experience: by the very act of transformation, society is transformed. There are only two ways for humans to relate to the world, that of integration and adaptation. Integration involves the critical capacity to act on the world as a Subject and adaptation is an Object, acted upon by the world. Transformative learning from Freire's perspective is seen as emancipatory and liberating, both at a personal and social level. An outcome of transformative learning is that of voice where the learner acquires the ability to construct his or her own meaning of the world.

Three broad concepts/methods, some of which are the most often alluded to by other educators and scholars, reflect Freire's basic beliefs and practices about fostering an emancipatory transformation. First is his illumination of the domesticating effect of traditional education by teachers in their narrative "bank deposit" approach to teaching. Freire (1970) states that most teaching reflects the teacher as the expert where he or she provides a gift of knowledge, depositing into the minds of the students, who in an unquestioning manner, receive, repeat, and memorize the information as if they have nothing to contribute in return. Since the "banking" approach to adult education will not induce students (the oppressed) to reflect critically on their reality, he proposes a liberating education couched in acts of critical reflection, not in the transferal of information, that of a problem-posing and dialogical approach to teaching.

A second concept that is at the core of this problem-posing approach of education is that of praxis. Praxis is the moving back and forth in a critical way between reflecting and acting on the world. The idea of reflection is the continual search for new levels of interpretations with a new set of questions with the intent to critique former questions. Action happens in concert with reflection; it is a process of continually looking over our shoulders at how our actions are affecting the world. Furthermore, praxis is always framed within the context of dialogue as social process with the objective of tearing down oppressive structures prevalent both in education and society. Third is the horizontal student-teacher relationship. This concept of the teacher working on an equal footing with the student seems couched in the Rogerian ideology, whereby the student-teacher dialogue is built upon a foundation of respect and mutual trust. This approach provides an educational atmosphere that is safe, where anything can be shared and talked about and is an obvious setting for raising one's consciousness and facilitating an emancipatory transformation. Freire's philosophy of education reflects an emancipatory perspective inherent of both a personal and social transformation of which neither can be separated. It is the combination of both the biography of the personal and that of the social that sets the stage for emancipation. Transformative learning from this perspective occurs when the learner becomes aware of their history and biography and how it is embedded in social structures that foster privilege and oppression of persons based with power. Furthermore, it is through the practice of critical reflection, problem posing, and dialogue that transformative learning is fostered—accomplishing its primary objective of democratizing our social world.

O'SULLIVAN: A PLANETARY TRANSFORMATION

O'Sullivan's (2002) perspective of transformative learning is cosmological in nature. This is a visionary view of transformation, planetary in scope that includes a comprehensive understanding about the universe as a whole. More specifically, transformative learning from O's Sullivan's view:

Involves experiencing a deep, structural shift in the basic premises of thought, feeling, and actions. It is a shift of consciousness that dramatically and permanently alters our way of being in the world. Such a shift involves our understanding of ourselves and our self-locations, our relationships with other humans and with the natural world; our understanding of relations of power interlocking structures of class, race, and gender, our body awareness's; our visions of alternative approaches to living; and our sense of the possibilities for social justice and peace and personal joy. (p. 11)

A transformation from this perspective is about radical change or restructuring of the mainstream culture, involving a significant rupture from the past. It is a transformation that dramatically alters the way people relate to the world around them. The focus of this view of transformation is much more about the nature of the new perspective and the kinds of education that needs to be fostered, and less about the learning process experienced by an individual. Essentially, the goal of transformative education from a cosmological perspective is about the development of a planetary consciousness within a broad cultural context. This is where individuals come to recognize and appreciate the importance of fostering a sustained world habitat of interdependency working against the constant environmental degradation caused by the global competitive market. It is a conscious recognition that the present system is no longer viable or appropriate for fostering sustainable living. Transformation requires a reorganization of the entire system, developing a world habitat that effectively challenges structural forces of the market place to where people in their everyday lives, create an environmentally viable world.

Transformative education involves three distinctive modes of learning, a tripartite of education for survival, for critique, and for creativity. Survival education involves coming to terms with a world system that is contributing to the current ecological crisis. On an individual level it focuses on issues not often associated with learning, that of dealing with the dynamics of denial, despair, and grief about the present state of the world around us. These mechanisms must be dealt with at length before a transformation of the consciousness and behavior can begin. O'Sullivan identifies the task at hand, as a form of cultural therapy, involving critique (critical resistance education) and fostering critical reflection. There are several dimensions to a critical resistant education. One dimension involves recognizing the mechanistic and overly dependent and destructive nature of the western worldview concerning the natural environment. It also means fostering a cosmological view of the world that is holistic, interdependent, and interconnected, where individuals recognize and appreciate their place in the world as a whole. A second dimension is confronting the saturation of the consciousness, that of where our present knowledge/information makes us unconscious of what is happening to the world around us. O'Sullivan argues that a diversity of information is needed about the world and its present environmental condition. The third dimension of critical resistance is that of fostering a critical examination of power structures that foster a dominant worldview, particularly those structures that support the foundations of patriarchy and imperialism.

The third mode of transformative learning is that of fostering of a visionary education—a planetary consciousness. Specifically, it involves articulating a holistic context that challenges the present hegemonic structures that foster the global market vision. One approach is the development of narratives, or stories that are of significant power that bring to light the complexity associated with environmental issues, to offer new and more viable possibilities for living, and

identify roles that people can take that foster change in the present system. A second dimension of this visionary education is that of a vision of development that overcomes the limitations of the mainstream conceptions of development, that of a dynamic of wholeness that encompasses the entire world. The third dimension of a visionary education that contributes to transformative learning, is bringing attention to the impact the first world (Western) has on others the lives of others in the world. More specifically, it means fostering a sense of community, a sense of place, and encouraging diversity within and between communities. Essential to this sense of place is a civic culture, where individuals play an active role of caretaking the environment and keeping a watchful and critical eye on the government. The last theme of this vision means recognizing the significance of the sacred. Transformative learning must address the topic of spirituality, a spiritual destiny, where there is a greater emphasis on nurturing the soul and spirit, and less emphasis on materialism.

These three views of transformative learning offer varied perspectives on the nature of significant paradigmatic transformation and its relationship to the larger sociocultural context. Mezirow's work is much more centered on the individual and the nature of change. However, as discussed in greater detail, essential to significant personal change is the larger personal and historical context. Freire moves away from the individual somewhat, with more attention given to the goal of the transformation, that of fostering political awareness and social justice. Similarly, is the work by O'Sullivan, who spends even less time on the individual nature of change, and more on articulating a transformative vision and educational practices that foster change. Despite the differences between these varied and contested perspectives of transformation, there are several core premises that they share to a greater or less extent that reflect a situated, socially constructed view of adult learning. Furthermore, these core premises have implications for the practice of adult education and educational psychology.

Four common themes are the centrality of experience, critical reflection, rational discourse, and the significance of context in the process of transformation. The first theme, experience is much more central to the work of Mezirow and Freire. It is the learner's experience that is the starting point and the subject matter for transformative learning. Experience is seen as socially constructed, so that it can be deconstructed and acted upon. It is personal experience that provides the grist for critical reflection and critique. In particular, it is shared learning experiences that are most significant to fostering transformative learning. Shared experiences provide a mutual base from which each learner makes meaning through group discussion and personal reflection. The group often subjects the meanings that learners attach to their experiences to critical analysis. Group discussion often disrupts the learner's worldview and stimulates questioning and doubt in learners about their previously taken-for-granted interpretations of experience.

The second theme, critical reflection, imbued with rationality and analysis, is considered a distinguishing characteristic of transformative learning. It is in adulthood where individuals begin to become aware of half-truths, unquestioned conventional wisdom, and power relationships and how he or she is being shaped by their own history. Critical reflection involves questioning the integrity of personal, social, cultural, and political assumptions and beliefs based on prior experience. It often occurs in response to an awareness of a contradiction among our thoughts, feelings, and actions. These contradictions are generally the result of distorted epistemic (nature and use of knowledge), psychological (acting inconsistently from our self-concept), and sociolinguistic (mechanisms by which society and language limit our perceptions) assumptions. In essence, we realize something is not consistent with what we hold to be true and act in relation to our world. It is the process of giving attention to the justification for what we know, feel, believe, and act upon in the world.

The third theme of transformative learning is rational discourse. Rational discourse is the essential medium through which transformation is promoted and developed. However, in contrast

to everyday discussions, it is used when there is a need to question the appropriateness, integrity, and authenticity of what is being asserted. Rational discourse in transformative learning from Mezirow's perspective rest on the following assumptions: (a) it is rational only as long as it meets the conditions necessary to create understanding with another; (b) it is to be driven by objectivity; (c) all actions and statements are open to question and discussion; (d) understanding is arrived through the weighing of evidence and measuring the insight and strength of supporting arguments; and (e) the primary goal is to promote mutual understanding among others. It is within this social constructivist arena of rational discourse that experience and critical reflection is played out. Discourse becomes the medium for critical reflection to be put into action, where experience is reflected upon and assumptions and beliefs are questioned, and where meaning schemes and meaning structures are ultimately transformed. This is similar to the notion of double-loop learning discussed by Argyris and Schön, where an individual reexamines current ways of knowing and acting in the world.

A fourth theme is context and its relationship to the process of transformative learning. Broadly speaking this refers to contextual factors that include the surroundings of the immediate learning event, made up of the personal, professional, and historical situation of the individual at that time and the more distant background context involving the familial and social history that has influenced the individual growing up. Research on transformative learning, in the response to Mezirow's somewhat decontextualized view of learning, has identified personal contextual factors as: a readiness for change, the role of experience, and a predisposition for transformation. Recent research on sociocultural contextual factors, inclusive of related historical and geographical influences, has identified life histories, prior educational experiences, and historical events as having influence on transformative learning. An example, in a study involving Jewish women reentering the workforce after a long hiatus revealed that their personal transformation could only be fully understood by considering their earlier married years, and that their return to employment outside the home was not a random event, but a response to historical circumstances, where women in general were finding voice and identity outside the family. This research on others on transformative learning reveals a conception of learning that is situated, not bound by the narrow confines of the psychological, but instead constructed personally and historically across the confines of the body, activity, and cultural setting.

Transformative learning theory offers a way to make meaning of how adults develop a more critical, inclusive, and discriminating worldview. A worldview that is politically conscious, socially and culturally aware, and tolerant of the ambiguity often associated with our postmodern world. In addition, transformative learning provides a framework for educators to help them guide their practice in an effort to foster transformative learning in the classroom. In addition, further understanding can emerge when discussed in relationship to constructivism and to educational psychology.

A CONSTRUCTIVIST PERSPECTIVE OF TRANSFORMATIVE LEARNING

Many of the processes of transformative learning are consistent with what is understood in educational psychology as constructivism. It is a view that knowledge does not exist exclusively outside the learner and/or that knowledge can be transferred from the teacher or expert to the learner (e.g., Bruner, Ausubel, Piaget, Vygotsky). Instead it is a view of learning that is seen as more meaningful, where the learner is an active participant in the learning process creating and interpreting knowledge, not transferring, but rooted and shaped by personal experience. This is particularly important when trying to make sense of the adult learner and how they engage learning in the classroom. Adults have significant life experiences and it this rich personal experience that is essential to the meaning-making process both for constructivism and transformative learning. As

previously mentioned it is the centrality of experience in conjunction with critical reflection and dialogue that helps make sense of how adults develop and transform their knowledge structures—their personal views of the world.

Kegan (2000) helps further illustrate transformative learning relationship with constructivism by discussing the transformation as an epistemological transformation, rather than behavioral or simply the process of acquiring greater knowledge. This epistemological transformation is reflected in two processes. One is a constructivist process of meaning forming or making, where perceiving is both an act of interpreting and conceiving. The second, and most significant to transformative learning, is the reformation of meaning-making. “We do not only form meaning, and we do not only change our meanings; we change the very form by which we are making meaning. We change our epistemologies” (pp. 52–53). Greater understanding of the dynamics of this change can be found in constructive developmental psychology (e.g., Kegan; Piaget; Kohlberg). During the transformative process the learner developmentally moves from a place where his or her values and beliefs are informed and defined by others, uncritically assimilated, toward a place where he or she develops an internal authority, making personal choices, critically, developing a self-authoring view of the world. This developmental view of transformative learning encourages a lifelong view of learning, where learners are capable of having several transformations of knowing during their lifetime.

Another way to add further understanding of the different perspectives of transformative learning is to look at them through three forms of constructivism, psychological, social and sociological, as discussed by Woolfolk (2001). Psychological constructivism is concerned with “individual knowledge, beliefs, self-concept, or identity . . .” (p. 330), similar to Mezirow’s view of transformative learning, where the primary focus is on significant change in the inner psychological life of adults. New understanding for the adult learner is derived from reflection on thoughts and actions. Although in contrast to Piaget, Mezirow would see social interaction, particularly dialogue with others as a key mechanism in fostering change in thinking. This emphasis on the social moves the analysis into the next form of constructivism, that of social constructivism. Rooted predominantly in the work of Vygotsky, this form of constructivism held “that social interaction, cultural tools, and activity shape individual development and learning” (p. 330). Vygotsky sees cognition not solely determined by innate factors, but is the product of the activities rooted in place, context, and culture. Consequently, the situation, the context, in which an adult learns, is a crucial determinant how adults will make sense of the learning experience. It is the emphasis on situated knowing connected to the essentiality of language that is consistent with the previous factors identified as significant to transformative learning, that of the role of context and dialogue. Research has shown that other concepts introduced by Vygotsky help broaden the constructivist emphasis of transformative learning. They include the nature of change in relationship to the zone of proximal development (interdependent process of development), using a holistic approach of analysis, the emphasis on language mediation within collaborative group settings (dialogue with others), and the importance of studying phenomena in process as opposed to performance outcomes.

The third form of constructivism, sociological, sometimes called constructionists, “does not focus on individual learning” (Woolfolk, 2001, p. 331) instead it is concerned with how public knowledge is created. Freire and O’Sullivan, similarly, emphasize the importance of discussing not only how knowledge is socially constructed, but more importantly, foster an awareness, a consciousness, of the dominant culture and its relationship to power and positionality in defining what is and is not knowledge in society. Further, all perspectives of transformative learning, like constructivism, encourage collaborative dialogue across diverse perspectives, fostering critique and questioning of dominant discourses.

By engaging transformative learning theory through a lens of constructivism, it not only sheds light on its inherent relationship to much in the field of educational psychology, but further

illustrates the importance of recognizing the unique nature of learning across the lifespan, that of learning as an adult.

TERMS FOR READERS

Cosomology—Stephen Toulmin, a philosopher, in his book *The Return of Cosmology* (1985) refers to it as an ambition by humans to speak and reflect upon the natural world as a whole.

Transformative Learning—Explains how adults' expectations, framed within cultural assumptions and presuppositions, directly influence the meaning individuals derive from their experience. It is a learning process where adults transform their worldview (paradigmatic shifts) as a result of developing more reliable beliefs about the world, exploring and validating their dependability, and making decisions based on an informed basis.

FURTHER READING

Freire, P. (1970). *Pedagogy of the Oppressed*. New York: Seabury Press.

Kegan, R. (2000). What "form" transforms? A constructive developmental approach to transformative learning. In J. Mezirow and Associates (Eds.), *Learning as Transformation*, pp. 35–70. San Francisco, CA: Jossey-Bass.

Mezirow, J. (1995). Transformation theory of adult learning. In M. R. Welton (Ed.), *In Defense of the Lifeworld* (pp. 39–70). New York: SUNY Press.

Mezirow, J., and Associates (Ed.). (2000). *Learning as Transformation*. San Francisco: Jossey-Bass.

O'Sullivan, E. (2002). The project and vision of transformative education. In E. O'Sullivan, A. Morrel, and M. A. O'Connor (Eds.), *Expanding the Boundaries of Transformative Learning*, pp. 1–13. New York: Palgrave.

Woolfolk, A. E. (2001). *Educational Psychology* (8th ed.). Boston, MA: Allyn & Bacon.

CHAPTER 46

The Impact of Apartheid on Educational Psychology in South Africa: Present Challenges and Future Possibilities

J. E. AKHURST

Ten years after the first democratic elections in South Africa, the schooling system in the country is facing numerous challenges. The legacies of the apartheid system and its impact on many aspects of schooling form a major part of these challenges. Many schools were sites of the struggle where learners rebelled against the oppressive regime. The apartheid system targeted education as the place where discriminatory policies could best be reproduced, and it is therefore the school system that has needed urgent attention. Thus, one of the major tasks in the development of a democratic and equitable society has been the reconstruction of education.

In 1990, Nicholas wrote, “Psychologists in South Africa have the daunting task of responding ethically to the many psychological problems that may result from apartheid” (p. 50). We might then ask, “What has been the role of educational psychology, and how might this division of professional psychology make a contribution to educational reform?” The purpose of this article is to explore this question.

In South Africa, educational psychology is not a unitary field: it covers both what are termed School Psychology and Educational Psychology in the United States of America. Thus, the application of psychological theory to the broader field of education, as by teachers and administrators, as well as the “work” of qualified and registered psychologists who work with learners, are both covered in SA educational psychology. The focus of practitioners may thus be both on the broader political, social, and economic issues and their impact on the lives of learners and educators, as well as on the specifics of tackling everyday management and learning issues of learners whose performance is compromised in various different ways. All of this needs to be responsive to the context of ongoing change in the educational arena.

Since 1994 (when the first democratic government was elected), policy makers and developers have been working on reforming the education system from its base—beginning with the underpinning principles and rationales. The system has been gradually refocused toward an outcomes-based education (OBE) system, with implications at every level of delivery. A fully retooled curriculum has been the result, and though there were hopes of it being fully in place by the millennium, it has now been more realistically adapted and termed *Curriculum 2005*, to be fully implemented for learners aged seven to sixteen by 2005. In no small part, the difficulties encountered during the implementation of the new curriculum relate to the legacies of apartheid

still evident in the system. One of these legacies relates to the marginalizing of educational psychology in the past, and the relatively minor role it still plays in influencing policies and practice.

In order to understand the position of South African educational psychology, it is necessary first to explore the impact of apartheid on education. Then, the current status of educational psychology is briefly presented, in the context of contemporary social issues. To follow on, we look at ways in which both academic and professional educational psychology may have to work, in order to begin to address the complex problems that exist in the psychosocial systems of schools and communities. Finally, suggestions for interventions are offered to demonstrate potential future directions for the field, and suggest opportunities for collaboration between professionals in the developed world and their counterparts in South Africa.

BACKGROUND TO APARTHEID

Apartheid emerged in South Africa as the over-arching policy of the Nationalist government after their 1948 election to power (by a whites-only electorate). These developments were the result of a number of influences on Afrikaans-speaking South Africans. Two of the most powerful were the impact of the wars with Britain at the turn of the twentieth century (leading to great bitterness and resentment) and people's experiences of the great depression of the 1930s, when many were reduced to "poor white status". The development of Afrikaner identity became important as people strove to become emancipated from their experiences of unemployment and poverty. Furthermore, after the 1939–1945 war, there was a heightened awareness of the impending shortage of white employees in the labor market as the economy improved, especially in the professional, technical, administration, and management fields. In South Africa, these developments led to a vision of prosperity and dignity for the Afrikaner, and since the group was a minority, Black South Africans were seen as a potentially great threat to these aspirations.

Over the following decades, apartheid policies developed into a system of White power based on beliefs of racial superiority (echoing Nazi sentiments). This led to differential policies related to land ownership and rights of access to certain areas (eventually expressed in the notorious pass laws), job reservation for people of different groups, and separate development. In schools, Christian National Education was introduced for White learners and Bantu Education for Black learners, with all of these policies guarded by a vigilant and often brutal police force. Thus citizens of South Africa had vastly differing experiences of living conditions and standards, all based upon racial differences. A major expression of this was in the education system.

THE IMPACT OF APARTHEID ON EDUCATION

All spheres of social life were radically affected by the inequalities resulting from apartheid. Apartheid was not only expressed in unequal treatment of people, but philosophically influenced the very levels of what knowledge was considered to be legitimate for different groups, as expressed through the education system. In this section, the philosophies and practices in education will be outlined, including the limited role of psychology in the system, and illustrating how the legacy of apartheid is still very visible in education today.

Separate Schools

Although the school system was in broad terms a dual one, influenced by the policies of Bantu Education or Christian National Education for Black and White learners respectively, the situation became much more complex toward the end of the apartheid era. This was influenced

by the unfolding policies of distinct homelands and separate development for many different groupings.

The concept of differing education for Blacks and Whites was evident in SA pre-1948 (when the Nationalist government came into power), but was built into a monolithic system from the 1950s by Dr. H. Verwoerd (who went on to become the prime minister before being assassinated in 1965). As early as 1936, there existed policies favoring the White child, in preparation for a dominant position in society, and limiting the education of the Black child, who was to be directed toward a subordinate position. From 1948, more blatantly racist sentiments were expressed in the policy-making.

The policies of Bantu Education led to a highly controlled type of education, preparing people mainly to take on menial tasks in the workplace. Learners were equipped with limited skills and attitudes, such as obedience and compliance, and critical thinking was not encouraged. The authority of the teaching staff was to be unquestioned, and the words of the textbooks reified. Teachers were poorly trained, with limited qualifications, and often had only basic second-language skills (the language in which they were expected to teach). Many became indoctrinated by the system, accepting policies with little question. For Black learners, instruction was in their home language until the end of the fourth year of education, but from the fifth year they were expected to learn through the medium of the Afrikaans language or English (depending on the controlling provincial education department). Many Black learners therefore dropped out of school at grade 5 because the change in medium of instruction led to great difficulties, particularly for those who had little contact with people speaking the language in which they had to learn. The continued imposition of education in Afrikaans, seen by black learners as the language of the oppressor, was one of the factors that sparked the famous Soweto riots of 1976.

When a more complex “Differentiated Education System” was introduced in the 1970s, along with the development of the self-governing “homelands” (an attempt to provide some autonomy for Black people in certain areas), further divides in the levels of education of different groups opened. This spawned more controlling departments of education, depending on the locality of the schools (rural or urban) and specific ethnic group. By the 1980s there were seventeen education departments in the four South African provinces, and schools were resourced according to the race group they served. Whites were provided with well-resourced schools in terms of buildings, facilities, and teaching staff (with low educator to learner ratios), and Blacks had poorly resourced schools. So-called coloreds and people of Asian origin were “in-between” in terms of provision and resources.

Within the education system for White learners, designed to “fast-track” especially Afrikaans-speaking learners into work in which they would take responsible positions, the hidden agendas of the Nationalist government were evident. English-speaking South Africans were gradually drawn into the fold by propaganda such as the talk of *swart gevaar* (danger from black people) and the threats of communism, and in 1967 the philosophies of Christian National Education (CNE) were announced. At its core, CNE entrenched White supremacy as based in the authority of God and pronounced that children should be molded as future citizens. Various systems in white schools were put in place to ensure conformity and “molding” of learners. There were Nazi-like overtones in the system, where White learners were to learn to “guard their identity” and to render “service” which was in response to their gratitude and loyalty to their people and country. Thus, the shaping of learners into desirable persons with correct attitudes (as determined by the government) underpinned various activities in schools: examples are discussions of civic responsibility, quasi-military marching, singing of the anthem, and prayers around the flag. Teachers had to be vigilant for any deviance from these activities, which needed to be corrected.

From a psychological perspective, the focus of education was on conformity to the group rather than a focus on the individual, with responsibility and obedience to authority (those placed in such

positions being seen as God's representatives), rather than individual rights, being paramount. School Guidance was introduced into all White schools as a part of this system of indoctrination, with learners being assigned tutors who would keep a careful watch over their development. Psychology as a subject was viewed by the policy-makers as subversive, and was replaced by the philosophy of *Fundamental Pedagogics* (to be discussed below). Psychometric testing was developed to assist with "correct" job placement, and favored White learners, since they were tested in their home language. Whilst there was some psychometric testing in Black schools, this was mainly a bureaucratic window-dressing exercise and the results were never discussed with the learners, if the tests were returned to the schools at all.

The School Guidance syllabi for Black and White learners are an example of the different ways in which the Nationalist government strove to maintain social control. For Whites, there were emphases on conformity to ruling party attitudes and beliefs, and adherence to group norms, whilst for Blacks the emphasis was on preparation to be workers who were obedient to those in authority.

There are thus gross disparities between schools that have emerged from the different education departments, with the most poorly serviced schools being in the rural areas. The influence of the Nationalist ideologies was pervasive in education, and still endures in many schools even though there have been great efforts to change this. In the following section, I describe the underpinning philosophy.

Fundamental Pedagogics

Fundamental Pedagogics (FP) was derived from a Dutch theorist in phenomenology (Langeveld), and became the most influential philosophy in SA education. The resulting principles became the foundations of training in education in the Afrikaans-speaking universities and subsequently in most teacher-training colleges. In FP special terms were developed to drive attitudes to practice, such as "ortho-didactics" (right teaching methods), "pedo-diagnosis," and "pedo-therapy" (using the prefix "pedo" to emphasize the difference between children and adults). Many university departments of educational psychology developed separately from departments of psychology, often situated in different faculties, due to education taking the more conservative stance of FP, and developing rigid outlooks on the aims, purposes, and methodology of teaching.

FP provided a theoretical basis, which was congruent with CNE because it supported an hierarchically structured education system, in which educators were regarded as purveyors of knowledge, superior to their learners due to their training and their conformity to Nationalist policies of education. The thrust of pedagogy was to emphasize the knowledge and wisdom of those placed in positions of authority, and the relative powerlessness of the learner who was expected to conform to the dominant group norms.

FP developed a theory of deviance where the "different" or "conspicuous" learner was seen as a person challenging the social realities and the normative principles of the society. Educators were therefore encouraged to identify such a learner in order to "re-orientate" (i.e., "indoctrinate") the young person to be able to resist what were seen as "onslaughts of foreign ideologies" both from the more liberal first world, and from communism. Educators were bound by strict syllabi, encapsulated in textbooks carefully vetted by the education departments, and little deviance from the laid-down content of the syllabus was tolerated. This was further entrenched by a well-structured examination system from grade 5, leading to teaching being focused on examinations for learners from about age ten onward.

In the authoritarian system that emerged, learners were not encouraged to think independently or question, rote learning became the chief means of success, and decisions were generally made for the learner. Eventually, it was hoped that learners would be inculcated with a philosophy of life

in which the person would make conforming decisions without critical thought. Thus, learners were not encouraged to be individuals exercising free choice (as encouraged by humanistic philosophies of psychology), but rather were to be persuaded by those who knew better.

Teacher competencies were therefore judged by their adherence to the philosophies and system described above, and teachers were themselves expected to obey those higher up the ladder in the system. The systems of inspection in schools, and of promotions being given only to those who did not challenge the system, further perpetuated and entrenched the system. Many teachers therefore developed relatively passive styles, having little influence and becoming cogs in the system rather than feeling that they could in any way change the *status quo*. The full routines and demands of both the classroom and extra-mural activities stifled teacher motivation, and teachers undertook their tasks with little question or critique, often willing to accept less than adequate conditions of service.

Guidance and Counseling in Schools

In the 1930s, psychologists were appointed to three of the White provincial education departments (Cape, Transvaal, and Orange Free State); and the fourth province, Natal, followed in 1944. The main focus of these psychologists was career guidance. A commission in 1948 recommended the appointment of guidance teachers to schools, and the first Vocational Guidance Officers were appointed in the 1950s. The provision of guidance in schools became a statutory requirement for whites-only schools in the National Education Policy Act of 1967. During the 1970s, guidance teachers were appointed, with such titles as “teacher counselors,” “teacher psychologists” or “vocational guidance teacher,” depending on the education authority. School Guidance was seen as having some benefit to the individual, but more importantly it was mandated to benefit the career development needs of the country. There is no term in Afrikaans to permit a direct translation of the word “counseling,” with *voorigting* (guidance) being the term preferred, since the work was directive in nature.

In more conservative regions, a “tutorship program” was established, whereby educators were given the responsibility to monitor the progress and development of learners. Tutors were to keep a file of notes on each pupil, gathering information from other members of staff on conduct, home background, achievement, personality, appearance, health, leisure pursuits and religious participation. The purpose of this was to develop a form of surveillance and control over the learner, and to “guide” the young person if any activities were contrary to what were seen to be acceptable norms. In order to accomplish this, the tutor was instructed to build relationships of trust with children, to enable the “guiding” to take place. Learners’ rights to privacy were therefore infringed, so that they could be subtly influenced.

The syllabi for School Guidance were vague with little available resource material. Also, since Guidance was viewed as different from examinable subjects, it was not accorded as much status, and was allocated to mostly untrained teachers, in order to fill up timetables. It was therefore widely viewed as a waste of time by educators and learners alike in the examination-driven system. Although a few schools developed sophisticated systems of guidance, much depended on the views of the school principal, and his or her attitudes to the careers and educational guidance.

Posts for School Guidance teachers were created in Black schools from 1981 (a response to the 1976 Soweto uprisings). However in Black schools, School Guidance was viewed with distrust, firstly because it was a government-imposed solution, and secondly due to resistance to the role of “moral guidance” described above. Differences in the provision of School Guidance thus became another tool for the promotion of discrimination.

Because of these politically formalized differences, entrenched over the decades of apartheid rule, the majority of the Black population had little access to or understanding of formal Western

psychological counseling. The majority of Black schools had no counselors of any sort, due to staff allocations, even though posts may have existed. The attitude that Guidance was a waste of time as a non-examinable subject was pervasive, and teachers given Guidance responsibilities lacked training and resources. The result is that generations of learners had little if any careers guidance, and left school with minimal knowledge of the options or opportunities available to them.

Individuals with Special Needs

Provision for special needs was determined, as for general education, by the race group of the learner, with White learners having far greater provision made for remedial and specialized education than Black learners. Although Whites made up about 17 percent of the population, there were sixty-four specialized schools across the four provinces; whereas for learners of all other race groups, there were only thirty-four comparative schools provided. The ratio of the number of learners in a special school compared to those in mainstream was 1:62 for White learners compared to 1:830 for Black learners.

In KwaZulu Natal (the province in which the author worked), learners in white schools prior to 1992 who were potential candidates for specialized education had to be tested by a psychologist in order to ascertain the appropriate placement. In the for-Whites Natal Education Department, there was a ratio of 3,000 learners to one school psychologist. In certain primary schools, remedial teachers worked alongside mainstream teachers, and a number of remedial schools where learners were placed for more intensive assistance for up to two years were also created. For learners with limited intellectual ability, certain primary schools had special classes, and a handful of special secondary schools were also created to accommodate those making inadequate progress in mainstream. There were also schools for the visually-, aurally- and physically-disabled. The situation for Black learners was not comparable, with a learner to psychologist ratio of 1:30,000 in the former KwaZulu government schools. Psychological assistance was therefore inaccessible to those in need of assistance, with most learners in special need remaining in mainstream by default or dropping out of school.

There were thus great disparities in the provision for individuals with special needs, and the needs of the majority of Black children in this category were not met. The situation is further compounded by the existence of greater number of children with disabilities in developing countries compared to developed nations. Conditions of poverty and social disadvantage, and the interaction of intrinsic factors with contextual disadvantages contribute to this. Inadequate resources in mainstream schools and very limited specialized provision have led to a totally inadequate and divided system having been inherited from the past.

Conflict in Schools

Whilst it is not possible here to give extensive detail regarding schools as a site of the struggle against the apartheid government, it is necessary to note the impact of the conflict on the schools for Black learners. The Soweto riots of 1976 marked the beginnings of youth organizing themselves against the regime, and the mid-1980s were characterized by boycotts of schools as a way of indicating resistance. Learners became more organized through joining student movements, and whereas at first the struggle focused on educational issues, it broadened out to include the wider struggle of the people living in the urban “townships” of the time.

The impact on children, of either being involved in or witnessing the horror of violent police and youth clashes, or the nightmare of being caught in the crossfire of political factions engaged in battles in the townships, must not be underestimated. Families were extensively affected by

the violence with many fleeing the violence or moving their children into safe areas, sometimes hundreds of kilometers away. Many families experienced the death and/or injury to their members. Politicized youth derided their elders for previously being passive, and parents and caregivers found it difficult to have any influence over young people. Young people left school prematurely and the slogan “liberation now, education later” was often chanted. The cohort of young people at this time have often been termed the “lost generation,” since their education was severely compromised and many drifted into adulthood with limited prospects of employment. The psychological impact of the destruction of community life, schools being gutted, young people roaming around with nowhere to go, and the trauma of recovering from horrific experiences and grief was extensive, yet very little psychological intervention was possible (or available).

One of the effects of the violence was that it seriously impaired relationships between learners and teachers. Teachers were fearful of the armed and angry youth, and were often threatened. They would thus be absent from school for extended periods of time, and learners became a law unto themselves. The writer knows of teachers who had to face learners armed with guns or knives in the classroom, and there were schools where security guards were employed in an attempt to provide for occupants’ safety. Teachers thus retreated into passivity and a technicist approach to teaching, becoming even more syllabus and textbook bound, and communicating at a minimal level with learners.

THE LEGACIES OF APARTHEID AND THEIR IMPACT ON FUTURE DIRECTIONS

Since 1994, there has been little redress of past imbalances in Black schools, other than some teachers being “re-deployed” in order to even out the teacher to learner ratio differences between schools from the different departments. Whereas the racial composition of the formerly privileged White schools has changed, often considerably, to be more inclusive, former Black schools have mostly remained single race schools. The urban–rural divide remains very problematic, in that many teachers who have become accustomed to urban life are resistant to being placed in rural schools where there might not be electricity, a telephone, or in remote areas even running water! Whilst every effort has been made by policy makers to provide a new curriculum, and to strive to equalize the provision of education, the problems remain extensive as a result of the influences described earlier.

The legacy of apartheid is therefore still evident in South African society, particularly in school education. Remnants of the education system described above are still extensive, with previously White schools well-resourced, and previously Black schools still lacking in many basic amenities and being overcrowded. However, the legacies of apartheid go much deeper than physical provision of amenities—they are to be seen in the attitudes and approaches of many teachers, and thus influence many learners.

From the second phase of education onward, large numbers of young people display characteristics of passivity, apathy, lack of interest, and motivation related to schooling. There is little communication between home and school, and schools are regarded by many as a necessary evil rather than being places of excitement and learning. Parents are mostly not involved in schools, many having been intimidated as learners, and thus being afraid of educators. This is further exacerbated by teachers often living outside of the area in which they teach, and doing little to initiate contact with parents and other community members.

Many teachers were attracted to the work in earlier decades because their tertiary education would be government-sponsored and they were thus sure of employment. Such teachers often lack interest in teaching or the motivation to give of themselves. Some of them also became militant as trade unionists, demanding their rights, but there has as yet been limited recognition of

the need for individual teachers to take responsibility for their roles in the lives of young people. The culture of teachers being late for class and absenteeism is still evident in many schools, and this has a great impact on the attitude of learners because of what they see modeled by their educators.

Whilst it might seem that the preceding two paragraphs are very critical of teachers, this must be seen in the context of their own previous education and training, as well as their emergence from the struggle. There is no doubt that there are many dedicated educators who give unstintingly of themselves, and herein lies the hope for education in South Africa. Many teachers engage in tertiary studies in order to improve their qualifications and competencies, and there is great potential for such further education to have an impact on practice in schools. It is in this realm that educational psychology has a central role to play, and such courses are proving to be popular choices.

The malaise affecting teaching extends to Higher Education to some extent. Many university lecturers pay lip service to policies of empowering students to become critical thinkers and leaders, and a limited number challenge academic practices that do not foster such approaches. Some of this relates to the tensions of research-led demands but greater teaching loads for academics. Many lecturers, in order to cope, continue to function in a more traditional “transmission” mode, where lectures are content-driven, and many students still use the rote-learning practices they developed in school.

Although there is a greater awareness of the fact that educators at all levels need training in democratic and liberal theory and practice, particularly in reflective practice which evaluates attitudes to and understandings of learning, the process of change has been slow. A dominant mode still in existence is that “experts” have access to knowledge and “the answers”, and there is little explicit development of thinking skills or widespread debate about knowledge as a socially constructed and dynamic entity. Since authoritarian practice was so entrenched by the apartheid regime, it is harder to shift in SA than in many other countries.

In the apartheid years, the few posts available for psychologists in education were largely in the White education departments. Much of the work of psychologists was limited to psychometric testing with little time for therapeutic intervention (perhaps to limit any influence psychologists might have had). Given the post-apartheid economic constraints and reorganization in education, along with views of some administrators that psychology is auxiliary rather than central to the educational endeavor, the number of provincial departmental posts for psychologists has diminished, and educational psychology has all but disappeared as an influence in educational policy making. Yet, it is evident that various forms of psychological intervention at a group, community, and organizational level have the potential to offer a great deal to assist in rebuilding postapartheid education.

Emerging research data indicates the need for psychological interventions in schools. There is the need for creative interventions to be implemented and researched, since the traditional School Psychology model of working with individual learners cannot be utilized in such a resource-limited context. Innovative interventions include Teacher Support Teams, Career Focus Groups, and Peer Help Programs. Whole-school community-based interventions are important and the potential for building on these developments needs to be explored. Furthermore, the HIV/AIDS pandemic as well as poverty-related diseases pose a great challenge for both the health system and the education system, because of the effects on children and youth. Many children are already orphaned, and their performance in schools is adversely affected by the emotional impact of their grieving, as well as often having to cope with added responsibilities at home. Then, there are a growing number of infected children and teenagers, compounding the difficulties in schools. School-based programs to respond to these challenges are therefore a high priority, and educational psychologists have the skills to be able to implement these.

In the new curriculum, there is support for skills-based educational programs, with the learning outcomes of such programs being the focus of attention. OBE has been developed as a concept which it is hoped will influence all levels of education. The underpinning philosophy of the approach is far more learner-centered than previously, and such methods as cooperative and collaborative learning are favored, with continuous assessment being preferred to the previous examination system. Whilst the government has extensive work to do in implementing educational reform, it must be applauded for identifying the destructiveness of the central tenets of the previous system, and for providing an alternate philosophy as a basis for education. The challenges in moving toward implementation, given the dysfunctions in the system and the extent of the remedial work that is needed, are daunting, and there is no doubt that it will take many years for educational reform to take hold more broadly.

From the above, it is clear that educational psychology has a potentially important role to play in reconstructing education, and providing programmatic responses to the challenges in schools. There are encouraging signs. For example, the book *Educational Psychology in a Social Context*, by Donald et al., (2002) is the first South African text specifically designed to discuss the theoretical application of Educational Psychology to the challenges described. Then, in professional psychology, the current chair of the Psychological Society of South Africa (PsySSA, the equivalent of the American Psychological Association), is an educational psychologist—illustrating the way in which educational psychology has the potential to become a far more central role-player professionally. There are also many creative projects known to the writer where educational psychologists are working in difficult settings without a fanfare or without writing up these interventions. Such workers need the support of their colleagues.

Educational psychologists will face difficulties in delivering appropriate services related to the policy of inclusive education. Consensus is lacking among educational psychologists about their preferred role, and among educators in schools, regarding their expectations of educational psychology services. Learners with special need are particularly in need of attention, and the equipping of mainstream teachers to deal with these learners should be a priority. There is also the need, more broadly, for a reappraisal of psychological interventions in schools. Certain alternative interventions have been noted above, and the lessons from these interventions must form the basis of wider programs. Theory and practice need to be considered together, in order for practice in schools to be improved. Theory from educational psychology and community psychology enables new ways of thinking about problems, and also provides tools for creating solutions. There is a shortage of person-power in South Africa, and major efforts will need to be made to support and enable educational psychologists to make a difference.

CONCLUSION

In this article I have endeavored to uncover some of the influences of apartheid on education in South Africa from the perspective of an educational psychologist. No doubt there are other influences that I have neglected to mention, and the impact of apartheid is far-reaching. The apartheid system violated the human rights of generations of people, and its legacies live on as the new government struggles to make the fundamental shifts necessary to unpick the intricacies of its influence and evil intent. A number of writers have written of the massive scale of the conceptualizing, legislating, planning, and implementing of such a comprehensive transformation agenda.

One decade of democracy has passed. The challenge in the next decade will be to find innovative strategies to implement the educational change that the new curriculum facilitates. This involves turning the democratic and learner-centered principles of OBE into practice. Educational psychologists need to become more active in utilizing psychological theories for the purpose of

developing the potentials of educators and learners in schools. This will require the role of the educational psychologist to be expanded beyond that of working with individual children to include advocacy, mediation, and facilitation, with practitioners engaging in systemic work in schools and communities. Political negotiation and influence are necessary in these tasks, since many educational decision-makers will need to be convinced to channel limited resources in such directions. A part of the work will thus need to be in the researching, evaluating, and writing-up of initiatives that are making a difference (e.g., the article by de Jong, 1995, listed below). Educational psychologists must determinedly take up their role as scientist practitioners. In these activities, educational psychologists would benefit from the collaboration and support of their colleagues from around the world. Educational psychology has, I believe, a central role to play, and the way is now clearer than before for transformational work to take place in schools.

FURTHER READING

- Basson, C. (1987). School psychological services in white schools in the Republic of South Africa. In C. Catterall (Ed.), *Psychology in the Schools in International Perspective* (pp. 155–167). Columbus, OH: International School Psychology Steering Committee.
- Cross, M. (1999). *Imagery and Identity in South African Education: 1880–1990*. Durham, NC: Carolina Academic Press.
- de Jong, T. (1995). The educational psychologist and school organization development in the reconstruction of education. *South African Journal of Psychology*, 26, 114–119.
- Donald, D., Lazarus, S., and Lolwana, P. (2002). *Educational Psychology in Social Context*. Cape Town, South Africa: Oxford University Press.
- Dovey, K., and Mason, M. (1984). Guidance for submission: Social control and Guidance in schools for black pupils in South Africa. *British Journal of Guidance and Counselling*, 12(1), 15–24.
- Leach, M. M., Akhurst, J., and Basson, C. (2003). Counseling psychology in South Africa: Current political and professional challenges and future promise. *The Counseling Psychologist*, 31(5), 619–640.
- Nicholas, L. J. (1990). The response of South African professional psychology associations to apartheid. In L. J. Nicholas and S. Cooper (Eds.), *Psychology and Apartheid*. Johannesburg, South Africa: Vision/Madiba.
- Watts, A. G. (1980). Career guidance under apartheid. *International Journal for the Advancement of Counselling*, 3, 3–27.

CHAPTER 47

Implications of Cultural Psychology for Guiding Educational Practice: Teaching and Learning as Cultural Practices

PATRICK M. JENLINK AND KAREN E. JENLINK

INTRODUCTION

Psychology, in particular educational psychology, has struggled with a crisis of identity in recent years, beset by questions of allegiances, values, and sense of place within education and society (O'Donnel and Levin, 2001). Historically, educational psychology has focused on prioritizing precision and theoretical parsimony over understanding the phenomena of learning as situated in educational contexts such as schools; contexts that do not lend to precision and parsimony (Turner and Meyer, 2000). Emergent in the ongoing debate and direction in educational psychology as an evolving field is the place of cultural psychology—cultural historical activity theory—as an important consideration in reconstructing the identity of educational psychology in relation to educational practice, and more importantly, in reconstructing our understanding of cognition and learning within the situated nature of human activity in educational settings.

Cultural-historical, sociocultural, sociohistorical, and cognitive theorists have advanced differing perspectives of learning in the past two decades, which have been instructive in helping to develop new understandings of how both students and teachers learn (Brown et al., 1989; Engeström et al., 1999; Fosnot, 1996; Lave, 1988; Rogoff and Lave, 1984; Vygotsky, 1978). Premised on the situatedness of learning, historically, socially, and culturally, a cultural psychology—cultural-historical activity theory—perspective (Cole, 1996) understands that learning occurs while individuals (students and teachers alike) participate in the sociocultural activities within and across the various communities of practice in which membership is held and practiced. The situated nature of learning is transformative, reflexively shaping and being shaped by the learner's cognitive and cultural processes and practices, and view of reality as the learners participate within and across communities of diversity and difference (Cole, 1998).

In this chapter, the authors will examine the use of cultural psychology for guiding educational practice, in particular educational practice in relation to learning and teaching in cultural–historical contexts where children come from many different home cultures, ethnicities, languages, and social classes. The authors undertake to: (1) examine the relationship between culture and activity; (2) explicate, using activity theory as a guiding framework, patterned ways of conduct of educational practice as activities or cultural practices, examining the import of mediational tools and

artifacts in relation to educational practice (as situated in diversity-rich contexts); and (3) extend the author's positions concerning the implications of cultural psychology for guiding educational practice—the choice of activities or cultural practices.

CULTURAL PSYCHOLOGY—A RELATIONSHIP OF CULTURE AND ACTIVITY

Cultural psychology is an interdisciplinary field that has emerged at the interface of anthropology, psychology, and linguistics. Its aim, in part, is that of examining ethnic and cultural sources of psychological diversity in relation to emotional functioning, moral reasoning, social cognition, and human development. A central thesis of cultural psychology, originating in the Russian cultural–historical school of thought, according to Michael Cole, is “that structure and development of human psychological processes emerge through culturally mediated, historically developing, practical activity” (Cole, 1996, p. 108). In his conceptualizing a second cultural psychology, Cole elected to bring cultural artifacts, both ideal and material, to the foreground of understanding learning. In this perspective, artifacts are viewed as products of human history, situated socially and culturally: culture is moved to the center in relation to artifact-mediated action within human activity systems. Culture, for Cole (1996), is an artifact-saturated medium of human life, further explicated as an “immense, distributed, self-regulating system consisting of partial solutions to previously encountered problems” (p. 294). Explicating his theoretical perspective of cultural psychology, Cole is concerned with a conception of culture adequate to the theories and practices related to an artifact mediated perspective of learning as activity, adopting an activity theory framework to further elaborate his cultural–historical notion of learning.

Cultural–Historical Activity Theory

A distinctive notion of cultural–historical activity theory is that learning is mediated within/by culture and its products. Learning is also understood as being historical and having social origins. Suggested as a main discipline to the cultural–historical psychology approach is human activity that is constructive. As summarized by Davydov (1995), “the genuine, deep determinants of human activity, consciousness and personality lie in the historically developing culture, embodied in various sign and symbol systems.” Cultural–historical theory, then, suggests that individuals engage in goal-directed activities within cultural contexts while relying on “others” who are more experienced, and using artifacts to mediate learning. Mediation occurs within “zones of proximal development” (Vygotsky, 1978), wherein less experienced individuals are assisted by more experienced “others” through mediated assistance: mediated assistance through cultural artifacts, both ideal and material in nature.

Situating Cognition

Situating cognition refers to learning within the context of practice, to the relationship between learners and the properties of specific contexts. Situating cognition reflects an understanding of knowledge as knowing about, which is a perceptual activity that always occurs within a context (Prawat and Floden, 1994). As Brown et al. (1989) explain, learning is always situated and progressively developed through situated activity. Learning involves more than acquiring a set of self-contained entities; it involves building a contextualized appreciation of these entities as artifacts, as well as for the situations through which these artifacts have value.

Mediating situated cognitive activities may be understood as a relationship between more experienced and less experienced individuals. In this relationship, more experienced others use conceptual as well as physical artifacts as tools for mediating cognitive reasoning and problem

solving. Vygotsky's concept of zone of proximal development (ZPD) is instructive in understanding this relationship. He defined the ZPD as the distance between the actual development level of the learner and the level of potential development "determined through problem solving under . . . guidance or in collaboration with more capable peers" (Vygotsky, 1978). The zone is where mediated assistance, such as teaching or facilitating, (through the resources of a more experienced other as cultural agent) and the individual (student or teacher as learner) development potential interface.

Extending the concept of ZPD into human activity systems, Engeström explained mediation as "the distance between the present everyday actions of the individuals and the historically new form of the societal activity that can be generated as a solution" (Engeström, 1987). Mediation, then, represents the use of cultural artifacts (ideal and material) to assist less experienced individuals, less cognitively and consciously aware individuals, to learn in situ—as situated cognitive development within communities of practice.

Artifact Mediation—Three Levels of Artifacts

A central principle of cultural–historical theory, as Cole (1996) explains, is the use of artifact mediation: semiotic mediation through the use of different levels of artifacts. All human actions are mediated by the use of cultural artifacts: culture is defined as a system of shared meanings and as the social inheritance embodied in artifacts. Thus, culture mediates human interactions, shaping and in turn being shaped by the use of artifacts. Artifacts are, as Cole explains,

an aspect of the material world that have been modified over the history of its incorporation into goal-directed action. By virtue of the changes wrought in the process of their creation and use, artifacts are simultaneously *ideal* (conceptual) and *material*. They are ideal in that their material form has been shaped by their participation in the interactions of which they were previously a part and which they mediate in the present. (p. 117)

Defined in this way, the distinction between the ideal and material properties of artifacts both affirms the inseparability of the material from the symbolic and affirms the equal force of mediating human actions through use of artifacts whether one is considering language or a more concrete artifact such as a pencil.

Importantly, in cultural–historical theory, Cole (1996) identifies three levels of artifacts, including primary artifacts (words, writing instruments, words, telecommunication networks, a mythical cultural personages, etc.); secondary artifacts (traditional beliefs, norms, constitutions, etc.); and tertiary artifacts (imagined worlds, creative representations, play, schemas, scripts, notions of context, etc.). These three levels of artifacts enable semiotic mediation of human action; most importantly they animate learning with the cultural-historical nature of human interaction in educational settings.

Internalization/Externalization

Cultural–historical activity theory explains that internalization/externalization processes regulate human actions/interactions within cultural activities. Internalization is a transformational process with changes in the structure of activity; internalization is the transfer onto an internal psychological plane of external performances. The process of internalization is, in part, an appropriation of cultural knowledge, as ideal/conceptual artifacts, and therein contributes to the reproduction of culture. In contrast, externalization creates new artifacts that enable the transformation of culture.

Internalization of external experiences is derived from social interactions that are mediated through use of artifacts, and as such, internalization is simultaneously an individual and a social process. Relatedly, externalization is also an individual and a social process through which the application of schemas and cognitive processes work to create/transform existing semiotic, ideal/conceptual, and material artifacts, and animate learning. Conceived as a representational activity, internalization is a process that occurs simultaneously in social practice and in the mind. The appropriation of semiotic artifacts—symbol systems—as an internalization process translates into the transformation of communicative language into inner speech. Internalization processes are those through which individuals construct minds in interaction with the external social world(s) of other individuals.

Legitimate Peripheral Participation

The notion of legitimate peripheral participation (Lave and Wenger, 1991) is the process through which individuals who enter a community of practice, recognized as peripheral participants (less experienced members of the community), appropriate a community identity (personal epistemology) through emergence in the practices of the community. Wenger explains that, “Because learning transforms who we are and what we can do, it is an experience of identity. It is not just the accumulation of skills and information, but it is a process of becoming – to become a certain person, or conversely, to avoid becoming a certain person” (Wenger, 1998). As an individual engages in a community of practice, or a community of learners, he or she would assimilate an identity (like-mindedness) similar to the members of that community. This is accomplished by providing for opportunities to engage in the patterned ways of conducting practice, first observing and then practicing. Situating the peripheral participant within activity contexts of the community, mediating the participant’s learning through cultural artifacts of the community, and assisting the peripheral participant to appropriate the shared beliefs and meanings of the community through its culture, cognitively develops the peripheral participant over time to move from the periphery to a more central participation. Mediation of an individual’s actions and practices, through cultural artifacts in social interaction, is the essential precondition for cognitive and social development.

Mediated Agency—The Authority of Cultural Artifacts

In activity theory, Wertsch and Rupert (1993) explain that agency refers to who it is that carries out the action, and by extension in cultural–historical activity theory, mediated agency refers to “individual(s)-operating-with-mediational-means.” If the focus on mediated agency is on the actions of participants within communities of practice, and more specifically its focus is on social dimensions of consciousness—mediational means employed in mental functioning, either intermental or intramental functioning (Wertsch, 1985). Mediated agency is concerned with how forms of social interaction maybe internalized to form individual mental processes; cognitive reasoning processes.

Mediated agency understands that human action is fundamentally shaped by the mediational means it employs, within situated activities of learning and practice. Relatedly, it is understood that appropriate mediational means (artifacts) are necessary to create solutions to problems, to engage in reasoning and to have certain thoughts. Mediated agency also acknowledges that shaping human action through the use of cultural artifacts does not imply simply a static body of knowledge or practices. Rather, it recognizes that tensions arise through the interaction between mediational means and the individuals using them, which results in a continuous process of transformation and creativity (Wertsch and Rupert, 1993).

An inherent property of mediational artifacts (means) is that they are culturally, historically, and institutionally situated within and across culture(s). Therefore, because of the sociocultural

situatedness of mediational means, mediated agency focuses on the cultural–historical “situatedness” of cognitive reasoning. Mediated agency, then, fosters the creation of new ideas and practices through focusing on existing cultural artifacts as mediational means (Wertsch and Rupert, 1993). Importantly, individuals engaged in mediated agency draw on the authority of cultural artifacts to mediated situated cognitive reasoning and development. Equally important, recognizing the inherited cultural authority of artifacts means recognizing the shared values, beliefs, and meanings within the artifacts, and how this inheritance may contribute to cultural reproduction and/or transformation.

Social Inheritance of Cultural–Historical Activity

Within cultural–historical activity theory, as Cole explains, culture is conceived of “as human being’s ‘social inheritance.’ This social inheritance is embodied in artifacts, aspects of the environment that have been transformed by their participation in the successful goal-oriented activities of prior generations” (Cole, 1998, p. 291). As a learner engages in external social activity, mediated by different levels of artifacts, his or her internal cognitive reasoning processes, cognitive schemas, and knowledge structures are transformed; conversely, through his or her schemas (Cole, 1996), cognitive activities construct and orchestrate social processes. The social inheritance of culture is acquired through mediated activity, and may simultaneously be transformed to reflect new artifacts constructed through interactions within various social activities.

Social inheritance of cultural artifacts includes the three levels of artifacts identified by Cole (1996), and therein the importance of analyzing the artifacts to determine their cognitive as well as political implications is important. All human actions are mediated, and the selection of mediating artifacts by more experienced others reflects the use of culture to either reproduce existing cultural patterns; patterned ways of conducting educational practice, and ways of learning. Within a diversity-rich context, multicultural and multiracial considerations are necessary to ensure that mediation of learning reflects artifacts responsive to the diversity of the individuals within and across situated activities designed for cognitive development of mind. Equally important, is that the artifact selection acknowledges how social inheritance—the shared beliefs and meanings embodied in artifacts—instructs the process of internalization, and may serve to reproduce cultural patterns that are ideologically bound in dominant politics as opposed to transform cultural patterns into possible alternative futures.

Cultural–historical activity theory recognizes that the conduct of educational practice as situated learning, mediated by cultural artifacts, creates patterned ways of learning and practice within social contexts defined by their historicity and spatial qualities. Patterned ways of learning reflect an inseparable relationship between the material and symbolic in human reasoning (Blanton et al., 1998). Internalization of cultural artifacts, symbolic (ideal) and material, appropriates, in part, cultural knowledge and ways of knowing and being; a patterned way of conducting practice. Outwardly, material artifacts are used to impact on objects; to externalize artifacts is to work to change patterned ways of conducting practice. In contrast, artifacts that are psychological in orientation work inwardly and outwardly to enable self-regulation and the regulation of others, patterning group dynamics, regulating shared thinking and negotiated meaning (Brown and Duguid, 2000).

PATTERNED WAYS OF CONDUCTING EDUCATIONAL PRACTICE—AN ACTIVITY THEORY FRAMEWORK

Educational practice—teaching, learning—is social and cultural in nature, taking place within and across human interactions mediated by artifacts and guided by sociocultural rules. Educational

practice is a process of learning *to be* and learning *about* that are deeply intertwined within communities of practice. Situated within communities of practice (Chung and Chen, 2002), we “learn ‘how’ through practice; and through practice, we *learn to be*” (Barab and Plucker, 2002). Educational practice also has both temporal and spatial qualities, that is, practice is patterned over time and defines, while simultaneously being defined by, the space in which the practice is lived. In this sense, the individual as learner is shaped (through internalization) by the culture as a process of mediation using various artifacts. Relatedly, the individual’s practice shapes (through externalization) the culture and transforms it, constructing new artifacts that replace existing ones, creating alternative realities animated by social imaginaries (tertiary artifacts as mediating influences).

Understanding how practice is patterned—how learning is mediated through cultural artifacts as the learner *learns to be*—is instructed by the use of cultural–historical activity theory in the form of an activity system framework. Cultural–historical theorists, in referring to activity, are not simply concerned with *doing* as disembodied action, but more importantly they are concerned with action that is *doing to transform* some object (that which is acted upon through action/practice), with the focus on the culturally, historically contextualized activity of the entire system, rather than a singular activity (Cole, 1996; Cole and Engeström, 1993).

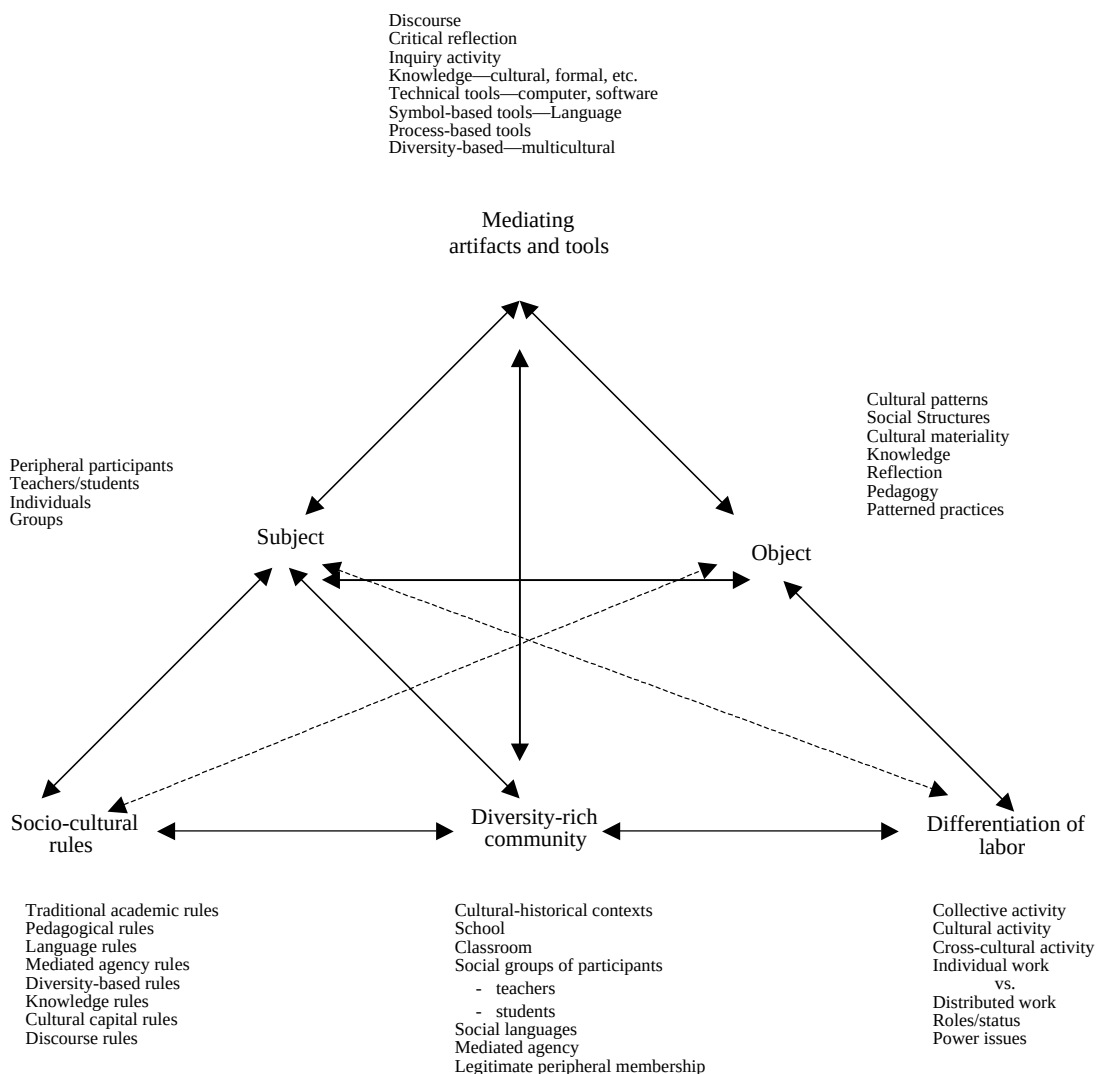
Cultural–Historical Activity Systems

Cultural–historical activity is predicated on the understanding that an individual’s schemas—cognitive frameworks—for thinking are developed through problem-solving actions conducted in specific contexts whose social structures are based on historical, culturally grounded actions. In this sense, activity theory is concerned with the historical origins of a phenomenon or activity and the cultural patterns of practice. Importantly, cultural–historical theory focuses on the interconnections, with and across cultures, which instruct human activity and work to form systems of activities such as teaching and learning situated within a classroom.

An activity system, then, consists of subjects (individuals or groups that act) and an object (that which serves as the focus of the activity), as well as the mediating tools and artifacts (ideal and material: first, second, tertiary levels) that mediate the relations of subject and object. An activity system also consists of sociocultural rules (informal, formal, technical) that guide practice and activity. Relatedly, an activity system involves a community (comprised of individual members who share in purpose) and a division of labor that reflects both the horizontal division of tasks and the vertical division of power and status. Figure 47.1 illustrates the relationship of these elements of the activity system as related to diversity-rich learning contexts (adapted from the work of Cole and Engeström (1993) and Cole (1996)). The activity system for a diversity-rich context focuses on the processes of how individuals develop in relation to the involvement with others while using and transforming cultural artifacts within cultural–historical situated contexts. This activity system recognizes the multilayered and multivoiced nature of activities within diversity-rich contexts. Tensions within the system (see a, b in Figure 47.1) arise as individuals and groups interact and contradictions are introduced as part of the transaction between the activity system and other systems, between mediated agency and individual needs, or between the peripheral participant and the patterned practices of the community.

Cultural–historical activity theory understands that the human activity system learns, expands, and transforms itself. In this sense the system is organic and self-organizing, experiencing crises and contradictions that create tensions. Such tensions require the activity system to self-critically examine and reorganize; to change in response to externally introduced contradictions (i.e., such as mandated curriculum, high-stakes testing) or innovations from another system. Importantly, the activity system is seen as a heterogeneous entity—there are diverse voices, perspectives, and

Figure 47.1
Human Activity System for Diversity-rich Contexts



cultures represented in the system. The heterogeneity of an activity system is defined, in large part, by its multicultural and multiracial makeup. The system is also defined by its historicity. Through its heterogeneity and historicity the system is bound in a complex contexts shaped by historical discourse and practices of disciplining and difference that have shaped its development. Relatedly, an activity system constitutes the minimal meaningful context in and through which to understand human praxis. That is, to understand how activity is distributed as tasks (division of labor) across subjects (those more experienced and those less experienced) and within the tasks, the artifacts individuals and groups use to accomplish the distributed tasks, all of which occur in relation to as well as within and across communities of practice.

An Activity System Framework: Implications for Practice

Cultural–historical activity theory is useful in understanding how individuals and groups learn, particularly in illuminating how teacher educators or teachers or students choose particular artifacts such as pedagogical tools to guide and conduct their practice. An activity systems framework, predicated on cultural–historical theory, focuses attention on the predominant value systems and social practices that characterize the contexts in which learning occurs.

Relatedly, an activity theory framework works to illuminate the cultural goals of reproduction, development, or transformation and the ways in which learning environments are structured, socially, to promote attainment of these goals (Cole, 1996). Where cultures are infused with alternative possibilities of individual and societal realities, alternative futures are promoted through ways in which cultural activity is structured. A central concern of cultural–historical activity theory is to examine the kinds of culturally defined artifacts that shape existing realities through mediated activity, and to understand the kinds of culturally defined artifacts necessary to create alternative futures that motivate individual's activity in order to facilitate mediation of one another's learning that transform, learning that creates alternative futures.

An activity theory framework for understanding patterned practices within activity systems situated in diversity-rich contexts includes certain key elements. These include the activity setting, identity, artifacts (tools), appropriation, and multivoicedness.

Activity Settings

Activity settings are those contexts that mediate the development of consciousness and the acquisition of cultural knowledge and skills. Examining the relationships within and across activity settings in a diversity-rich context illuminates motives that encourage patterned practices that serve to bring the peripheral participant into the community of practice. Activity settings are instructed by sociocultural rules that provide constraints and guidance to support learners' efforts to *learn to be* a member of the community. Activity settings in diversity-rich contexts have cultural histories that require certain relationships, mediated by artifacts and tools, in which participants adopt a general agreement of purpose and meaning. Recognizing that multiple and competing desired outcomes often coexist within an activity setting is important, as is the understanding that tensions arise from competing outcomes. Activity settings are often individual constructions, that is, they are constructed through the interactions of individuals, influenced by the mediated agency of a more experienced other. Thus, there may be multiple activity settings within a situated context, constructed by the various participants engaged in different activities. Activity settings are defined, in part, by the boundaries constructed through mediated interactions. Such boundaries are not insular, but coexist as sets of relationships, overlapping one with another. The cultural history and cultural spatiality of activity settings create complex systems of social interactions that must be understood in relation to mediated agency and human development.

Identity

Identity is shaped and at the same time shapes the social interactions and relationships of individuals within the activity setting. Activities, mediated through cultural artifacts, pass on a social inheritance to participants. In effect, activities are part of a larger system of relations in which they have meaning—an activity system—and from which individual and group identity is shaped. Understanding this aspect of cultural–historical activity, as identity shaping within situated contexts of practice, is to understanding the broader implications of *learning to be* in diversity-rich contexts. Communities of difference bring to the foreground the need for mediated agency that

recognizes the ethnic, cultural, linguistic, social, and economic diversity that define social interactions, and importantly situate learning within complex systems of cultural knowledge and shared meaning. Agency and identity share an important relation in that the more experienced member (such as a teacher) of a community of practice (activity setting) serves as the mediating agency for less experienced individuals, and importantly mediates not only the cognitive development in terms of reasoning ability, but also mediates the development or formation of identity of the less experienced participant as he or she is brought into the community. Recognition of cultural, ethnic, racial, linguistic differences as well as cognitive maturity contributes to the shaping of identity. Mediating social interaction and shaping of identity enables the individual to appropriate necessary artifacts and acquire the social inheritance within these artifacts, and to construct an identity commensurate with the community of practice.

Diversity-Based Artifacts

Mediated agency within diversity-rich contexts implicates the use of cultural tools and artifacts—ideal, material, psychological—in the mediation of cognitive development; acknowledging the need for selecting artifacts that are responsive to the needs of diverse individuals as well as the need to select artifacts that engender an appropriate social inheritance that works to transform the patterned ways of conducting practice in educational settings. Importantly, understanding the cultural–historical origins of the individuals is necessary for identifying the conceptual, material, and practical tools used in mediating learning and social interaction toward moving from legitimate peripheral participation to a more central role in the community of practice. Herein, mediated agency must focus on Cole’s (Cole, 1998, p. 292) three levels of artifacts, recognizing that first and second level artifacts (conceptual and material [physical]) are necessary, but not sufficient in mediating the diversity of individuals, if mediation is to transform practice. The third level of artifacts, which reflect the use of social imaginaries and creativity to foster alternative possible futures, is essential to the externalization of culture. Mediated agency must understand the historical origins of individuals, as well as the culturally patterned nature of practice, recognizing that social practice is both temporal and spatial, defined by social interactions over time and by the nature of the place in which human activity is conducted. Diversity-based artifacts are carefully selected to transform the individual and at the same time, to transform the patterned conduct of educational practices.

Appropriation

Appropriation refers to the process through which individuals adopt artifacts/tools available for use in particular social spaces/places such as classrooms and schools. In part, appropriation is the internalizing ways of cognitive reasoning inherent in cultural artifacts. Through appropriation, shared meanings, values, and beliefs embedded in cultural artifacts are acquired by individuals engaged in mediated actions situated within activity settings. Here the question of types of social structures, patterned ways of conducting practice prevalent in different activity settings is important. Equally important is the question of how such structures and patterned practices mediate appropriation of particular cultural knowledge and skills as well as mediate the development of consciousness of individuals. For the legitimate peripheral participant, appropriation occurs over time, situated within activity settings. Within diversity-rich contexts, legitimate participation on the periphery requires legitimation of multivoicedness and a recognition that participants have different cultural, ethnic, linguistic, and economic needs. Mediated agency works to create a safe and just activity setting in which individual actions are mediated with diversity-appropriate artifacts/tools. Appropriation can occur at different levels of artifacts/tools, including ideal or

conceptual, material or practical, and social imaginary or creative schema. Factors affecting appropriation include social context of learning and the individual characteristics of the learner. Mediating the appropriation of cultural artifacts through activities situated in diversity-rich contexts is a process of cultural transformation and cognitive-cultural human development.

Multivoicedness

Multivoicedness reflects a diversity of beliefs, values, culture, ethnicity, race, and sexual preference. It is based on the principle that “every form of human interaction contains within it many different selves, arranged in multiple, overlapping, and often-contradictory ways” (Brown, Collins, and Duguid, 1989, p. 41). Diversity-rich contexts represent multicultural/multiracial/multiperspectival differences that define communities of difference that exist within and across—cross-cultural—activity settings or communities of practice. Multivoicedness also reflects a level of consciousness of complexity of historical origins of individuals and their respective cultures, noting the need for appropriating artifacts from within and across different cultures. Situating learning in diversity-rich contexts recognizes that such contexts are social constructions, through mediated human interaction, and that the recognition of differences is fundamental to the development of individual and group identity within and across activity settings within the larger activity system (such as a school). Multivoicedness also recognizes that the voices of the less experienced (legitimate peripheral participant) and of the more experienced participant must be recognized and heard, therein mediating asymmetry of power relations within communities of practice and distributing social tasks and work equitably and justly.

FINAL REFLECTIONS

Cultural–historical theory, and by extension cultural–historical activity theory, in diversity-rich contexts, is fundamentally concerned with mediated human development in relation to recognizing difference in human growth and potential. Its concern for the cultural–historical nature of human development makes it an important consideration in understanding learning in educational contexts. Cultural–historical activity theory illuminates the importance of context, in particular the historical and cultural origins, as related to learning. An importance of this perspective is that it situates learning within social contexts, and therein moves the focus from the individual to the setting of human activity. A second importance of this perspective is that it provides a theoretical basis for analysis and understanding of the patterned conduct of educational practices within diversity-rich contexts. Importantly, cultural–historical activity theory provides a framework for understanding the interactions of individuals and the different contexts in which they learn, and for understanding how individuals appropriate cultural artifacts, through mediated agency in diversity-rich contents.

REFERENCES

- Barab, S. A., and Plucker, J. A. (2002). Smart people or smart contexts? Cognition, ability, and talent development in an age of situated approaches to knowing and learning. *Educational Psychologist*, 37(3), 165–182.
- Blanton, W. E., Moorman, G., and Trathen, W. (1998). Telecommunications and teacher education: A social constructivist review. *Review of Research in Education*, 23, 235–275.
- Brown, J. S., and Duguid, P. (2000). *The Social Life of Information*. Cambridge, MA: Harvard Business School.

- Brown, J. S., Collins, A., and Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32–42.
- Chung, W. L. D., and Chen, D. T. V. (2002). Learning within the context of communities of practices: A Re-conceptualization of tools, rules, and roles of the activity system. *Educational Media International*, 39(3/4), 247.
- Cole, M. (1996). *Cultural Psychology: A Once and Future Discipline*. Cambridge, MA: Harvard University Press.
- . (1998). Can cultural psychology help us think about diversity? *Mind, Culture, and Activity*, 5, 291–304.
- Cole, M., and Engeström, Y. (1993). A cultural-historical approach to distributed cognition. In G. Salomon (Ed.), *Distributed Cognition: Psychological and Educational Considerations*, pp. 1–46. Cambridge: Cambridge University Press.
- Davydov, V. (1995). The influence of L. S. Vygotsky on education theory, research, and practice (S. Kerr, Trans.). *Educational Researcher*, 24(1), 12–21.
- Engeström, Y. (1987). *Learning by Expanding: An Activity-Theoretical Approach to Development Research* (p. 174). Helsinki, Finland: Orienta-Konsultit.
- Engeström, Y., Miettinen, R., and Punamäki, R. (1999). *Perspectives on Activity Theory*. New York: Cambridge University Press.
- Fosnot, C. T. (1996). *Constructivism: Theory, Perspectives, and Practice*. New York: Teachers College Press.
- Lave, J. (1988). *Cognition in Practice*. New York: Cambridge University Press.
- Lave J., and Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge, MA: Cambridge University Press.
- O'Donnel, A. M., and Levin, J. R. (2001). Educational psychology's healthy growing pains. *Educational Psychologists*, 36, 73–82.
- Prawat, R. S., and Floden, R. E. (1994). Philosophical perspectives on constructivist views of learning. *Educational Psychology*, 4, 17–38.
- Rogoff, B., and Lave, J. (1984). *Everyday Cognition: Its Development in Social Context*. Cambridge: Cambridge University Press.
- Turner, J., and Meyer, D. (2000). Studying and understanding the instructional contexts of classrooms: Using our past to forge our future. *Educational Psychologists*, 32, 69–85.
- Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.
- Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity* (p. 215). Cambridge, MA: Cambridge University Press.
- Wertsch, J. V. (1985). *Vygotsky and the Social Formation of Mind*. Cambridge, MA: Harvard University Press.
- Wertsch, J. V., and Rupert, L. J. (1993). The authority of cultural tools in a sociocultural approach to mediated agency. *Cognition and Instruction*, 11(3/4), 230.

CHAPTER 48

The Culture/Learning Connection: A Cultural Historical Approach to Understanding Learning and Development

YATTA KANU

INTRODUCTION

This article adds to the burgeoning collection of research that views learning and development as psychosocial and cultural processes, an emerging notion that challenges educational psychology's traditional assumption that the mind does not extend beyond the body and that learning and development are purely psychological processes. Based on research utilizing the cultural historical approach to understanding and characterizing patterns and regularities of engagement in learning among Native-Canadian (Aboriginal) students from low-income communities, the article invites educators and educational psychologists to reconsider the artificial boundary traditionally drawn between the individual and the social in the development of mind, and attend to learning and development through the lens of cultural socialization and its pervasive role in human learning and development. Too often cultural context is neglected in the study of development and education, particularly in studies on ethnic minorities like Native American, Native Canadian, Latino/a, and Black students from poor backgrounds, who have been historically underserved in public schools. I propose that an integration of cultural socialization processes into teaching and learning, based on an understanding of the places where people live their lives and how they are culturally socialized to participate in routine practices in these settings, will improve educational outcomes for racial and ethnic minority youth.

The article begins with a brief discussion of the primacy of cultural mediation in the learning process, after which the focus shifts to the cultural historical approach which concerns understanding how individuals' or groups' patterns of participation in shared practices in their cultural communities/places contributes to their learning and development. Using the cultural historical approach to inquire into the influence of cultural participation/socialization on learning, I identify four valued Aboriginal cultural practices that appear to be socially meaningful and consequential in shaping pathways of learning and development for particular groups of Aboriginal students from low-income communities in western Canada.

THE CENTRALITY OF CULTURAL MEDIATION IN LEARNING AND DEVELOPMENT

Why does it matter that we undertake research that helps us better understand cultural socialization and its mediating influence on, and consequences for, student learning? It matters because social-cultural and cultural-historical psychology begins with the assumption of an intimate connection between the special environments that human beings inhabit and human psychological processes. In their work, James Wertsch and Michael Cole have explicated this link by explaining that the special quality of the human environment is that it is suffused with the achievements of prior generations in reified form. This notion is also found in the writings of cultural historical psychologists from many national traditions. John Dewey, for example, wrote that, from birth to death, we live in a world of persons and things which is in large measure what it is because of what has been done and transmitted from previous human activities. When this fact is ignored, experience is treated as if it were something that goes on exclusively inside an individuals' body and mind. According to Dewey, experience does not occur in a vacuum; there are resources outside an individual that give rise to experience (Dewey, 1938 and 1963). The early writings of Russian cultural psychologists also emphasize the cultural medium. They argue that the special mental quality of human beings is their need and ability to mediate their actions through artifacts previously shaped by prior human practice, and to arrange for the rediscovery and appropriation of these forms of mediation by subsequent generations (Cole and Wertsch, 2001). In this regard, Vygotsky (1981) wrote: "the central fact about human psychology is the fact of cultural mediation" (p. 166).

From the perspective of the centrality of cultural mediation in mind and mental development, the mind develops through an interweaving of biology and the appropriation of the cultural heritage. Higher mental functions are, by definition, culturally mediated, involving an indirect action in which previously used artifacts are incorporated as an aspect of current action (Cole and Wertsch, 2001).

This perspective has several implications for learning and cognition. First, cultural artifacts do not simply serve to facilitate mental processes; they fundamentally shape and transform them. Second, because artifacts are themselves culturally, historically, and institutionally situated, all psychological functions begin and, and to a large extent, remain culturally, historically, and institutionally situated. There is no universally appropriate form of cultural mediation. A third implication is that context and action are not independent of each other. As Cole and Wertsch put it, "objects and contexts arise together as part of a single bio-social-cultural process of development."

These implications suggest that mind can no longer be seen as located solely inside the head. Rather, higher psychological functions include the biological individual, the cultural mediational artifacts, and the culturally structured social and natural environments of which individuals are a part. The positions of Dewey, Vygotsky, Cole, and Wertsch, and others on the centrality of cultural artifacts in human mental processes has great resonance in recent movements in cognitive science, and the position undergirds much of the emerging science on distributed cognition and situated learning.

This primacy of cultural mediation in learning and development invites us as educators to provide opportunities for our most disadvantaged groups to draw on their cultural capital—what they bring from prior cultural socialization in their homes and communities—to support and enhance classroom learning for them. Understanding how individuals or groups historically engage in shared practices in their cultural communities may account for dispositions they may have in new circumstances such as classroom learning.

UNDERSTANDING LEARNING AND DEVELOPMENT THROUGH A CULTURAL HISTORICAL APPROACH

Research on understanding learners, learning, teaching, and thinking through the lens of psychosocial and cultural processes is often undertaken using the cultural learning styles approach. This approach attributes individual learning styles/traits categorically to ethnic group membership and, based on this, prescriptions are made for creating learning environments that complement the learning styles of different ethnic groups. Undoubtedly, the cultural learning styles approach has contributed positively to the attempt to leave behind the deficit-model thinking in which cultural ways that differ from the practices of dominant groups are judged to be less adequate without examining them from the perspective of the community's participants. The approach can also appeal to teachers who may have limited training, support, and resources to meet the challenges of cultural diversity in classrooms. Yet, the cultural learning styles approach does not sufficiently help us understand the relation of individual learning to the practices of cultural communities and it sometimes hinders effective assistance to student learning by producing overgeneralizations within which a single way of teaching and learning may be used with a particular group without accounting for individuals' past experiences with certain practices or without providing instruction that both extends those practices and introduces new and even unfamiliar ways of doing things. The approach also creates a false dichotomy between contexts and actions, viewing individuals as though their characteristics were unrelated to the cultural contexts in which they and their families have participated in recent generations (Gutierrez and Rogoff, 2003).

A cultural historical approach addresses these shortcomings by helping us understand how patterns/regularities in the engagement of shared and dynamic practices of different communities contribute to human learning and development. Rather than viewing an individual's learning style as a static, essentialized trait that is independent of tasks and contexts, constant over time and setting, and attributable to ethnic group membership, the focus in a cultural historical perspective shifts to individuals' histories of engagement in activities in their cultural communities. A central and distinguishing feature of the cultural historical approach is that the structure and development of human psychological processes emerge through participation in culturally mediated, historically developing, practical activities involving cultural practices in contexts (Gutierrez and Rogoff, 2003). The approach also appreciates that individuals participate in the practices of cultural communities in varying and overlapping ways, which change over their lifetime and according to changes in the community's organization and relationships with other communities. Of course, there are patterns and regularities in the ways groups draw on cultural artifacts to function and participate in the everyday practices of their respective communities but, as Gutierrez and Rogoff argue, the emergent goals and practices of participants are in constant tension with the relatively stable characteristics of these environments. It is this tension and conflict that accounts for and contributes to the variation and ongoing change in an individual's and community's practices.

Researchers and practitioners can examine people's usual ways of doing things and characterize the commonalities of experience of people who share cultural backgrounds.

To be able to characterize learners' repertoires of cultural practices and help them extend these practices or use them in new ways in the classroom, the researcher and practitioner need to understand both the community and the individual practices, and the nature and forms of cultural tools/artifacts used (e.g., social relations, belief systems, customary approaches to performing specific tasks). To facilitate this type of understanding, cultural historical psychologists suggest prolonged observations in multiple situations in communities, assuming various vantage points so as to understand not only the complexity of human activity but also the participant's familiarity of experience with cultural practices.

CULTURAL MEDIATORS OF LEARNING FOR NATIVE CANADIAN (ABORIGINAL) STUDENTS IN THE FORMAL SCHOOL SYSTEM

Using cultural historical theory as explicated above, I set out to investigate and understand aspects of Aboriginal cultural socialization and its mediating influence on the learning of urban Aboriginal students from low-income backgrounds in Manitoba, western Canada. In both Canada and the United States the persistent failure of Aboriginal/Native students in the public school system has been consistently explained in terms of the differences between the sociocultural environments of their homes and communities and those of the school. Particularly in the case of urban Aboriginal students who constitute the highest incidence of school failure and dropout in Canada, the lack of Aboriginal cultural knowledge among teachers—who are predominantly middle-class Euro-Canadians—has been identified as a significant factor in school failure, prompting calls for the inclusion of Aboriginal cultural perspectives across school curricula, classroom practices, and teacher preparation programs. For me, these calls raised the following questions: (1) What specific aspects of Aboriginal cultural experience/socialization influence and mediate learning on which teachers can draw to support and enhance classroom learning for Aboriginal students? (2) Would these cultural experiences be similar and supportive of classroom learning for all students from a particular Aboriginal group or should we base interventions on regularities discerned in individuals' histories of participation in and familiarity with cultural activities? (3) What are the histories of individuals' participation and engagement in activities in their cultural communities? (4) What are the patterns and variations of engagement of shared cultural practices among particular groups of Aboriginals? (5) How does such participation/engagement contribute to learning and development both in the community and in the school? These questions led me to a one year study conducted among Canadian Aboriginal students, undertaken to identify aspects of their cultural socialization (existing knowledge structures) that influenced/mediated how they received, negotiated, and responded to curriculum materials, teaching methods/strategies, and learning tasks in their high school social studies classroom. Knowledge of cultural mediators of Aboriginal student learning is critical to our understanding of how teachers could best adapt classroom materials and processes to enable Aboriginal students to have generous and positive access to their cultural heritage while also acquiring knowledge and confidence with the content and codes of the dominant cultures. Historically, Aboriginals have faced tremendous social inequities that are structured into the fiber of Canadian society and of schools. Consequently, Aboriginal students suffer from enduring gaps in academic achievement compared to their more affluent peers or peers who belong to dominant cultural groups. In this regard, Aboriginals share many similarities with other ethnic minorities, including students of European descent who experience persistent intergenerational poverty in both Canada and the United States.

RESEARCH METHODS AND PROCEDURES

The Aboriginal students who participated in this study came from the Ojibwe, Cree, and Metis groups (Metis are mixed descendants of European and Canadian Aboriginal groups). The study occurred at two sites simultaneously. One site consisted of Ojibwe and Cree communities in a large urban location in western Canada where my Ojibwe research assistant and I carried out prolonged observations (one visit per week over 46 weeks) of ten research participants' engagement in shared activities in their communities. The other research site was an alternative high school with a very large Aboriginal student population (90%) where the research participants attended school, and where we observed classroom materials and teaching/learning processes in a grade 9 social studies classroom once every week over the entire 2001 academic year.

Data for the study was collected in an integrated grade 9 social studies classroom with 80 percent Aboriginal students, 20 percent whites, and two teachers (one was Euro-Canadian and the other

African-Canadian) who had been identified as successful teachers of Aboriginal students and who had expressed a willingness to enhance their understanding of cross-cultural instruction.

A social studies classroom was chosen for the study because it derives its subject matter from the social science disciplines, and therefore offers opportunities for the use of a variety of curriculum materials, teaching strategies, and learning tasks which apply across a large number of subject areas. As well, I (the researcher) am a social studies instructor and was more likely to understand the curriculum goals, concepts, and the teaching/learning processes targeted in the social studies classroom.

Among the twenty-eight students in the class, ten volunteered to be followed and observed each week as they participated in different activities in their communities (five of these students were Ojibwe, three were Cree, and two were Metis of European-Ojibwe-Cree ancestry). They and their parents/relatives also participated in the research conversations we conducted.

Ethnography offers enhanced opportunities to understand research participants within their own settings, and the flexibility to follow and document events as they arise during the research, and so an ethnographic approach was used for the study. In line with ethnographic methodology, multiple data collection methods were used. These were:

Site observations. In this study, my interest was in the importance and benefit of knowing about the valued, shared practices and activities of the Aboriginal groups under study, the history and patterns of participation/engagement of the ten research participants in these activities, and the mediating influence of these prior knowledge structures on their classroom learning. Therefore, my research assistant and I spent countless hours observing activities and interactions in the two Aboriginal communities and in the grade 9 social studies classroom. In the communities, we observed and wrote down field notes on the participation of the ten student volunteers and their parents/relatives in activities such as patterns of verbal communication, nonverbal communication, and their intended meanings, approaches to task performance, norms regarding competition and interdependence, extent to which children are brought up to accomplish things on their own and arrive at their own independent decisions and opinions, how children and adolescents engage in play and past-time activities, ways of responding to persons in authority, and interpersonal relationships and interactions. The intent was for us to be able to characterize the cultural repertoires of our ten student volunteers and their dexterity in moving between approaches appropriate to varying activity settings. Over the year's duration of the research, we would have an account of each participant's and the community's value-laden experience, and be able to speak about the usual/customary/habitual approaches taken in known circumstances.

At the school site our classroom observations focused on the curriculum materials, teaching methods/strategies, and learning tasks used in the social studies lessons, and how our ten student volunteers used their prior cultural socialization to negotiate and cope with these classroom processes. Data collected from both sites were later used as material for research conversations with participants.

Research conversations. In the two Aboriginal communities, we had many informal conversations with our ten research participants and their relatives to help us better understand the practices we were studying and confirm or disconfirm our own beliefs and hypotheses about issues such as social relations, rules, division of labor, cultural tools and artifacts used, and certain actions and the rationales behind them. More formally, we held two sets of research conversations (each lasting one hour) with the students in the study. The first set of conversations was intended to get participants' initial responses to our research questions pertaining to (a) how the curriculum materials and the classroom activities, processes, and interactions facilitated or inhibited class participation and conceptual understanding for them; (b) the specific aspects of their prior cultural knowledge and socialization that contributed to enhance or inhibit class participation and conceptual understanding when these classroom materials and processes were used; (c) their preferred teaching and learning

methods in the social studies classroom and how these were similar to or different from the dominant methods through which they learned in their cultural communities; and (d) questions intended to further illuminate the data collected at the community and classroom sites. The second set of conversations provided the researchers with the opportunity to probe specific responses in more detail and explore any new questions and ideas that emerged. These formal conversations were audio-recorded and later transcribed verbatim.

Students' journals. Aboriginal students participating in the study were asked to maintain a journal where they documented the cultural experiences that influenced/mediated how they received, negotiated, and responded to curriculum materials, teaching strategies, and learning tasks in the social studies classroom.

Important sections of the data from the multiple sources described above were highlighted and summarized. Doing so enabled the researchers to get an overview of what the data offered concerning the research questions. As well, the researchers were able to see whether the data gave rise to any new questions, points of view, and ideas. All data were coded and categorized, using both deductive and inductive methods. Coded data were read and organized according to themes emerging from the data. The themes were examined collaboratively with the participants in order to understand what certain data meant and how certain facts could be explained. Data analysis and interpretation, therefore, incorporated both emic and etic perspectives. Research narratives based on the data were constructed. The research narratives were returned to the research participants for comments, changes, and/or confirmation before being included in the final report. In the following discussions of our findings I have attempted to respect the participants' words/contributions by including them as quotes, where appropriate, to enrich the research narratives. Where participants are quoted in the report, pseudonyms have been used to protect their identities. Therefore, the ten students are referred to as Mike, Ned, Kem, Rich, Liz, Joe, Don, Andy, Tim, and Jon. The teachers are referred to as Mrs. B. and Mr. X.

FINDINGS AND DISCUSSIONS

Analysis of the data generated from the different research instruments revealed several findings related to the two main concerns of the study: (a) the participants' history of participation in and familiarity with activities in their cultural communities, and (b) the curriculum materials and teaching/learning processes and interactions used in the social studies classrooms, and the aspects of Aboriginal cultural socialization which enhanced or inhibited Aboriginal student participation and conceptual understanding when these materials, strategies, and learning tasks were employed.

The first significant finding was that all ten students that we followed for this study showed an impressive level of familiarity with the cultural practices and knowledge structures of their communities. To a large extent, they easily and consistently participated in activities with comfort, authority, and knowledge of their culture. Of course, some differences were observed among individual participants, as the following discussion shows. However, there were sufficient common elements among them that appeared to conflict with the values, culture, and processes that are dominant in the conventional classroom. These common elements in the data provided the bases for the construction of themes.

Part I of this report presents, in tabular form, the curriculum materials, learning tasks/activities, teaching methods/strategies, and learning goals observed in the social studies classroom during the research (Table 48.1).

Part II discusses the themes that emerged from our site observations and conversations with the research participants about the aspects of their prior cultural socialization, which helped or hindered their learning in the social studies classroom.

Part I

Table 48.1
Curriculum Materials, Teaching Methods/learning Tasks, and Learning Goals in a
Grade 9 Social Studies Class.

Curriculum Materials	Teaching Methods/learning Tasks	Learning Goals
No prescribed textbooks were used. Materials were selected according to needs and interests of students, but of relevance to successful living in mainstream Canadian society. Materials used included the following: Stories with moral messages from the book “Chicken Soup for the Soul.”	.	To develop students’ listening and comprehension skills, to develop higher-level thinking, to provide student motivation through the moral lessons in the stories (e.g., perseverance, respect for self and others).
Concepts such as “stereotyping,” “discrimination,” “prejudice,” “racism,” “lazy” that depicted some of the lived experiences of many Aboriginal students. Concepts of more general relevance and application, for example, “supply and demand,” “critical consumer decision-making factors,” “advertising,” “motives for purchasing goods and services,” “human rights.”	Small group discussion of concepts; two teachers and one teacher aide in the room provided support to students as they worked in groups; sharing of insights through verbal presentations; teacher input through further discussion, examples, probing questions (scaffolding), and notes.	For students to understand the ignorance and discrimination present in stereotyping; for students to recognize their own prejudices; for students to improve their discussion and public speaking skills; to relate curriculum to students’ daily lives.
Pictures of accomplished Aboriginal people in respected professions.	Whole class teacher-led discussion through higher-level thinking questions that encouraged student participation (expression of ideas and opinions).	To make the curriculum relevant to the Aboriginal students (students see themselves in positive ways in the curriculum); students will be motivated by positive role-models.
“The Canadian Scrapbook: Looking back on Aboriginal early lives”.	Independent and small group worksheet activities; scavenger hunt locating information from pages already identified by the teacher (scaffolding research work), individualized instruction by teachers, whole class discussion of student responses	For Aboriginal students to understand their rich history; for students to develop research skills.
Teacher’s notes on transparencies and other visual aids.	Visual aids were used by the teacher to explain certain concepts. Notes provided lesson summaries for students.	To support student learning through visual examples.

Part II: Themes Relating to Cultural Influences on Aboriginal Student Learning

Theme 1: Aboriginal Approaches to Learning. Four indigenous approaches to learning that appeared to be common in the communities we observed were also found to have facilitated or hindered class participation and conceptual understanding for the students in our study. These were:

Learning through stories and anecdotes. Anecdotes and stories were sometimes observed to be used by adults, especially parents and elders, to convey important messages to the young and to each other in the communities we observed. This probably explains why all the students in the study agreed that the story reading method adopted by their social studies teacher was very effective in helping them understand the concepts and messages contained in each story. The research conversations revealed the following cultural reasons for the effectiveness of the storytelling method:

- In indigenous Aboriginal culture traditional stories, legends, songs, and many other forms of knowledge are passed on among generations by constant retelling (through stories) by elders and leaders who carry the knowledge of these spoken forms in their memories. As one student research participant put it,

... My grandmother knows these stories inside out. My parents also know them and I learn the stories from them all. We all know the songs that go with each story. (Don)

- Children develop a sense of morality by observing parents and elders modeling certain behaviors, and through stories, anecdotes, and legends they hear from parents and elders.

We learn what is right and wrong from these stories. For example, many stories of hunting my grandpa has told me are about being honest about the number of catches each person had on a group hunting trip ... (Jon)

- Stories and anecdotes offer important ways for individuals to express themselves safely (e.g., convey messages of chastisement without directly preaching the message or specifically moralizing or blaming the culprit). From the research conversations we learned that Aboriginal peoples' stories are shared with the expectation that the listeners will make their own meaning, and that they will be challenged to learn something from the stories. Stories, therefore, appear to contain layers of meaning that listeners decode according to their readiness to receive certain teachings.

... You just get the message as you listen to the story and you loosen up and improve your behavior, if you want to ... (Ned)

Learning through observation and imitation. A second learning approach, which appeared to have a strong basis in the Aboriginal cultures we studied, was observational learning. Probing questions during our research conversations revealed a close link between learning by watching and doing and some traditional child-rearing practices, which have survived in many Aboriginal families. From our observations and the research conversations, it appeared that Cree and Ojibwe children have developed a learning style characterized by observation and imitation as children and adults in the extended family participate in every day activities. Joe, a student in the study elaborated on this approach to learning:

... When they (parents, grand parents, or teachers) actually show you and you see it in action, it's easier for you to grab ...

Kem, another student, linked this learning method to preparation for adult responsibility:

... Actually seeing how something is done, instead of reading how it's done, that's hard to remember. When you watch how it is done it automatically clicks in your head. It's like making bannock (an Aboriginal dough); you learn to make it by watching the older people and then making it by yourself.

By contrast, students in the study pointed out that the “talk approach” to much of school instruction actually inhibited classroom learning for them. In an effort to reconcile this data with the benefits of verbal instruction earlier touted by these participants during our discussion about storytelling, I asked them for clarification. Liz's comment below reflected those made by the rest of the students:

Do you remember how I said some teachers explain too much and too fast? That really confuses me. I get lost in the explanation. But Mr. X, he cuts it down to size, right to the chase, works the formula on the board which I watch step by step. I like that. . . .

It appears that while verbal instructional methods such as storytelling are an important cultural approach to learning for these students, the verbal saturation which characterize much of school instruction, especially when this instruction is fast-paced and delivered through a different language, is not conducive to academic success for some Aboriginal students.

This finding is significant because differences in approaches to learning have far-reaching consequences in the formal education of some Aboriginal students, particularly in view of the fact that the formal education system almost always favors those who are highly verbal.

Community support encourages learning. Learning through verbalization was also disparaged by the students for another reason—they felt lack of support in the integrated classroom, compared to the family and community support we observed. All but one Ojibwe participant pointed out that the teaching/learning method they found most uncomfortable was when they were called upon to make a verbal presentation in front of the class. The students revealed that they were intimidated by the direct criticism, which this method entailed in the formal (Western) school system. Jon's comment on this point is instructive:

It's like they are looking out for the mistakes you make and they pounce on you. Even the teachers sometimes make you feel dumb by the questions they ask after you have presented something. . . .

I probed further to see how learning would be different in their community and Ned said:

In the (Aboriginal) community, if you don't have the right answer you are not criticized directly and you ask for some help because you know the people that are around you, so you feel secure. Also, in the community you are doing it for the community or their approval, so everyone is supportive and pitches in to help or encourage you. In school you are doing it for your own education as an individual. . . .

These comments are consistent with our observations and informal conversations with two of the relatives of the student volunteers about parenting and social interaction in some Aboriginal cultures as entailing “non-interference” (meaning refraining from directly criticizing the individual).

For these Aboriginal students, silence seemed to be the best defense mechanism in an integrated classroom where they felt they were among white strangers whom they have been raised to believe are constantly critical of them. Chris's comment spoke to this point:

Yeah, that's why I prefer to remain silent in class. . . . It's just that I don't really know and trust people here. At home and in my community, I know and trust people, so I just blabber along without fear of making mistakes or being criticized. But when school starts, I don't talk, period, so they leave me alone . . .

The Ojibwe participant who said he was not uncomfortable with verbal classroom presentations is a clear indication that membership in a certain group does not predict behavior; it only makes certain types of behavior more probable. This shows that culture is not a unified monolithic whole, and while there may be distinctive learning patterns among cultures, variations do exist among individuals within groups.

Learning through scaffolding. When asked about the type of support they needed to learn most in social studies, the data indicated that all the students in the study required some form of scaffolding or temporary framework of support, at least until they were able to develop the skills to learn independently. Forms of scaffolding identified included: specific direction and guidance from the teacher through clear and concise explanations (Jon, Liz, Rich, Mike), concrete examples preferably from the students' own background (Jon, Ned, Andy), explicit steps to follow in the performance of a given task (all, except Ned), direct feedback from the teacher (Liz and Andy).

(Data from the classroom observations showed that the two teachers and one teacher aide in the classroom provided some of these structures to enhance Aboriginal student learning).

These four forms of support appear to have direct foundations in child-rearing practices between the two Aboriginal groups we studied where children are socialized to accomplish tasks largely through the support, direct guidance, and feedback from parents and other significant adults. Don compared this classroom support to what obtained at home:

Mrs. B., Mr. X. and, Ms. T. always go round when we are working on our own, to explain more about what we are to do. It helps a lot, just like at home. . . .

Theme 2: Effective Oral Interaction Between Teacher and Aboriginal Students Assists Learning. This theme emerged from our conversations about cultural and socioeconomic class differences in patterns of oral interactions between parents and children. In studies conducted on linguistic interactions among different cultural and socioeconomic groups researchers observed that middle-class parents tended to use discussion, playfulness, and questions when instructing their children (e.g., "Is that your coat on the floor?") whereas working-class whites and African-American parents tended to be more overtly directive (e.g., "Pick up your coat from the floor and hang it in the closet.")

Our research suggests that some Aboriginal parents also communicate with their children mainly through the use of overt directives. Two of the research participants, for example, said:

They (parents) tell me directly what they expect me to do; they do not leave it up to me to figure out what they mean . . . (Liz)

Mr. X. (the African-Canadian teacher) tells you straight what he requires from you. I like that . . . (Don)

Since teachers in Canadian classrooms are mainly white and come from middle-class backgrounds, some Aboriginal students are less likely to understand what to do if the teacher uses indirect statements. Clarity is important to school success because students are judged by what they produce in class and on tests. Such a product, based as it is on the specific codes of a dominant culture (English or French in the case of Canada), is more readily produced when the directives of how to produce it are made explicit. The study data strongly suggested that effective parents and teachers of Aboriginal students offer clarity about what they demand, and they provide structures

that help learners produce it. My conclusion here is not that Aboriginal students are incapable of learning through discussions or questions and indirect statements. Instead, I draw attention to the fact that teachers must be helped to recognize and attend to the particular strengths and needs that underserved groups may have in relation to new instructional strategies such as discussions in the classroom, while also questioning the role of schooling in the perpetuation of such linguistic inequities in society.

Theme 3: Concepts of Self. This finding refers to notions of the self, how the self is constructed and understood, and how this construction mediates the learning process in different cultures. The research revealed that, in describing their identity, the Aboriginal students in the study were not comfortable with the term “self”, with its implications of individualism, autonomy, and unity. Rather, they considered themselves as “subjects” whose identities were constructed and understood in terms of interdependence, communality, and interaction with the world around them more so than, say, Caucasian groups who tend to treat the self as a relatively self-contained agent. Because they viewed themselves less as a separate psychological unit and more as a part-function of the cultural forces from which they emerged, the students identified a cultural model of learning that is grounded in Aboriginal cultural values such as cooperation, collaboration, group effort, and group rewards. In school, these values would lend themselves well to group work and cooperative tasks and it was, therefore, not surprising that eight out of the ten research participants disclosed that they thrived better as learners in cooperative/collaborative/group work situations. However, they also pointed out that because group work and cooperative learning tasks in school were not usually organized effectively for productive work, group work had actually hindered rather than promoted learning for them. Several of them elaborated on this point, as the following quotes demonstrate:

You see, it’s different in school than in the (Aboriginal) community. In the community everybody participates equally or almost. You have a bunch of people who carry an equal share of the task and they know it is for the good of the community. So everyone does their part and you learn from each other. In school no one in the group cares, really. Group members do not share their opinions or ideas. . . . (Don)

And they make a lot of noise during group work. . . . (Liz)

Yes, and if you have someone smarter than the other people in the group, then they are going to rely on that one person for all the ideas (Mike).

So I think what we need is better group work organization from them (the teachers). I like group work because you can talk to others. You can discuss your ideas if you don’t understand something, like in the community. . . . But in class that does not happen in groups (Ned).

Our findings suggest that communal work is integral to life and each day in the Aboriginal communities we studied. Community members worked together, each taking on the responsibilities appropriate to their knowledge and abilities.

What is clear from these discussions is that attention needs to be paid to the contextual barriers that interfere with the deployment of cultural tools such as the cooperative, collaborative, and communal aspects of Aboriginal cultural socialization, which enhance student learning. Teachers do not generally seem to acknowledge group identity, insisting that all students are individuals with individual differences, thereby denying that group membership is an important part of some students.

Theme 4: Teacher’s Interpersonal Style. Under this theme are subsumed three subthemes which emerged to describe those dimensions of teacher interpersonal style that are effective in

eliciting intellectual participation from the Aboriginal students in the study. In order of importance to the study participants, these dimensions were:

Respect. All the research participants identified “respect” as the most important dimension of the educator’s (teacher, parent, or significant others) interpersonal style. Since research on cultural difference has found that different cultures may hold very different views of behaviors that express such feelings as respect, participants were asked to elaborate on what they meant by “respect” in the educator-learner interactions. For them, respect referred to the following teacher behaviors:

Not stereotyping me as the drunken, failed Indian whose image the teacher already has in mind (Ned).

Treating me like I already have something the teacher respects (Liz).

Not making me feel dumb in front of the whole class. Treat me like I know something which the teacher may not know . . . everybody knows something. . . (Don)

It is as simple as valuing and understanding me as a person. Like, just teach the way you want to be treated. . . . You know, teach with respect for us as individuals and do not treat us like all Indians are the same. (Rich).

Previous research and our own observations support the students’ assertions. Members of the two communities we observed frequently expressed positive opinions about each other and treated each other with unusual gentleness, patience, and respect (e.g., if some members of the community were late for a meeting, the others patiently waited for hours and showed no anger when the late-comers eventually arrived). Similarly, Haig-Brown et al.’s. (1997) research interviews with sixteen students of Aboriginal ancestry (Cree, Ojibwe, Metis, and Saulteaux) from Joe Duquette High School (an all Aboriginal school in western Canada), found that all the students identified “respect” as “the number one rule” for successful interactions among the teachers, staff, and students in the school. According to these researchers, respect is integral to traditional Aboriginal values. They wrote: “Respect encompasses the understanding that children are complete human beings given as gifts from the Great Spirit on loan to adults who share with them the responsibility for preparing them for life’s journey” (p. 46). The researchers also quoted what a member of the school’s Parent Council said about “respect” during an interview: “You are born as equal and you are born with respect . . . every individual has it (respect) and you don’t have to earn it” (p. 46).

Strictness. Although the practice of “non-interference” (meaning not attempting to control the behavior of others by direct intervention) has been documented as a prominent characteristic of parenting and social interaction in many Aboriginal cultures, the image of the teacher as a strict disciplinarian who corrects and guides learners toward appropriate behaviors emerged as the second most important characteristic of the teacher’s interpersonal style, suggesting that how Aboriginals practice the cultural value of non-interference could be changing according to what is valued in the dominant culture surrounding them. As the pressure to succeed in mainstream Canadian society has mounted, some Aboriginal parents appear to be abandoning the attitude of non-interference in favor of more direct interventions in the behaviors of their children to increase their chances of success in the society. With one exception (a Metis student in the study who was being raised by his Cree grandmother), participants seemed to expect their teachers to be strict, intolerant of nonsense, and act like the authority figures they are. Otherwise the message is sent that this adult has no authority and the students react accordingly. As the following quotations show, the Aboriginal students in this study firmly believed in this strict image of the teacher:

I think Mrs. B., I don't know what it is, but she should be tougher with us. After all she is the teacher, she has the authority. . . . (Jon).

I agree with Jon. She needs to be stricter to keep the class more in order. Some people call her down and treat her anyhow . . . whatever, and she just stands there. . . . (Mike).

Some of the things kids do in her class, I know I can never get away with at home. I know my boundaries and how far I can take my family, especially my dad. If I go past that boundary I know I am in trouble . . . probably get grounded for days or something, without any argument. I was surprised at first at what she (Mrs. B.) was tolerating from them. . . . (Ned).

Ned's surprise could have also come from the fact that in his Ojibwe community, we observed that elders and parents, as respected teachers, often conveyed to the young the acceptable rules of behavior and the values to be honored through subtle verbal and nonverbal communication. Such a teacher is a role model whose own behavior and attitudes are absorbed by the children.

However, as pointed out earlier, the image of the teacher as a strict individual wielding authority in the classroom did not seem to hold for one of our Metis participants, suggesting diversity in how the cultural values and traditions of Aboriginal peoples are engaged. In response to Ned's comments about behavioral boundaries he had to observe at home, this Metis student said:

Jeez, I can never live like that. My grandmother lets me do what I want. I go and come as I like, no questions asked. Sometimes, I go for two days . . . as long as I stay out of trouble. (Chris).

Chris's comment is consistent with our finding that among some Cree community members the principle of noninterference is still predominant. The child's will is respected, and adults do not interfere in the choices made by the child. The imposition of the adult's will on the child is considered inappropriate except, of course, in instances where the child may encounter harm. From our research conversations, we learned that this noninterference, nondirective approach determined a basis for a future lifestyle. Children matured rapidly and became adept at determining their own actions and making their own decisions, while being sensitive to the expectations of the collective and to elders.

The contrast between this *laissez-faire* approach and the regimentation of the classroom experience, including the exertion of the teacher's authority, constitute a discontinuity between the school and the home environment. This cultural conflict has been cited in several documents as a threat to the Aboriginal child's identity in the formal education system and a major cause of school failure.

Personal warmth. The data revealed that nine out of the ten participants in the study expected their teachers to treat them with emotional warmth and have personalized relationships with them. This finding is consistent with Haig-Brown et al.'s. (1997) report that teachers at Joe Duquette High School referred to their students as "extended families" and students referred to their teachers as "friends," "second parents," and "sensitive."

Warmth as a teacher attribute emerged during our conversation about the effectiveness of the individualized instruction, which we observed each student regularly receiving from the two teachers and one teacher aide present during each lesson. Ned's comment on this point was typical and instructive:

When she (Mrs. B.) is teaching from in front of the room, she is kind of far from you and she is usually talking to everyone, not to any of us in particular except if she is addressing a question to someone specifically. But when we are working on our own and all three of the teachers go round and help us individually, that helps a lot.

Wishing to find out more about how this personal contact/closeness, as opposed to the professional distance teachers typically maintain in the classroom, enhanced Aboriginal student learning I asked Ned to elaborate on his comment and he said:

Well, I mean, the close contact means personal attention. When they (teachers) come close to you, sometimes they bend down to your seat level and you tell them your specific problem and they explain and help you. When you get the point right, sometimes they pat you on the back. They are also more friendly one on one. . . .

Individualized instruction has been found to have a positive effect on student academic achievement in general. For these Aboriginal students in particular, individualized instruction appears to carry added benefit because of its significance in communicating the warmth which they perceived as important in interactions between them and their teachers. Joe expressed this feeling best in his closing comment on this aspect of our conversation:

When they (the teachers) are that close and personal you get the feeling they care. . . .

These data do not suggest that all “respectful,” “strict,” and “warm” teachers are good teachers of Aboriginal students. They do, however, suggest that there are different notions among different cultural groups about which characteristics make for a good teacher. It is, therefore, impossible to create a model of the good teacher without taking issues of cultural and community contexts into account.

CONCLUDING REMARKS

This was a small-scale exploratory research, undertaken to identify aspects of Aboriginal cultural socialization which mediate/influence the learning of some students of Aboriginal ancestry in the Canadian formal school system. Four examples of such cultural mediators have been identified as significant in providing place-conscious education for two groups of Aboriginal students. Research is still inconclusive about many claims relating to specific or predominant cultural practices and classroom learning, highlighting the difficulty in arriving at any final “formula” for helping a cultural group perform better in an educational setting. However, taken together, these examples signal a vibrant counterpoint to the dominant system of education, which fails to connect meaningfully to the lives of learners and the communities from which they come. The examples are, therefore, suggestive of a badly needed conversation about the relationship between the places we call schools and the places where students live their lives.

The last two decades have seen profound changes in educational psychology that have placed psychosocial and cultural processes squarely at the center of learning and development. We are witnessing a resolution of the antimony traditionally heard in discussions about the primacy of individual psychogenesis versus sociogenesis of mind, in favor of the recognition that learning and development arise through the interweaving of individual biopsychological processes and the appropriation of cultural heritage. This new view adds a political dimension to the conversation as it moves cognitive and educational study from the individual level which hides the effects of race, socioeconomic status, and culture, to the level where learning and development are understood within cultural and larger sociopolitical contexts and their effects. The new position calls for research into what different groups bring to processes of learning and development and how this interfaces with the culture and practices of the school. In this paper, I have provided an example of such research, and argued that the design of any study intended to inquire into how cultural processes mediate and influence learning and development must focus on understanding

individuals' or groups' histories of participation in activities in their cultural communities instead of simply attributing general traits of individuals categorically to ethnic group membership.

TERMS FOR READERS

Individual psychogenesis—The view that learning and development are individual mental functions that originate in the mind, unaffected and unmediated by the outside world.

Sociogenesis—The view that the development of mental functions are influenced and mediated by factors such as social interactions, and the contexts and environments surrounding the individual.

REFERENCES

- Cole, M., and Wertsch, J. V. (2001). *Beyond Individual-Social Antimony in Discussions About Piaget and Vygotsky*. Retrieved November 22, 2003, from <http://www.massey.ac.nz/~alock/virtual/colevyg.htm>.
- Dewey, J. (1938/1963). *Experience and Education*. New York: Macmillan.
- Gutierrez, K. D., and Rogoff, B. (2003). Cultural ways of learning: Individual traits or repertoires of practice. *Educational Researcher*, 32(5), 19–25.
- Haig-Brown, C., Hodgson-Smith, K. L., Regnier, R., and Archibald, J. (1997). *Making the Spirit Dance within: Joe Duquette High School and an Aboriginal Community*. Toronto, ON: James Lorimer.
- Vygotsky, L. S. (1981). The genesis of higher mental functions. In J. V. Wertsch (Ed.), *The Concept of Activity in Soviet Psychology*, pp. 144–188. Armonk, NY: Sharpe.

CHAPTER 49

Endorsing an Angel: Peggy Claude-Pierre, the Media and Psychology

MICHELLE STACK

From 1993 to 2002, there were at least five different talk shows on which Claude-Pierre was a guest, approximately 300 newspaper articles¹ about her and Montreux, six programs that aired television feature pieces, and six women's magazines that published pieces on Claude-Pierre and Montreux, as well as articles in *USA Today*, *Maclean's*, and *People Magazine*. In addition, there was media coverage in Germany and Australia on patients from those countries admitted to Montreux.²

Two investigations into allegations against Claude-Pierre and her Montreux clinic have been conducted. The second investigation concluded that patients had been exposed to substantial health and safety risks because of Montreux's treatment. Allegations included force-feeding, forcible confinement, verbal abuse, improper nutrition, lack of basic first aid know-how, and absence of suicide prevention knowledge among staff. In December 1999, the Health officer for the Capital Health Region in Victoria, British Columbia revoked Montreux's license to operate. Montreux fought the decision but in 2002 agreed to hand in its license to operate a residential treatment facility. It continues to offer outpatient services and training for therapists.³

MONTREUX IN CONTEXT

In 1983, singer/songwriter Karen Carpenter died of cardiac arrest after years of self-starvation. Also in 1983, Jane Fonda revealed that she was bulimic (Brumberg, 1989). In the same year, eating disorders, particularly anorexia nervosa, became a matter of great public interest. The media expressed a growing concern over this new epidemic affecting mainly young, intelligent, middle- to upper-class girls (Gordon, 2000). Simultaneous with media interest, medical interest in eating disorders intensified (Gordon, 2000).

A year after Carpenter's death, doctors told Peggy Claude-Pierre that her fifteen-year-old daughter had anorexia. Nine months later, her younger daughter, Nicole, was diagnosed with the same illness. In her book, *The Secret Language of Eating Disorders* Claude-Pierre states, "I made myself the platform for Nicole's survival. Anything else I may have needed—including finishing my doctorate, which I wanted to do so desperately—I had to put aside." Claude-Pierre did not,

nor does she now, have a doctorate but was working on her bachelor's degree in psychology; however, this information persists through much of the media coverage.⁴

Claude-Pierre opened an outpatient counseling practice in 1988. It was not until 1993, however, that with media attention, Claude-Pierre began a rapid ascent from a locally known therapist to an internationally sought after "expert" in the treatment of people with eating disorders, mostly teens and those in their early twenties.

MEDIA ATTENTION

In February 1993, reportedly at the behest of Claude-Pierre's patients, she received her first media coverage in a local women's magazine, *Focus on Women*. Kerry Slavens, the author, states, "As for Peggy, she's casually dressed in jeans and a shirt. There's no white coats here; no psychobabble or force-feeding, just friendly talk and subtle encouragement." In this same article and a subsequent one a month later, *Focus on Women* decried the death of services and highlighted the relief women felt once they began receiving treatment from Claude-Pierre. Similar to other journalists I interviewed, Slavens relies on being an eyewitness to understand the truth of what she saw.⁵ The "before" and "after" pictures of Montreux patients provide visual testimony on which virtually all media coverage about Montreux focused. Some media provided word-pictures of emaciated patients; nonetheless, the need to "show" photographs or footage of the miracles is essential to being a journalist, that is, a legitimate eyewitness. This *Focus on Women* piece, and every piece thereafter, detailed Claude-Pierre's experience in helping her two daughters overcome anorexia, and how she had used her background in psychology to do so.

A month later, Claude-Pierre received province-wide attention in a tabloid newspaper, *The Vancouver Province*. Wendy McLellan⁶ the health reporter at the time for the *Vancouver Province*, explained to me that she spent fifteen hours with Montreux's founder, which resulted in a two-page feature on Claude-Pierre. McLellan too believes that it made "common sense" that Claude-Pierre's method would be more effective than the methods traditionally employed by the medical system. McLellan appears to be challenging the establishment. She believes Claude-Pierre's patients were those who had been failed by the traditional system, but who were able and willing to pay the US\$1,000 a day.

McLellan's report was picked up on a wire service by the staff of the *Maury Povich Show* and thereafter began its rapid ascent to the interconnected American talk show circuit, news programming, print, radio, and publishing industries. Ten months after McLellan's feature, Peggy Claude-Pierre appeared as a guest on *The Maury Povich Show*, an American talk show alongside a mother who had lost one of her twin daughters to an eating disorder. It was Povich who connected Claude-Pierre with a patient from the United Kingdom, Samantha Kendall, who had been featured on one of his prior episodes. Kendall thereby became Claude-Pierre's first patient outside of North America, providing her with international media attention. In July 1994, Montreux was turned down for B.C. government funding due to a lack of professional staff, as well as issues around a lack of confidentiality and the health and safety of clients. This rejection was not widely reported by the local media nor mentioned by any of the American media soon to arrive at the clinic.

THE MIRACLE SPREADS

A mother who was considering sending her anorexic daughter to Montreux asked Alan Goldberg, a friend and producer for ABC's *20/20*, to investigate the truth of Claude-Pierre's claims (Personal communication, August 3, 1999). I spoke with Goldberg a number of times, first in 1999 after allegations had been leveled at Montreux and a hearing process had begun to determine whether its license should be revoked. We talked again in 2001, more than a year after the license

had been revoked. Despite these events Goldberg maintained a commitment to what he regarded as the truth of Montreux and dismissed those who disagreed with him as jealous or as disgruntled employees. He knew he had witnessed something out of the ordinary and that it made a powerful human-interest story. In our first interview, Goldberg provides the **framing** for the Montreux story:

I'm trained to be skeptical. On the first day I was blown away. Granted, all anecdotal. There was no scientific analysis or studies. I think you know that in Canada it is a socialized medicine system. They like to think that medicine is untainted by politics—baloney—especially in socialized medical systems. Montreux contends that doctors are jealous. Montreux has saved the lives of patients they were less successful with (Personal communication, August 3, 1999).

For Goldberg, psychological and medical care is clearly based on the ability to pay, and hence universal health care systems that do not treat it as such are suspect. Goldberg became further convinced that he was watching a woman who was selfless in her devotion to patients in a way not present in institutions:

Her level of compassion for kids, devotion to her own daughters and then the stray puppies that ended up at Montreux is remarkable. It was that it is a mom and pop operation that I found endearing. It is not affiliated with any major hospitals or universities. They bought a house and for a long time lived in debt to fix kids. It is a sacrifice to do that. A saint is willing to give up many things to help others. This is true with Peggy (Personal communication, August 3, 1999).

We now have someone who fits the American Dream—an enterprising person who provides care as a charity to the desperate. Goldberg convinced *20/20* management to devote an entire hour to Montreux, something rarely done at the time (Personal communication, August 3, 1999). It was the airing of this program that created a massive demand for the clinic's services. In less than two years from opening, Montreux thereby became known to over twenty million viewers of *20/20* as a place of "last resort" and of "salvation" for the most ill of anorexics (*20/20* Transcripts, December 2, 1994). The program used a great amount of before and after footage with emotional testimonials from young patients who stated they would be dead without Montreux and Peggy Claude-Pierre. The program concluded with ABC correspondent Lynn Sherr telling Barbara Walters that *20/20* had spoken with a number of families and patients, finding "no evidence of failure whatsoever" (*20/20* Transcripts, December 2, 1994: pp. 14). The only word of caution came from a medical doctor, Timothy Johnson. Hugh Downs asked Johnson if experts are embracing Claude-Pierre's approach:

Dr. Timothy Johnson, ABC News Medical Editor: Well, the first question, I would say no. I think the real experts in this field are very humble about how little they know and how much they don't know, and they try to incorporate many different approaches in their treatment. As to her work, I think they would applaud it. They would be amazed at the commitment and the dedication she brings to it. I think they would be very envious of her resources, having five staff people per patient and being able to have them in a place like that for nine to twelve months.

Barbara Walters did not ask Johnson to elaborate. For example, what did he mean when he said the "real experts" are humble? Was he implying Claude-Pierre does not know what she is doing? Did Johnson talk to anyone who treated people with eating disorders? Why did they choose not to feature someone on the program that might have a different opinion than Claude-Pierre? Instead of exploring this, Walters simply asked Sherr to talk more about the type of children and adults who become anorexic. Sherr at this point made use of Johnson's statements not only to provide

legitimacy to Claude-Pierre's miracles but also to demonstrate the superiority of Claude-Pierre, given that she is also a mother.

Well, don't forget Peggy Claude-Pierre was a parent when she figured this all out. She was studying psychology, but she was a parent. She learned it on her own and she kind of stumbled into this intensity, the thing that *Time* was talking about that the other physicians are applauding. So could a person do it at home? Probably not. She's writing a textbook. She hopes to get the word out. Maybe other clinics will open up so that other doctors, other hospitals will use some of the same techniques (20/20 Transcripts, December 2, 1994).

20/20 won a number of awards for its representation of Montreux and anorexia, including the Peabody. The Peabody was the most prestigious honor but, Goldberg explained to me that his office wall was full of other certificates and prizes including: the British Medical Association film and video competition; the Santa Clara County Psychological Association award for a significant contribution to the field of psychology by the media; and the Gabriel for inspiring stories about compassion by Catholic Broadcasters (Personal communication, July 10, 2001).

A representative of British Medical Association later explained to me (Personal email communication, December 5, 2001) that the award provided to 20/20 is no longer in existence, and that 20/20 had received the "lowest" category of their four awards. In any event, Goldberg was proud of these awards and other accolades received. For example, he told me of how King Juan Carlos of Spain upon seeing 20/20 wished to set-up a similar program in that country. Furthermore, he noted that Hilary Clinton conveyed to Sherr that she thought the 20/20 program was excellent (Personal communication, July 10, 2001). These accolades had further fortified the view in Goldberg's mind that his program "got it right." Those like Michael Strober, a well-known psychologist and director of the University of California (UCLA), Los Angeles Eating Disorder program, who complained about 20/20's positive coverage of Montreux were basing their complaints in jealousy, not on the "truth."

THE DOMINO EFFECT: MEDIA AFTER 20/20

The 20/20 broadcast precipitated a domino effect precipitating further media and professional attention from Australia, Britain, Canada, and the United States. Perhaps the most significant media coverage following the 20/20 program was Claude-Pierre's appearance on the *Oprah Winfrey Show* in 1996, and again in 1997. Prior to being on *Oprah*, Claude-Pierre spoke about anorexia as merely a symptom of what she called Confirmed Negativity Condition (CNC). Oprah provided a large audience to further promote this theory, with the visual illustration of the aforementioned three-year-old boy, Doug, who appeared on the show as one of Claude-Pierre's patients.

Oprah perpetuated the pre-1997 media-created dichotomy—Claude-Pierre the compassionate saviour versus the heartless and ineffective doctors and psychologists. Oprah emotionally shared: "Well, I think that what you [Claude-Pierre] do—I'm going to not cry-but I think that what you do is really like an angel on earth, you know?" (*Oprah Winfrey Show* Transcripts; p. 27) She used the language of medicine by talking about "cases" and "the prescription," but like Goldberg she expressed her frustration that doctors didn't unconditionally love people back to health.

CLAUDE-PIERRE'S BOOK AND 20/20'S ESTABLISHED TRUTH

The subsequent release of Claude-Pierre's book, *The Secret Language of Eating Disorders*, created two streams of coverage: the continued positive coverage that cited the book as evidence of the miracle cure, and pieces by reporters who were covering the story for the first time and

questioned the validity of the cure. To be sure, academics were also critical of Claude-Pierre prior to her book launch. From 1993 to the latter part of 1997, however, their voices were concentrated in professional discussions and journals rather than in the popular media. More prominent in the media were endorsements from professionals and patients who extolled the power of Claude-Pierre. Many of these endorsements, including two on the back of Claude-Pierre's book were from medical doctors, each had a daughter who was being treated at Montreux. Neither doctor/father has a background in eating disorders, but instead their testimonials highlight the emotional tension and relief of a parent who has found a miracle cure for his dying daughter, and a doctor who knows it is real.

In 1997, Claude-Pierre was invited to a Women's Health conference at the University of Connecticut and a press release explained her "proven" approach:

STORRS, Conn.—Eating disorders expert Peggy Claude-Pierre, who has been profiled on, *20/20* and *Oprah* and is the author of the new book *The Secret Language of Eating Disorders*, will be the keynote speaker at the University of Connecticut's seventh Women's Health Update Conference. She began counseling in 1983 when both her daughters, Kristen and Nicole, were gripped by anorexia. Claude-Pierre could not find physicians who could adequately treat her girls and decided to take matters into her own hands. Her success led to her working with other patients afflicted with eating disorders. She established an outpatient practice in 1988 and a clinic in 1993. The clinic has a treatment success rate of more than 90 percent (University of Connecticut, 1997).

This press release is of interest on a number of counts. First, the reference to *20/20* and *Oprah* served as an imprimatur, and second, Claude-Pierre's success was assumed and the treatment success of 90 percent was claimed without a qualifier as to where this information had been obtained and how it was established. The university assumes that 90 percent is the "truth." Given that there had been neither outcome studies nor independent assessments, one can only assume that this information must have come to the university via the release that Random House had put out with Claude-Pierre's book. Presumably, that release contained what Claude-Pierre told her publisher and other media about her work.

By October 1997, articles had started to be published questioning Claude-Pierre's success rates, as well there were critical discussions concerning her methods among professionals belonging to the Academy of Eating Disorders. Yet Brigham Young University (BYU) hosted a conference on obesity and eating disorders at which Claude-Pierre was an invited plenary speaker. The BYU press release (Larson, October 7, 1997) referred to Claude-Pierre's 99 percent success rate and asserted that she had been so successful that doctors from around the world were seeking her assistance. The press release, like that from the University of Connecticut, referred to Claude-Pierre's appearances on *Oprah* and *20/20*.

Coverage about Claude-Pierre and Montreux also appeared in *The American Psychological Association Monitor*, widely available on the Internet. In the article, titled: Innovative Anorexia Clinic Offers Remarkable Success (Clay, March 1997), Clay writes:

Although Claude-Pierre never returned to her academic studies, the lessons she learned from her daughters' struggles became the basis of her life's work. Her staff of 15 specially trained care-workers including her daughters and a former patient who weighed just 49 pounds. In these comfortable surroundings, patients undergo a medically supervised, five-step process designed to parallel human development (March 1997).

In this sample excerpt, the language of psychology is used to make credible the process of recovery "five-steps . . . designed to parallel human development." The article does go on to say some are skeptical: "I'm open to the possibility that programs like Claude-Pierre's work, but

her approach hasn't been proven,' said Kelly D. Browell, PhD, a psychology professor at Yale University." However, the article concludes on a note that appears to question why anyone would be so trivial as to question Claude-Pierre: "When my children got better, I never wanted to see an anorexic again," Claude-Pierre was quoted as declaring. "Then I wanted to stop once I'd cured the cases in front of me. I hoped the line-up would stop. It didn't." The numbers of care-workers and patients change from story to story, even when the number is provided for the same period.

An American psychologist, whom I interviewed, Dr. D (pseudonym) spoke of how she had cried while watching *20/20*. She had treated patients with eating disorders for over twenty years and written numerous books and journal articles about treatment approaches. Watching *20/20*, she thought that finally help was available for those who did not seem to receive what they needed from traditional care. Dr. D met Claude-Pierre at an academic conference. Dr. D was immediately struck by the dissonance between the visual power of *20/20*'s presentation of Claude-Pierre versus what seemed to be more of a religious aura to the Montreux founder when she met her face-to-face. Patients in the audience gave emotional testimonials and Claude-Pierre's presentation appeared to be more based on this incandescent quality rather than on delivering the kind of low-key speech usually expected at an academic conference. Dr. D chided herself, however, for being so cynical about a woman who appeared so selfless, a woman who *20/20* had stated had achieved remarkable success and who was not doing her work for money but out of compassion.

Reportedly, it was the images from the *20/20* documentary that stuck with Dr. D until she was confronted with the cognitive dissonance between this imagery and information that was provided by a producer at NBC's *Dateline*. That producer's allegations against Claude-Pierre convinced Dr. D that Claude-Pierre had lied about her credentials, treatment of patients, and a number of other issues. Dr. D was distraught, she had seen Claude-Pierre as "her guru" brought to her by *20/20*, a program she was confident was a reputable newsmagazine and therefore "must have done their research." (Personal communication, December 1, 2000).

Despite the research examining the different paradigm under which journalists determine the legitimacy of research, certain professionals I spoke with indicated that their early support for Montreux was based on their being confident, as was Dr. D that "a reputable program like *20/20* would do their homework." Goldberg maintains that *20/20* did "do their homework": they saw patients get better, they talked to Claude-Pierre, and they witnessed "miracles."

HOW DID MEDIA DETERMINE THAT MONTREUX WAS REMARKABLE?

A theme of importance for professionals and academics is the difference in journalistic versus academic evaluative discourse. McLellan, the reporter for the *Vancouver Province*, determined that a doctor she spoke with who specialized in the treatment of people with eating disorders was not critical of Montreux: "If he had said to me, 'Oh my god, you know this person is totally insane and is risking the futures of these kids,' that would have been a whole different wake-up call." Inasmuch as this doctor did not say, "This woman's insane," McLellan reasoned that Montreux was having success where others had failed.

McLellan is confident that her information is a responsible portrayal of what Claude-Pierre was doing: "It is a feature on a woman that was doing something new." For this study, thinking it would be helpful to know more about how McLellan came to her knowledge, I asked if she had read Claude-Pierre's book or other books about eating disorders and documents concerning Montreux. McLellan responded:

I never read it. If I had to read a book on every subject I wrote about, I'd be insane. I did a huge four-page story on genetically altered foods. I read two books to write that story. I don't know, if you read it you'd probably think I was positive about organic or something. [It] depends what's going on in your own head. You try and

be objective, but again we don't know anything about genetically altered foods (Personal communication, November 10, 2000).

The reader will note frequent use of the pronoun "we." A common-sense understanding is that if the reporter did not know about an issue, then "we" as a society also did not know and the know-nothings include those people who may have a great deal of understanding and experience but since they are not part of the "we as reporters" group, are therefore irrelevant. Knowledge is again something based on one's "nose for news" or "professional" ability to smell, hear, and see the truth. Knowledge is not that which comes from critical reviews of relevant literature, debate, or grappling with uncertainty, but from one's direct experience in and of the world.

From my interviews, it became clear that pre-1997 reporters had read nothing to very little about eating disorders beyond their peers' accounts of the illnesses, yet they were confident that they were helping build knowledge and therefore were providing a public education function. When asked if there was enough evidence to write a piece about Montreux and its success, McLellan, who sees herself as building knowledge, expressed her opinion of the absurdity in waiting to tell what you know. "You could say that about any story—pollution—not enough evidence. You have to wait for the final results to see if separation is really good for Quebec. I think that there may have been positive stories written about her [Claude-Pierre] because she was doing something new and there was no success in hospitals either." Again, McLellan, the health-reporter, is confident in explaining the absence of "no" success in hospitals and is thus setting up Montreux as an alternative in which common sense dictated that recovery would prevail.

In 1999, ABC's Goldberg explained to me that "If you press Peggy on the 100% she will back off on it. Her success rate is probably closer to 80% or 90%." From his armchair research, however, Goldberg understood the failure rate in other facilities to be over 75%; thus his sense that the success rate at Montreux was 80% to 90% was extremely newsworthy. While in an interview in 2001, Goldberg seemed more cautious about providing a success rate but, he still was comfortable in relying on his senses to maintain his belief that Montreux, at least when he "discovered" it, had a "magic to it." He was further convinced of Claude-Pierre's success, given that she told him that no client had died at her facility. This seemed remarkable to Goldberg who had read that the mortality rate for people with anorexia was high. He was not aware that studies around mortality demonstrate that deaths generally did not occur in hospital or treatment centers where an anorexic was monitored, but rather when patients were out of hospital and at risk for complications caused by prolonged starvation or suicide (Crisp et al., 1992).

Two of the women that *20/20* focused on as success stories have since died. After the death of Samantha Kendall, Goldberg stated she had left before treatment was completed and therefore could not be considered a Montreux failure because she had refused to finish the program. The second death was that of Donna Brooks. Goldberg believed that Montreux had in fact helped her. Seeing himself as witnessing Brook's improvement, Goldberg focused on this past improvement rather than on the reality that she had died, weighing as little at death as she did before arriving at Montreux (Personal communication, July 10, 2001).

Research, available at the time when *20/20* and other media were preparing stories about Montreux, strongly indicated that a person could not be considered to be "recovered" while still in a residential program, given it was an unnatural setting (Garfinkel, 1986). Goldberg, though, saw "recovery" and provided the visual proof of this to viewers. His interpretive framework did not enable him to see discrepant facts in his miracle cure framework. He later found out that a third patient portrayed on *20/20* required intensive care after leaving Montreux, but he stated that Montreux still had helped her, articulating his "knowledge" that maybe there are some who just can't be helped. A lack of definitive information was taken by McLellan and Goldberg as either implicit support or at the least not explicit opposition.

Like Goldberg, Slavens and her editor at the time, Leslie Campbell, state that their support for Claude-Pierre was partly due to Montreux's juxtaposition to a medical system perceived as arrogant and resistant to sharing information about medicine's inability to help people with little-understood illnesses. These journalists believed that Claude-Pierre had found something "new" to help those with anorexia. All believed that they had been diligent in collecting extensive data to demonstrate the truth of their story—Claude-Pierre was a revolutionary who could cure even those in the most dire circumstances. When I asked McLellan about the criticism that Claude-Pierre's theories were not new but developed in the 1960s by Hilde Bruch⁷, she responded, "Interesting. Never by themselves. Interesting, it just happened she was the vortex . . . because everything was changing at that point." Again that which exists is that which reporters know rather than what may actually exist. For her part, McLellan shifted the focus, explaining that her piece was about building knowledge and about Claude-Pierre, not about treatment for people with eating disorders.

It was about Peggy Claude-Pierre and what she was doing. And I've written many stories since about what we don't have here that is available in other jurisdictions. Knowledge grows. [It's] like anything, when you are the one to write about it first. Start off—become more knowledgeable. You can't know everything at the beginning. Grow—knowledge builds (Personal communication, November 10, 2001).

Again the focus is on merely transferring that which one hears or sees as "fact"; the journalist's responsibility is to ensure that the source of the information is reliable and to provide information in a manner that is easy for the journalists to understand. Klaidman (1990) argues that often investigative journalists collect "exquisite detail" to support a "strongly held hypothesis." A problem arises when journalists consciously or subconsciously reject information. For example, two reporters from *The Washington Post* with no background in science or medicine determined that a National Cancer Institute Phase Drug trial was killing hundreds of patients. They did not seem to understand that most of the patients were already terminally ill, and therefore, their deaths were not necessarily due to the drug, but that the drug had not created the hoped-for cure.

CONCLUSION

20/20, *Oprah*, *Cosmopolitan Magazine*, *The Maury Povich Show*, *The Montel William Show*, as well as numerous newspapers, magazines, and radio programs did not revisit their positive portrayals of Montreux, even after two investigations, patient deaths, and evidence from Montreux's own case files of serious abuse and neglect of patients. However, it is not only the media that is guilty of withholding information that does not fit into the desired construct. Some psychologists and academics continued to promote Claude-Pierre without reference to evidence contrary to that gleaned through media and Claude-Pierre. For example, The Southern State University of Connecticut offered a one-day workshop in 2001 taught by Claude-Pierre; the promotion for the workshop states, "In spite of its outstanding success rate, the treatment methodology has not been endorsed by the mainstream medical profession and her clinic license was revoked." There is no reference in this promotion to patients who have died, to the nature of the allegations by not only the medical establishment but also by careworkers who came to work at Montreux because of their interests in alternative care. Also overlooked in the university's promotion of Claude-Pierre was a patient who stated she was drugged and shown on television despite her wishes, or another patient who states she was taken off a diet designed by a doctor because Claude-Pierre said it would make her fat. How the university has ascertained the success rate is unknown given there has never been an outcome study done to determine recovery amongst Montreux's patients.⁸

The fact that the critics who went to the media to criticize Montreux and Claude-Pierre were all white middle-aged males speaking about an illness in which 90 percent of those that suffer are female may have impacted on how journalists received their critique. Ironically, Claude-Pierre's model is represented as alternative to the coldness of the male *medical model*, yet in some ways more patriarchal than the majority of hospital programs that give cursory mention of gender. Claude-Pierre ascertains eating disorders have nothing to do with society or gender, but that they are symptomatic of a condition that children are born with, a condition that strikes the upper classes more frequently than the poor. It is this focus on the pathological individual rather than society that was attractive to the media and perhaps the professionals that became ardent supporters of Claude-Pierre.

Media coverage about Montreux points to the dominance of a cultural pedagogy in which the media defines the nature of a psychological pathology and the preferred cure. It is a pedagogy that is connected to the willingness of mental health professionals playing giving legitimacy to this role. A critical educational psychology must disrupt the dominant cultural pedagogy that represents children as problems who can be cured with a quality psychological product.

Media coverage about Montreux does raise issues not only of research literacy but also of media illiteracy on the part of both journalists who believed what other journalists reported as TRUTH, as well as professionals who saw journalistic research as a process similar to that applied in academic and applied research environments. Professionals were an integral part of solidifying the legitimization process by providing testimonials as to the effectiveness of Montreux, testimonials which were often based on media advertising Claude-Pierre's seemingly remarkable success with even the most ill.

Mental health professionals supporting or becoming psychological gurus through media attention is not new;⁹ nor is their ability to influence professionals, families and ultimately the lives of children and youth deemed by their caregivers to require specialized services. To criticize the media for how they came to believe in Montreux is not to say that credentialed psychology has a great piece of the truth pie. It too silences diverse voices, and with growing corporate involvement in psychology and psychiatry, the issue of independent exploration may also become problematic as it has for journalists who do wish to be critical of the media conglomerate for which they work. It is to say that mental health professionals need to take the role of media seriously not only in its ability to persuade young people, but also in its power to influence the thinking and decisions the people charged with determining what is best for them.

NOTES

1. I attended the twenty-six day licensing hearing, visited the Montreux clinic, conducted a qualitative content analysis of over 300 media pieces, licensing transcripts and 1300 pages of court documents concerning Montreux, and conducted twenty-nine semi-structured interviews with the founder of Montreux and its staff, mental and medical professionals, and journalists.

2. Nexus, as well as the Canadian Database, CBCA were used to locate articles. In addition, media materials were provided by interview participants.

3. Pseudonyms are used for mental health professionals and ex-staff and managers at Montreux. Ethics approval was sought and received from the University of Toronto to use the real names for the founders of the clinic, Peggy Claude-Pierre and David Harris, as well as, the name of the Medical Health Officer and members of the media. These individuals agreed to have their names used.

4. 20/20 stated Claude-Pierre was "working on her doctorate." The *Maury Povich Show* referred to her as Dr. Claude-Pierre. A number of other media outlets, following these established "facts" also referred to her as doctor, or as working on her doctorate.

5. I interviewed Kerry Slavens on November 15, 2000. All quotes are based on transcripts from this interview.

6. Quotes from McClellan are from the transcripts of an interview I conducted with her on November 10, 2000.
7. Hilde Bruch was considered to be in the forefront of developing latter twentieth Century theories of and treatments for anorexia.
8. I did email the person in charge of the program and leave a phone message, but did not receive a reply.
9. Sutton (1996) and Pollak (1997) found that Bruno Bettelheim, for example, started off having weekly dialogues with mothers, but soon was quoted in the academic literature, media, and women's magazines speaking on everything from Autism to protesters of the Vietnam War having an Oedipal Complex.

REFERENCES

- Brumberg, J. J. (1998). *The Body Project: An Intimate History of American Girls*. New York: Vintage Books.
- Clay, R. (1997). *Innovative anorexia clinic offers remarkable success*. APA Monitor March.
- Crisp, A. H., J. S. Callender, et al. (1992). Long-term mortality in anorexia nervosa: A 20 year follow-up of the St. George's and Aberdeen cohorts. *British Journal of Psychiatry* 159: 325-333.
- Gordon, R. A. (2000). *Eating Disorders: Anatomy of a Social Epidemic*. Oxford: Blackwell Publishers Ltd.
- Klaidman, S. (1990). Roles and responsibilities of journalists. In Atkin and B. Atkin (Eds.), *Mass Communication and Public Health: Communicating Health Information*. Thousand Oaks, CA: Sage Publications.
- Larson, T. (1997). *BYU hosts conference on obesity and eating disorders*. The Daily Universe. Provo.
- Sutton, N. (1996). *Bettelheim: A life and legacy*. New York, Basic Books.

CHAPTER 50

The Buddha View: ReVIEWing Educational Psychology's Practices and Perspectives

PATRICIA A. WHANG

Tracing the growth and development of the field of educational psychology unearths its largely Eurocentric and patriarchal roots. Consider, for example, the table of contents of a recent book, *Educational Psychology: A Century of Contributions* (2003). Fifteen of the nineteen chapters of this book are profiles of individuals who have made seminal contributions to the field. More specifically, thirteen of the chapters document the achievements of Caucasian men, all of whom are American except for Binet, who was French; Vygotsky, who was Russian; and Piaget, who was Swiss. Maria Montessori and Ann Brown are the only two women profiled and they were Italian and British, respectively. Calling attention to the token representation of women, the absence of people of color, and the invisibility of educational psychologists of non-European or American descent in this book is not meant to diminish the accomplishments of the individuals profiled. Rather, the point is to contextualize the importance of questioning how the contributions made by educational psychologists have been constrained by the largely male and Euro-American perspectives, values, and traditions held by influential members of the field.

This question resonates with me because I am an educational psychologist who is intentionally positioned on the margins of the field. That is, as an Asian American woman holding a Psychological Foundations position in a teacher education department, I have struggled to commit my time and energy to the traditional pursuits of educational psychologists, as reflected, for example, in the types of articles that get published in the field's most prestigious journals. This has not always been the case. As a graduate student I received my doctoral degree in educational psychology from UC Berkeley and was a student of Arthur Jensen, the prolific and controversial researcher of intelligence. I was well prepared to continue deploying the experimental methods, quantitative statistical tools, and theoretical perspectives that I had acquired in graduate school and I did so for a few years. Despite my growing involvement in the field, I felt a gnawing dissatisfaction with my intellectual pursuits and yearned to commit my time and energy to endeavors that I was passionate about and that held personal meaning. For example, as a person of color I see the need to contribute to a more just, dignified, and sustainable world. My scholarly efforts to make such a contribution ultimately necessitated trespassing the traditional boundaries of educational psychology and exploring what other disciplines had to offer in terms of purposes, methods, and theoretical perspectives.

It is important to point out that others have questioned the impact and import of the work of educational psychologists. Earlier, Jackson (1969, 1981) offered an unsettling commentary that seems to have fallen on deaf ears. Unfortunately his points carry no less potency today than they did in years past. In his quest to engage educational psychologists in an honest appraisal of what they have to offer teachers, Jackson (1969) urged an imagining of “what would happen if all of the knowledge in our field were suddenly eliminated from minds and books. . . . How far back toward caveman status would such a catastrophe put us?” (p. 70). Even with the advantage of more than thirty years to add to the stock of offerings, total elimination of the contributions made by educational psychologists would probably not substantially change the teaching and learning that takes place in schools. Jackson also encouraged educational psychologists to imagine standing before an audience of teachers reading the table of contents of its most prestigious journals, as evidence of disciplinary preoccupations and of the ways they are laboring to benefit schools and schooling. He feared that these earnest efforts would be drowned out by the laughter of those they are meant to serve. Moreover, a quick perusal of recent issues of the disciplinary journals affords evidence of the continued concern and debate over the direction, focus, and relevance of the field. I resurrect Jackson’s provocations and draw attention to current disciplinary concerns to reinforce the point that the work of educational psychologists might profit from a broadening of its sources of influence.

LOOKING BACKWARD BEFORE CHARTING A FORWARD COURSE

ReVIEWing the historical context that situated the emergence of educational psychology as a discipline provides a basis for critically considering how historical conditions have influenced the gestation and subsequent development of the field. More specifically, the efficiency reform movement and the drastic improvements in the quality of life resulting from scientific and technological advances will be used as a means of understanding why certain positions and perspectives have been fortified to such a great extent. Also, this history will be used to foreground what has been omitted and committed as a result of the developmental directions the discipline has followed. Then, Buddhist teachings will be used to demonstrate how unexplored and untapped perspectives offer a beneficial broadening or grounds for reconsideration of current disciplinary perspectives, practices, and values. It is important to point out that in forwarding a consideration of the potential influences afforded by Buddhist teachings, I am not advocating a religious or faith-based solution. Profiting from Buddhist teachings requires neither belief in or reverence for a supernatural power or being nor blind faith in a system of beliefs, values, or practices. Rather, Buddhist teachers advocate approaching teachings with open-minded skepticism and a willingness to test the teachings with respect to how they impact the quality of one’s life.

My choice of Buddhism as a perspective from which to reVIEW aspects of educational psychology is purely incidental. In fact, I am not advocating a consideration of Buddhist teachings from the position of someone raised as a Buddhist or trained as a Buddhist scholar. In fact, my introduction to Buddhist teachings occurred by happenstance. On a whim, I happened to purchase the book *An Open Heart* by the Dalai Lama and was immediately struck by the ways in which his teachings were consistent with theoretical positions that stress the need for developing vigilant awareness, critical questioning, open-minded reflection, and ethical action. Perhaps what has resonated with me the most is that Buddhism has offered me a basis for thinking about, engaging in, and evaluating my professional activities from a more holistic and coherent manner that is ultimately about working toward freeing oneself, and eventually others, from those habits, perspectives, and actions that result in suffering. Briefly, a central tenant of Buddhism is that all sentient beings have in common the desire to minimize suffering and maximize happiness. More specifically, the teachings help us understand the causes of suffering, the possibility of ceasing that

suffering, and the path or means of achieving less suffering and more happiness. In short, I have found that Buddhist teachings expand how I think and do my work as an educational psychologist. I offer the following in hopes of intriguing others to consider the power and potential in a more widely influenced educational psychology.

Making Efficient Disciplinary Progress

In the United States, the field of educational psychology was begot during a time of great ferment and change. The largely agrarian society was giving way to industrialism. That is, labor evolved from nineteenth-century craft guilds, where master craftsmen taught apprentices the total production process, to large factories, where labor was required to perform specialized and routinized tasks in the name of effective and efficient mass production. In this new era, interest in efficiency spilled over to the burgeoning schools, which subsequently fashioned themselves after the production-minded factories.

It was in this context that disciplinary ancestors were nurturing the growth of educational psychology in a space between scientific psychology and the more applied field of education. Pivotal negotiations of this space occurred as two American males, Edward Lee Thorndike and John Dewey, vied for the attention and the allegiance of educational psychologists, with Thorndike eventually prevailing. Conjuring up both of these disciplinary ancestors should remind us that although disciplinary space has largely solidified around a particular vision, the fundamental assumptions about preferred goals and methods have been contested and are not immutable. Nevertheless, it was the experimenter and quantifier who set the template for what it means to be an educational psychologist, which in turn resulted in many educational psychologists' preferring to stepping into laboratories in search of generalizable principles of learning and instruction, rather than into classrooms and the complex world of schools. More specifically, Thorndike insisted that whatever behavior constituted a child's response to a particular stimulus was a reflection of the content of that child's learning. This conception of learning permitted the quantification of responses and paved the way for the scientific study of learning and the mathematization and mechanization of human experience. Tools were developed that allowed quantified responses or data to be compared, tabulated, ordered, correlated, or judged for probability. When communicated to educators, the results of these statistical manipulations were assumed to offer an improved basis for determining the effectiveness of teaching and learning.

Thorndike was in the right place at the right time, given that the societal preoccupation with efficiency lent credence to the perspectives and practices that he represented. In fact, Thorndike's concept of mind, his experimental conception of psychology, and his faith in statistical research and measurement legitimated what is referred to as the social efficiency reform movement. Efficiency-minded administrators found the research produced by educational psychology to be an acceptable source of insights and knowledge that could be used for improving teaching and learning.

Although educational psychology seemed to take up and profit from the societal preoccupation with efficiency, it should be noted that, in doing so, educational psychologists tended to cultivate a preference for particular practices and perspectives, to the neglect of others. That is, the perspectives adopted by educational psychologists contrasted sharply with, for example, those put forth by Dewey, who actively promoted the understanding that schools perform important social functions and that making this world a better place requires considering both educational and social changes. Educational psychologists, however, were unconcerned about the purpose of education or about education's social role and tended to think in terms of what was rather than what could be. In other words, educational psychologists have historically worked without an explicit vision or larger purposes to guide the differences that their work should make; hence there

is little evidence of any moral obligation to address issues of power, democracy, inequality, ethics, or politics. In sum, although supporting society's efficiency impulse seems to have bolstered the perceived usefulness of educational psychology, perhaps it is now important to consider how aligning the discipline with an efficient enterprise has occluded or excluded other practices or perspectives.

Reviewing Efficient Disciplinary Progress

To be efficient is to act or produce with minimum waste, expense, or effort. An interesting counterpoint to an emphasis on efficiency is the Buddhist concept or practice of mindfulness. To be mindFUL is to be fully present and fully attuned to the current moment in a way that is open, curious, flexible, and nonjudgmental. As the Vietnamese Buddhist monk Thich Nhat Hanh points out, mindfulness practice involves cultivating greater awareness of and openness to our body, feelings, mind, and objects of our mind. Mindfulness does not represent a mind full of preconceptions, assumptions, or unruly thoughts or feelings that feed into reflexive or habitual responses.

For example, rather than reflexively acting out our feelings of agitation, the cultivation of mindfulness provides us with the tools and wherewithal to recognize the clenching of our fists, the rise in our body's temperature, and the angry cascade of thoughts as agitation. Without feeding our agitation by thinking about the ways in which it is justified, we openly accept our current state, but work to recognize it as wholesome, unwholesome, or neutral. If we recognize the agitation as unwholesome because the actions that stem from our agitation do more to escalate ill feelings than bring about a positive resolution to the problem, then we have created a wedge in what once was a reflexive response to a strong emotional state. In this space we have created between our emotional state and the mindless responses that the state provokes, we have the opportunity to consciously work with our body, emotions, and thoughts to respond more constructively. Cultivating sustained mindful energy and attention requires effortful practice, because responding to the world habitually or reflexively is so effortless. As such, Buddhist teachings on mindfulness provide insights and tools essential to ceasing those behaviors, thoughts, or emotions that contribute to suffering, whether that suffering be our own or others.

Engaging in habitual or reflexive responses to the world is an effective way of maintaining the status quo. Consider how, for example, any field of study follows a developmental course influenced by the people who have invested their identities and livelihood in particular traditions and perspectives. These negotiated traditions help define what ideas are worthy of consideration, which theoretical perspectives have currency, and what methodological approaches are acceptable or preferable. As mentioned earlier, educational psychology has strongly solidified its practices and perspectives around those championed by Thorndike.

Changing or expanding preferred practices or traditions may be difficult given that those who are invested in the field give shape to it. That is, one's reputation as a scholar and researcher depends on one's investments' paying off. Ironically, the greater the success one experiences the greater one's opportunity to define what counts or matters because of the role peer reviews play in hiring, promotion, publishing, and grant funding decisions. This could promote the tendency to function as if one's commitments are the best or the soundest, and may encourage a lack of openness, curiosity, and flexibility toward new, alternative, or contradictory perspectives or practices.

As a countervailing force to this tendency, mindfulness offers techniques and strategies for bringing greater awareness to the actions, feelings, and thoughts that we engage in mindlessly. This awareness provides a basis for considering the implications of our actions. Essentially, approaching one's work mindfully should force a broader consideration of the import and

implications of one's work and make problematic, for example, the reflexive desire to act in ways that are ultimately self-protective or self-promoting. Serious consideration of the importance of working mindfully seems warranted given that the work of educational psychologists has the potential to directly impact the lives of others.

Finding a Way to Progress Scientifically

In addition to changes in labor and production, people living during the early 1900s were experiencing vast improvements in the quality of their lives as a result of scientific and technological advances. Given the successful contributions the sciences were making to the transformation of society, it is perhaps unremarkable that ancestral forefathers saw fit to bind the field of educational psychology to these same scientific methods, practices, and perspectives. Educational psychologists were buoyed by the optimistic hope that following the precedents set by the natural sciences, research could provide a means of efficiently and uniformly improving schools and schooling. In fact, educational psychologists did not travel the path toward the scientific alone. Given the stature of the sciences during the nineteenth century, academic respectability was considered attainable by aligning with the traditionally powerful disciplines. In fact, even today, the relative standing of a discipline within academic circles continues to be judged by the objectivity, power, and rigor of the discipline's methods and the closeness with which it aligns with those fields using "hard" methods.

The nascent field of educational psychology was caught in the odd predicament of possibly compromising the scientific development of psychology if it emerged with an applied emphasis. This predicament is said to have resulted in efforts to minimize the appearance that educational psychology was more practically focused than scientific. The desire to approximate experimental conditions lent credence to Thorndike's studying learning in a psychological laboratory with animals. Moreover, there was disciplinary reluctance to get involved with educational issues, such as educational reform, that reached beyond classrooms and into society. Ironically, those studies that have the greatest claim to validity and reliability may be the most trivial or the least practical because the results have been obtained by means that negate the complexity that inherently characterizes schools and classrooms.

Moreover, as a result of assuming the stance of the neutral and objective scientist wielding scientific tools and procedures, distance has been created between researcher and researched. Creating such distance absolves researchers of the need to include those being researched in question posing, data collection, or analysis. In fact, by holding tightly to positivistic methods, educational psychologists have been able to position themselves as experts within the educational community who produce a specialized form of knowledge that is typically more valued than the knowledge produced by practitioners, thus conferring upon educational psychologists the authority to inform teachers' practices and perspectives within their classrooms. Essentially, the desire to professionalize the discipline required academic social scientists to distinguish themselves from amateur theorists. This required social scientists to establish themselves as professionals, who unlike amateurs, had knowledge and methods that could offer objective, uncontestable, and correct solutions. The distinction between professionals and amateurs was made by establishing doctoral training programs, professional societies, esoteric jargon, and specialized publications. Thus, upholding Thorndike's scientific ideal was interpreted as progress for a field that prior to the turn of century was both jargon and methodless. The disciplinary progress evolved from a body of scholarly work accessible to any educated person, to a literature complicated by the method sections and method books we have grown accustomed to.

It is important to note that schools of education seemed to accept, and perhaps implicitly contribute to, educational psychology's belief in the utility of attaining scientific certainty by

relying heavily on laboratory experiments and on quantification. That is, being bound to the scientific was probably seen as essential for a field striving to raise its status from that of a trade taught to high school graduates in what were referred to as normal schools, to that of a full-fledged academic field of study in colleges and universities. In fact, the legitimacy of teacher preparation programs was questioned in academic circles because the ways normal schools structured their courses were grounded experientially rather than scientifically. Educational psychology courses were developed with the hope of upgrading the status of teacher education by providing a scientific means for infusing scholarship and rigor into professional programs.

Stepping back to reflect on the historical conditions that contextualized the growth and development of the field may lead to the conclusion that current disciplinary commitments reflect the ways that the profession has responded to the need to establish itself as a legitimate and useful discipline. Now that the field of educational psychology is established, it might profit from the infusion of ideas that spur a consideration of new practices or perspectives. To this end, Buddhist teachings on compassion will be used to push thinking about the scientific progress of educational psychology. A consideration of compassion is important because when Thorndike stepped into a laboratory to study learning, he began the long tradition of treating children, teachers, parents, and schools as data sources.

Reviewing Educational Psychology's Scientific Progress

The word *compassion* has been defined by the Dalai Lama as the wish that others be free of suffering. Cultivating mindfulness is important to furthering our ability to be compassionate, because being fully present or mentally aware affords opportunities to discern the presence of suffering in others as well as some of the ways in which our impulses are shielding us from having to confront or address that suffering. Moreover, mindfulness helps clarify the relationship between our own self-interests and the suffering or happiness experienced by others. For example, I might be able to buy a very inexpensive taco from a fast-food restaurant, but it is important to reckon with the fact that the people picking the tomatoes for that taco are being exploited as a result. If compassion is about caring so deeply about others that we take responsibility for and do everything in our power to ease their suffering, then we might decide that a more wholesome response is to forego the taco. Essentially, coupling compassion with mindfulness is important because compassion challenges us to look beyond our own self-interests and to understand the ways in which lives are interconnected.

Unfortunately, it is necessary to cultivate compassion, because although we tend to form close attachments to those near to us, we have to learn how to have compassion for people outside our immediate circles. As the Dalai Lama has explained, our compassion toward strangers or mere acquaintances is limited, partial, prejudicial, and predicated upon how close we feel to them. With this in mind, it is interesting to consider the ramifications of the practice of maintaining distance between researcher and researched. Such distance can be problematic, because it allows the researcher to remain unaware and hence unconcerned by such aspects of lives as joys, triumphs, agony, or fear. This is beneficial if one desires to avoid being held accountable for responding compassionately. Furthermore, maintaining distance dilutes any sense of agency or responsibility, decreases the likelihood of alliances being formed, and can suppress the moral imagination or a consideration of what could be. This allows researchers to have their research needs met by taking what they want from the subjects of their studies, with little or no dialogue or interaction, and then leave fulfilled while the subject leaves unfulfilled and perhaps even feeling used. The suggestion is not to discontinue involving people in research. Rather, working from a desire to research compassionately one may decide to bridge the usual distance by engaging the researched

in a more egalitarian and respectful manner. This can be achieved by affording opportunities to dialogue about the what, how, and why of the research to be conducted.

CONCLUSION

Educational psychologists are not studying rocks, chemicals, or the solar system. Rather the inquiry that educational psychologists engage in is hoped to have very real consequences in the lives of thinking, acting, and feeling people. Typically, the participants or beneficiaries of the disciplinary efforts of educational psychologists are children, who are developing an understanding of the world and their place in it. I have found that Buddhist teachings help me to work in ways that are responsive to the ethical responsibilities inherent in endeavors meant to positively benefit the lives of others. This has proved an effective counterbalance to disciplinary practices and perspectives that encourage pursuing expertise and knowledge. As the Dalai Lama has pointed out, knowledge is important, but even more important may be how we use it. Our use of what we know is influenced by the wisdom we bring to the situation. Wisdom, like mindfulness and compassion, is not a state that once achieved remains forever. Rather, wisdom, as understanding or insight into what is true, right, or lasting requires cultivation. Given the influence that our work can have on the lives of others, is it not imperative that we seek out perspectives that promote our ability to make wise decisions?

I am advocating the value of a discipline influenced by Buddhist teachings because it provides the means for making wise decisions. Buddhist teachings on suffering, its causes, the possibility of eliminating suffering, and the means for achieving the cessation of suffering have given me a touchstone from which to consider the import and impact of my practices and perspectives. Consider further the power and potential in achieving mindfulness through bare attention, non-judgmental awareness, and deep listening. What realities about their practices and perspectives would educational psychologists become aware of? Yes, vigilantly working to attain a mindful state might bring us face to face with the suffering of others, and if moved by Buddhist teachings we would be beholden to acknowledge our responsibility through acts of compassion. Responding compassionately requires understanding the nature of suffering and the wisdom to determine how we can contribute to the lessening of the suffering. It is true that even after looking into the face of suffering and understanding the ways in which our privileges and power are entangled with the oppression of others can result in inaction. But this greater clarity in seeing what one was previously unaware of may plant a seed of discomfort that makes one's complicity in perpetuating indignities difficult because the bliss that ignorance affords us has been stripped away. Simply, the importance of achieving compassion is that once injustices or suffering becomes visible, an impetus to remedy the situation exists. Given the work of educational psychologists has the power and potential to influence the lives of others, is it not essential that we seriously consider the wisdom in approaching that work mindfully and compassionately?

TERMS FOR READERS

Compassion—As pointed out by Thich Naht Hanh, *compassion* is the closest translation of the Sanskrit and Pali word *karuna*. The translation is not direct because compassion is derived from *com*, “together with,” and *passion*, “to suffer.” However, *karuna*, or the intention and capacity to relieve and transform suffering and lighten sorrow does not require that one also be suffering in order to respond.

Mindfulness—According to Thich Naht Hanh, the Sanskrit world for mindfulness means “remember,” as in remembering to come back to the present moment and not, for example, get lost

in the distraction of past or future events. Considering the Chinese character used for *mindfulness* is also instructive. The upper part means “now,” and the lower part means “mind” or “heart.”

Wholesome—To paraphrase the *American Heritage Dictionary*, something that is wholesome is conducive to sound health or well-being. Or, in other words, it promotes mental, oral, or social health.

REFERENCES

- Jackson, P. W. (1969). Stalking beasts and swatting flies: Comments on educational psychology and teacher training. In J. Herbert and D. P. Ausubel (Eds.), *Psychology in Teacher Preparation* (pp. 65–76). Toronto: OISE.
- . (1981). The promise of educational psychology. In F. H. Farley and N. J. Gordon (Eds.), *Psychology and Education: The State of the Union* (pp. 389–405). Berkeley: McCutchan.
- Lama, The Dalai (2001). *An Open Heart: Practicing Compassion in Everyday Life*. Boston: Little, Brown and Company.
- Zimmerman, B. J., and Schunk, D. H. (2003). *Educational Psychology: A Century of Contributions*. Mahwah, NJ: L. Erlbaum Associates.

CHAPTER 51

Without Using the “S” Word: The Role of Spirituality in Culturally Responsive Teaching and Educational Psychology

ELIZABETH J. TISDELL

Spirituality is an important part of human experience. Bookstores are filled with many popular titles on the subject. Not surprisingly, most popular press books on spirituality focus on its individual dimensions: how to cultivate mindfulness; how to develop a better relationship with God or a Higher Power; how to draw on spirituality and meditation to reduce stress, and thus lead to a greater sense of health and well-being; even how to have a prosperous life. There are few discussions of spirituality that focus on its cultural aspects. Indeed, just as in psychology, where the traditional focus is on the individual with little attention to the cultural context that inform the life and development of that individual, most discussions of spirituality also focus on its more individual dimensions. But there is a cultural dimension to spirituality, and a spiritual dimension to culture. Thus far in the field of educational psychology, there has been little attention to spirituality in general, much less to its cultural dimensions.

The relative silence about spirituality is not particularly surprising in educational psychology. Indeed, the field has been dominated by behaviorists and clinically oriented cognitive psychologists, who have been grounded in positivism and the scientific method. Such a view of the world has traditionally seen spirituality either as wish fulfillment, or “background noise” that needs to be tuned out to make studies “scientific.” In addition, the separation of church and state grounded in enlightenment period philosophy and in positivism might give further pause to educational psychologists about either considering the role of spirituality in cognitive and overall development, or doing research in this area.

Just as the field of educational psychology has been reticent about dealing with issues of spirituality, until recently they have been quite hesitant at acknowledging how structural power relations between dominant and nondominant groups based on sociostructural factors of race, ethnicity, gender, sexual orientation and class, affect one’s view of the world. Traditionally, theories of human development, including cognitive development, in all areas of psychology were based on white, male, middle- to upper-middle-class participants. If a particular person didn’t fit with the theory, he or she was assumed to be less developed, or less evolved, since most of these theories tended to ignore gender and cultural issues. This of course has changed in the last two decades, with the greater attention to gender, and to some extent cultural differences in the field of psychology (Hays, 2001). However, because educational psychology has focused largely on

psychometrics, the attention to gender and culture has lagged somewhat behind other areas of psychology and education, although clearly there is more of a concern with power relations based on gender, race, class, and culture now than ever before, even in educational psychology.

Obviously the discourses in education that focus on dealing with gender, race, class, and sexual orientation have a great interest in the cultural context in education; indeed that is their purpose. But like the field of educational psychology, these discourses focused on power relations and how to alter them, and have mostly ignored the role of spirituality in the ongoing development of identity and in culturally responsive education. There is, however, a growing body of literature in education that talks about the role of spirituality and learning (Astin, 2004; Glazer, 1999; Palmer, 1998; Parks, 2000). Most of this literature, however, has not attended to how spirituality interconnects with culture. Therefore, the purpose of this chapter is to examine the role of spirituality in culturally responsive teaching, and its potential role in challenging power relations, and what it suggests for educational psychology. Much of this discussion is based on the results of qualitative research study of how spirituality informs teaching to challenge power relations of a group of 31 educators of different cultural groups, as well as my own experience as a white woman teaching in a graduate-level higher education setting of how to do it. The discussion of the study itself here is necessarily brief, but I have discussed the role of spirituality in culturally responsive teaching in depth elsewhere (see Tisdell, 2003). But before this discussion goes any further, it's important to consider what is meant by spirituality and how does it connect to culture.

DEFINING SPIRITUALITY AND ITS CONNECTION TO CULTURE

Most often in discussions of spirituality, it is argued that spirituality is about meaning making, a belief in a higher power, or higher purpose, the wholeness and the interconnectedness of all things, and that it is different from religion, although for many people it's interrelated. Many people also discuss it as related to developing a sense of greater authenticity. Indeed, most authors agree that this is some of what spirituality is about. But faith development theorist James Fowler (1981) notes that spirituality is also about how people construct knowledge through image, symbol, and unconscious processes. While Fowler has not discussed the connection of spirituality to culture, obviously image, symbol, and unconscious processes are often deeply cultural, and thus deeply connected to cultural identity.

As noted earlier, in most of the education and psychology literature, discussions of spirituality are focused more on an individual level—on what meaning individuals make of spirituality and spiritual experience, with little attention to the role of culture in the expression or understanding of spirituality. Some authors do, however, more explicitly discuss spirituality as a fundamental aspect of their being rooted in their cultural experience. To a large extent, these contributions and discussions have been made by people of color or those who are explicitly interested in cultural issues. Indeed, as hooks (2000) suggests, these authors are a part of the counterculture that are trying to “break mainstream cultural taboos that silence or erase our passion for spiritual practice” (p. 82) and the spiritual underpinning to cultural work.

In order to consider further how spirituality relates to culture, and to culturally responsive teaching, it is important to consider the phenomenon of developing and sustaining a positive cultural identity. Again the field of educational psychology has tended to ignore the process of *cultural* identity development, largely because its traditional focus has been on measurement, and of isolating and measuring a particular variable, usually devoid of the multiple cultural effects that shape an individual's identity. But in order to attend to culturally responsive teaching, it is important to understand the dynamics of cultural identity development. Those who have discussed race and ethnic identity models of development have built on the pioneering work of William Cross (1971), who initially posed a five-stage model of racial identity. According to

this model, in addition to the positive views of their culture they may have inherited from their families, individuals from these cultural groups may have internalized (from the White dominant culture) some negative attitudes toward themselves. This results partially in the phenomenon of internalized oppression, an internalized but mostly unconscious belief in the superiority of those more representative of the dominant culture. The educational psychology might simply label such a person who has internalized oppression as someone with bad self-esteem due to a mother who was not loving enough, or other such individualist effects, rather than acknowledge that internalized oppression is a phenomenon that is a part of structural social relations based on race, class, ethnicity, and so on. But even most of those who do write about the sociocultural dimensions of internalized oppression have tended to ignore the role of spirituality in healing from oppression. Latino writer David Abalos (1998) lends insight here. He suggests that in order for particular cultural groups to be able to create and sustain positive social change on behalf of themselves and their own cultural communities, it is necessary that they deal with the phenomenon of internalized oppression. He argues it is necessary to claim and reclaim four aspects or “faces” of their cultural being: the personal face, the political face, the historical face, and the sacred face. This “sacred face” is related to the spirituality that is grounded in their own cultural community, by claiming and reclaiming images, symbols, ways of being and celebrating what is sacred to individuals and the community as a whole. Those who reclaim their sacred face and its connection to cultural identity often experience the process of working for transformation of themselves and their communities as a spiritual process. In Abalos’s (1998) words,

The process of transformation takes place first of all in the individual’s depths. . . . But each of us as a person has four faces: the personal, political, historical and sacred. . . . To cast out demons in our personal lives and in society means that we have freed our sacred face. (p. 35)

In the exploration of the four faces, Abalos has grounded the individual in not only a cultural, historical, and spiritual context (in his attention to the sacred face), but a personal context as well. His conceptualization has implications for the field of educational psychology in that it recognizes the multiple and interconnected aspects of an individual’s being as related to a history, a culture, and a spirituality, all of which affects overall identity development.

Now, with the above as background and theoretical grounding, and given the fact that this discussion is about spirituality, it is important to summarize and to be as clear as possible about what is meant by the term *spirituality*, particularly as it relates to culture and education, as it is used here. As noted elsewhere (Tisdell, 2003), based on both the literature and the findings of the study discussed below, spirituality is about the following: (1) a connection to what is discussed as the Lifeforce, God, a higher power or purpose, Great Mystery; (2) a sense of wholeness, healing, and the interconnectedness of all things; (3) meaning-making; (4) the ongoing development of one’s identity (including one’s cultural identity), moving toward greater authenticity; (5) how people construct knowledge through largely unconscious and symbolic processes manifested in such things as image, symbol, and music, which are often cultural; (6) as different but, in some cases, related to religion; and (7) spiritual experiences that happen by surprise. Understanding how these dimensions of spirituality have played out in the lives of educators who conceive of this process of positive cultural identity development as a spiritual process can offer new direction to a culturally responsive educational psychology.

A SUMMARY OF THE STUDY

The qualitative research study itself was informed by a poststructural feminist research theoretical framework, which suggests that that the positionality (race, gender, class, sexual orientation) of researchers, teachers, and students affects how one gathers and accesses data, and how one

constructs and views knowledge, in research and teaching. Thus, my own positionality as a white middle-class woman who grew up Catholic and has tried to negotiate a more relevant adult spirituality, in addition to the fact that I teach classes specifically about race, class, and gender issues, has influenced the data collection and analysis processes.

Purpose and Methodology

My primary purpose in this study was to find out how educators teaching about cultural issues in education, the social sciences, and the humanities either in higher education or in community-based settings interpret how their spirituality influences their work in their attempts to teach for social and cultural responsiveness, and how their spirituality has changed over time since their childhood. I was attempting not only to provide some data-based information about how their spirituality informs their work, I was also trying to examine the cultural aspects of spirituality. In essence, I was interested in looking at the often-ignored sociocultural dimensions of spirituality, and to explicitly make visible the spiritual experience of people of color, as well as the experience of white European Americans, which is the group that the spirituality literature in North America tends to primarily be about. There were thirty-one participants in the study, twenty-two women and nine men (six African American, four Latino, four Asian American, two Native American, one of East Indian descent, and fourteen European American). Twenty-three of the thirty-one taught in higher education settings, while eight taught in community-based settings.

The primary means of data collection was a 1.5–3-hour taped interview that focused on how their spirituality has developed over time, relates to their cultural identity and overall identity development, informs their education practice. Given the poststructural feminist theoretical framework, which attempts to avoid “othering” participants (Fine, 1998), I approached the interviews as a shared conversation, and looked at the process as an ongoing one where we were constructing knowledge together. Thus, if participants asked me a question, I briefly answered it. Many participants also provided written documents that addressed some of their social action pursuits or issues related to their spirituality. Data were analyzed according to the constant comparative method (Merriam, 1998), and several participants were contacted for member checks once data were analyzed to ensure accuracy of the analysis.

There were several findings to the study relating to the participants’ conception of the role of spirituality in claiming a positive cultural identity. Three of these that are particularly related to educational psychology and to culturally responsive educational and psychological practice are discussed briefly below.

Unconscious and Cultural Knowledge Construction Processes

People construct knowledge in powerful ways through unconscious processes, and ritual, gesture, music, and art has enduring power. These aspects of knowledge production are nearly always connected to culture, and often have spiritual significance as well. Take the case of Anna Adams, an African American education professor, who has long since moved away from the African American Christian religious tradition of her childhood. But Anna discussed Aretha Franklin and her music as an important spiritual symbol for her that connects to her cultural identity and her spirituality, a spirituality that has become more important to her as she has gotten older. In reflecting on the connection of Aretha’s music to her own cultural identity, Anna explained:

I grew up in a Black community doing and understanding and experiencing things of Black culture, so when I say Aretha takes me back, she takes me back to my childhood and the things that I understood then—things like music and dance, and the way of walking, the way of talking, the way of knowing, the interactions, the

jive talk, the improvisations, you know, all those things that I learned coming up—the music of the church, the choir that I sang in, all of that. And because I was raised in that community with that knowledge her music takes me back even farther than I know, because I don't know where all of those things come from.

Obviously, for Anna, Aretha's music is a great source of inspiration because of its connection to her ancestors, her own spirituality, and its rootedness in her own cultural experience.

Julia Gutierrez also spoke of the journey of reclaiming a positive cultural identity as a spiritual experience, and the role of the cultural symbol of *La Virgen de Guadalupe* in that process. Julia has long since moved away from the Mexican Catholicism of her youth, but in reflecting back, she notes,

I think part of my journey is going back to my heritage, my Aztec and indigenous roots. . . . Ana Castillo (1994) gives a different picture of what *La Virgen* could represent in terms of powerful women. . . . But there's another side to it. . . . I don't always just go with "this is the way that it is" because I do question "was that a way for the Spaniards to . . . convert the Aztecs into Catholicism? Or is it really an Aztec goddess?" . . . But I do believe it's a spirit—a spirit that kind of watches over me.

Further she discusses some of the affective significance she holds to this image of *La Virgen de Guadalupe* in her family and cultural history:

We have this ritual in my family—every time I go home, and when I 'm getting ready to leave, I ask for my parents' blessing, and so they'll take me into their room, and each one of them will bless me. . . . And I don't feel complete if I don't do that. . . . So my father will bless me, "te encomiendo a Dios Padre, y a *La Virgen de Guadalupe*," and ask my grandmother and *La Virgen* to watch over me, and so I feel like my Grandmother's watching over me!

For Julia the importance of the cultural symbol is in its significance to her ancestral connection, to her cultural roots, and the affective dimension associated with the family ritual of blessing.

Spirituality in Dealing with Internalized Oppression

Many of the participants discussed the role of spirituality in unlearning internalized oppression based on race or culture, sexual orientation, or gender. But many of them also talked specifically about the role of spirituality in that process. As noted above, the pressure to adopt the views from the dominant culture about one's identity group can result in the internalized but mostly unconscious belief in the inferiority of one's ethnic group, and/or to being exposed to little to no information about one's cultural group if one's parents, family, or immediate community overemphasized assimilation. Unlearning these internalized oppressions is often connected to spirituality, and for most people is a process. Elise Poitier, an African American woman, describes recognizing that she had to some degree internalized white standards of beauty, when as a young adult she moved from the Midwest to Atlanta and explained, "In Atlanta, my beauty was affirmed. I could walk down the street and see myself; there was a sense of connectedness . . . that I would consider a spiritual connection."

Tito, a Puerto Rican man, described the process of reclaiming his Puerto Rican identity as a spiritual process. As he explains,

I found out that I was Taino [the Indigenous people of Puerto Rico], African, and European. This made me happy. But I had to learn more about the history and stories of these cultures in order for me to be "whole." . . . But even after learning about that, I felt empty. . . . I then look into the sacred story of my ancestors.

For Tito, knowing about the spirituality of some of his ancestors was an important part of his healing process.

Penny, a Jewish woman, spoke very specifically to the phenomenon of internalized oppression.

Raised as an assimilated Jew in White Christian middle-class suburbs, I learned well how to blend in and belong as White. . . . I felt uncomfortable around people who looked and/or behaved in ways that were “too Jewish.” When told I didn’t “look Jewish,” I replied “Thank you.” . . . In brief, I had learned to internalize societal attitudes of disgust at those who were “too Jewish”; I had learned to hate who I was, and I did not even know it.

Penny began the process of reclaiming her Jewish heritage, her sacred face, by reading the works of Jewish women that filled her with stories that she related to. In summing up and reflecting on how this relates to her spirituality she noted,

My spirituality is all about how I relate to my world and others’, how I make meaning of life. From Jewish prophetic tradition and mysticism (via the Kabbalah) comes the concept of “*tikkun olam*” or the repair and healing of the world. This aptly expresses my core motivation in life, towards social justice, towards creating a life that is meaningful and makes a difference. I believe I get this from my Jewishness/Judaism, which for me is a blend of culture and spirituality.

This blend of culture and spirituality embodied in the Jewish concept of “*tikkun olam*” not only motivates her activism, it has also motivated the healing of her own world, the healing of her own spirit, in confronting and dealing directly with her own internalized oppression.

Spirituality and Mediating Among Multiple Identities

As many participants discussed, we are not only people of a particular ethnic group, we also have a gender, a class or religious background, and a sexual orientation, and several participants discussed the role of spirituality in mediating among these multiple identities. Harriet, a forty-eight-year-old nurse and adult educator, is a case in point. Harriet is a community activist, a white woman from a rural Southern, working-class background who grew up in the Pentecostal Church, where she went to church four times per week. In considering the intersection of class, religious background, and culture, she reflected back, noting, “It [her religious upbringing] has to be understood in the context of being your culture. It’s not your religion or spirituality, because it’s everything you *are* and what you *do* and *how you live your life*. . . . It’s your way of life!” While she didn’t have much class consciousness growing up, in reflecting back, she noted, “Pentecostal folks are pretty poor people.”

It was in this religious/cultural/class context where Harriet, who found meaning and identity in these intersections, began to wrestle with another important aspect of her identity: her sexual orientation. In her early twenties, she talked to many ministers and church people, who alternately made her feel guilty and hopeful, and one finally suggested to “leave it up to God.” Harriet described a pivotal experience that happened about a year later, where she experienced what she believed was a healing after a sports injury, and explained that it helped her come to terms with her lesbian identity. “Why would God heal me, if I was this person that was condemned to hell?” God wouldn’t do that for me, and I thought “OK, this is my sign that it’s OK for me to be a lesbian.”

While this particular experience was a significant turning point for Harriet, in terms of her own acceptance of her lesbian sexual identity, she knew she was not going to find public acceptance for it in the Pentecostal Church. Yet in her heart, the authenticity of her identity, confirmed through

what she describes as this particularly significant spiritual experience, gave her the courage to embrace who she is and, over time, to ultimately develop a positive identity as a lesbian, and one that resulted in her considerable activism, not only around lesbian and gay issues, but around race, class, and gender issues. Over the years, she has developed a more positive spirituality that has helped her mediate among these identities that inform all her activism.

Harriet has lived in the same community her whole life. While communities never remain static and are always changing incrementally, the cultural context in which she was negotiating various aspects of her identity remained relatively stable—at least much more so than if she had moved to a different geographical area. But those who are immigrants to North America (or elsewhere) generally negotiate various aspects of their identity and their spirituality against the backdrop of a very different cultural context than that of their home countries. Aiysha is a Muslim woman of East Indian descent, born in East Africa, and after living in Africa, England, Canada, she immigrated to the United States in her late teens. Moving a number of times and having to negotiate being a member of a privileged group in some contexts but being a member of an oppressed or lower-status group in other contexts has made Aiysha negotiate her own shifting identity in a constantly shifting cultural context. These moves and identity shifts that are a part of her personal life experience, along with the fact that Aiysha is a professor with a subspecialty in multicultural issues, has forced her to think a lot about the development of her religious and cultural identity as an immigrant and a Muslim in the United States. In describing the connection between her ethnic identity and her religious identity, she noted,

Being of East Indian origin AND a Muslim, not only here in the U.S. but everywhere I've lived, has served as a double reinforcement of my otherness. In some cases, for me it's a question of privilege. For example, in Africa where we were, there's no doubt that the Indian population was part of the business population, whereas in London, I was definitely NOT part of the privileged class. In terms of societal structures, I identified a lot more with the lower classes, and came to the U.S. with a thick cockney accent.

In being both an ethnic minority and a religious minority but as one who is educated with a doctoral degree and has both education and class privilege in the United States, Aiysha has developed the ability to cross cultural borders to be able to speak to many different groups and in many different contexts fairly comfortably at this point in her adult life. But developing this ability has been a process that has taken time, as there had always been subtle pressures to blend in. She gave the example of how this had been manifested earlier in her life. In her Muslim community, occasions of joy are often marked with the application of henna. "In the past I would think very carefully of where I was going on the past two or three weeks, before putting on henna, I now do not hesitate to do it," she explained. At this point in her development, she does not try to blend in, but rather uses those occasions when people ask what she has on her hands as a point of education about Islam and about her East Indian ethnic heritage. She described how this shift has taken place over time, and reflected on being both Muslim and East Indian:

Before it was just a matter of fact for me. Now, it's still a matter of fact, but it's also a matter of pride. I've taken the attitude "This is WHO I AM. If you are going to know me and like me, you're going to know the whole of me, not just parts of me." So in a sense the dichotomization of my identity that I described at the beginning, I'm beginning to take that and create a whole from it in the way that I interact.

Aiysha attributes the shift that's taken place over time to formal education that has partly focused on the negotiation of cultural and religious difference, positive personal experiences where she was deliberately in religious and culturally pluralistic situations that allowed her to experiment with being more overt with these aspects of her identity, and to the experience of becoming

a parent. But this sense of “the whole” is related to her spirituality, which is tremendously important to her. Like Harriet, and nearly all the participants in the study, Aiysha has drawn on her spirituality and her growing sense of her “authentic” and more centered self to mediate among these multiple identities.

CONCLUSIONS: TOWARD A CULTURALLY RESPONSIVE EDUCATIONAL PSYCHOLOGY PRACTICE

So what does this suggest for culturally responsive teaching and educational psychology practice? It seems that for all participants in this study, the claiming of the “sacred face” was key to developing a positive cultural identity. Participants discussed the spiritual search for wholeness, by both embracing their own cultural identity by dealing with their own internalized oppression and through the experience of crossing cultural borders, and finding what was of spiritual value that was more prevalent in cultures other than their own. Neither spirituality nor cultural context were “background noise” to their ongoing identity development as has been traditionally conceptualized in educational psychology. Rather, both were interconnected and absolutely central to the reclaiming of their cultural identity through dealing with their internalized oppression.

While space limitations don’t allow for further discussion of these findings which are discussed in depth elsewhere (Tisdell, 2003), there are some specific implications for practice. These educators also attempted to draw on their own spirituality in their own teaching by developing opportunities for students “to claim their sacred face” in developing culturally responsive educational practices, not so much by talking directly about spirituality but in ways they conducted their classes. On the basis of their responses and my own experience of attempting to do this, some general guidelines for the implications of practice include the following seven principles or elements of a spiritually grounded and culturally responsive teaching and educational psychology practice:

1. An emphasis on authenticity of teachers and students (both spiritual and cultural)
2. An environment that allows for the exploration of:
 - the cognitive (through readings and discussion of ideas)
 - the affective and relational (through connection with other people and of ideas to life experience)
 - the symbolic (through artform—poetry, art, music, drama)
3. Readings that reflect the cultures of the members of the class, and the cultural pluralism of the geographical area relevant to the course content
4. Exploration of individual and communal dimensions of cultural and other dimensions of identity
5. Collaborative work that envisions and presents manifestations of multiple dimensions of learning and strategies for change
6. Celebration of learning and provision for closure to the course
7. Recognition of the limitations of the classroom, and that transformation is an ongoing process that takes time

Clearly, every educator or educational psychologist needs to determine for herself or himself how he or she can implement such principles in practice, in light of her or his educational context and cultural identity. In the remainder of this discussion, I will very briefly explore how I do this in teaching teachers in graduate higher-education settings as a white woman concerned about cultural issues, and as one who believes it is possible to attend to spirituality, although I tend to be somewhat implicit in my attention to it.

An important aspect of learning is creating a space. Thus for my classes that deal with cultural issues, or adult learning, I bring symbols of the elements of the world—earth, wind, fire, and water, because learning takes place in the context of our life experience in the world, and these symbols can serve as a reminder of that, and implicitly takes learning to what the heart of spirituality is about—the interconnectedness of all things. I am also trying to set up an environment where students will explore the meaning that they map to symbol, so that learning through symbol, and affect, as well as the obvious academic readings can be a part of the learning environment right from the beginning. I also begin each class with a brief check-in of joys and difficulties that have been a part of the learning lives they’ve had since the last time we met. This five-minute activity is an attempt to create a learning community that honors the life experiences of the learners.

I usually begin my own classes that focus on cultural issues with an assignment where learners write aspects of their own cultural story. Stories touch our hearts and put a human face on the world of ideas. Thus learners’ initial assignment will include story readings, and a written assignment of analyzing aspects of their own story (with some guidelines) related to the content., such as how their own awareness of their cultural identity developed. In particular, they describe their culture of origin in terms of their race, ethnicity, religion, and class background; the cultural mix of the communities in which they grew up; what messages they received about themselves and “others” through both the overt curriculum and the hidden curriculum in schools and in other institutions; who important cultural role models were for them. In essence, in this initial assignment, I am attempting to pose questions that might help them think about how their cultural consciousness developed, and the role of social structures in shaping their identity and their thinking. I try to model this by sharing some of my own story. In particular, as a white woman trying to deal with cultural issues, I discuss pivotal points in my own ongoing understanding of what it means to be white, as a system of privilege, and how it interacts with my Irish Catholic female cultural upbringing, and how I am still very much working on this. Sometimes I share a poem, or a song, that has been meaningful. My intent is to encourage students to do the same in their own writing: to use critical analysis and their creativity in analyzing their own stories relative to the larger society.

I rarely use the term *spirituality* in my classes. But at a point in the class, I ask them to bring or create a symbol of their cultural identity. Often, their use of art, poetry, music, and other artform and use of this cultural symbol touches on the spiritual for some people, and encourages it to be present in the classroom. Others don’t map to such activities in that way, but whether or not one experiences something as “spiritual” depends on the learner. Furthermore, learners also generally do a collaborative teaching presentation on a particular subject. They use multiple modes of knowledge production in their presentations. They often incorporate the spiritual and cultural, as well as the affective and analytical in these presentations, that is grounded in their own cultural experience, and suggestions for social change. This ensures its cultural responsiveness. In closing, we often make use of some of what they created throughout the course in a final activity that hints at a ritual through use of song, poetry, dance, art, and ideas from significant reading in stating our intent of next steps for action; after all, there are limits to what can be accomplished in any given education context, including in higher education where I teach.

In conclusion, it is clear that it is time for the field of educational psychology to continue to move forward from its historically positivist underpinnings that paid little attention to gender or culture, to not only attend to these issues but to consider how culture interconnects with spirituality. Furthermore, a culturally responsive educational psychology and teaching practice that attends to spirituality by drawing on the role of imagination, and how people construct knowledge through image and symbol, which is always expressed through culture, can facilitate continued development and continued healing, both individually and in the larger world. It is a way of drawing on spirituality, and engaging the “sacred face,” without ever necessarily using

the “s” (spirituality) word. By helping learners engage in multiple dimensions of knowing by attending to the individual, the cultural, political, the historical, and sacred faces that affect their own and others’ ongoing identity development, there is a greater chance that education will become transformative, both personally and collectively. It is not, however, learning based strictly on the rationalistic and individualistic assumptions of Descartes, “I think, therefore I am.” Rather, as my colleague Derise Tolliver of DePaul University says, it is based on the collective insights of the African proverb and spiritual traditions that offer some collective wisdom for the building and sustaining of community and the work of social transformation: “I AM because WE ARE: WE ARE, therefore I AM.” Perhaps, drawing on this collective wisdom helps all of us begin to claim a sacred face, and can also contribute to a more culturally responsive and holistic view of teaching and educational psychology.

REFERENCES

- Abalos, D. (1998). *La Comunidad Latina in the United States*. Westport, CT: Praeger.
- Astin, A. (2004). Why spirituality deserves a central place in liberal education. *Liberal Education*, 90 (2), 34–41.
- Cross, W. (1971). Toward a psychology of black liberation. The Negro-to-Black convergence experience. *Black World*, 20(9), 13–27.
- Fine, M. (1998). Working the hyphens. In N. Denzin and Y. Lincoln (Eds.), *The Landscape of Qualitative Research* (pp. 130–155). Newbury Park, CA: Sage.
- Fowler, J. (1981). *Stages of Faith: The Psychology of Human Development and the Quest for Meaning*. San Francisco: Harper and Row.
- Glazer, S. (Ed.). (1999). *The Heart of Learning: Spirituality in Education*. New York: Putnam.
- Hays, P. (2001). *Addressing Cultural Complexities in Practice: A Framework for Clinicians and Counselors*. Washington, DC: APA Press.
- hooks, b. (2000). *All About Love*. New York: William Morrow.
- Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education*. San Francisco: Jossey-Bass Publishers.
- Palmer, P. (1998). *The Courage to Teach*. San Francisco: Jossey-Bass.
- Parks, S. (2000). *Big Questions, Worthy Dreams*. San Francisco: Jossey-Bass.
- Tisdell, E. (2003). *Exploring Spirituality and Culture in Adult and Higher Education*. San Francisco: Jossey-Bass.

Developmentalism

CHAPTER 52

Beyond Readiness: New Questions about Cultural Understandings and Developmental Appropriateness

LISE BIRD CLAIBORNE

When is a student “ready” to learn? The notion that teachers should try to gauge each student’s readiness for learning was once a central concern of educators, one that educational psychologists were well placed to comment on. Although this concern is less likely to be voiced aloud these days, theories of human development are still seen as relevant to classroom learning and are discussed in most educational psychology textbooks. In this chapter I look at expectations that a child of a certain age “should” be able to accomplish particular tasks. Questions can be raised about these expectations that have implications for work in schools. The field of educational psychology will be defined broadly as both an academic discipline and as the domain of teachers and school psychologists who work with students experiencing learning or behavioral difficulties (see Bird, 1999b). The questions raised here have no simple answers, but they may provide new insights for readers’ own reflections on their own and others’ development.

The notion of readiness refers to the idea that each student’s capability is to some extent determined by his or her level of development. As children mature, they are expected to improve in all aspects of their learning, progressing day by day in a straightforward, linear march. The timetable of improvements might include an expectation that a six-year-old should be able to master the basics of reading or that a nine-year-old should become efficient in multiplication. Because not all children learn at the same rate, there is the further assumption that most children will fit into the performance expected in their age group, while a minority of students will progress more slowly or quickly than others.

It may be useful to begin with a sporting metaphor to describe the notion of developmental readiness. Imagine the teacher as both a coach and a race official for the student who is a runner in a long-distance race. The ideal teacher runs alongside the runner, shouting encouragements and also handing over crucial materials at just the right time. The teacher-coach must judge the right moment to hand over a cup of water or sports drink. If the teacher is too early in handing over the drink, the student may not be able to swallow, while if the teacher is too slow the student may collapse from dehydration. At the end of the race the teacher also becomes the official who declares who has won the race, who has completed it competently for his or her age group, and who might need extra help to become a good runner. The teacher’s job is to try to gauge the

readiness of the student to receive the next input from the teacher, the “right moment” in which the student will be receptive to knowledge that will stretch him or her—not too little nor too much—to new learning.

The foundation for these expectations of what a child can learn at a particular age is in theories about human development. These can be useful, but they also have problematic assumptions. These will be outlined below, before some alternatives are considered.

THE DEVELOPING CHILD

These days most educational psychology textbooks do not presume to tell teachers how to spot the right moment for a child to learn a particular skill or piece of knowledge. However, most contemporary educational psychology textbooks have chapters on development, emphasizing theorists such as Jean Piaget, Lev Vygotsky, Erik Erikson, Urie Bronfenbrenner, and Lawrence Kohlberg. (More detailed descriptions of these theorists can be found in textbooks on human development.) The idea of “readiness” was probably cemented in place with the use of Piaget’s theory in the training of several generations of teachers from the mid-twentieth century. Piaget developed an account of the child’s cognitive progress that had its origins in a biological account of human intellectual functioning. He considered that the child’s logic—the way of seeing and being in the world—shifts as the child grows older. He outlined four big qualitative shifts, referring to these as the stages of sensorimotor, preoperational, concrete, and formal operational thinking.

Originally a biologist, Piaget was interested in the unfolding competencies of all children over time as an interaction between the child’s physiology and the surrounding environment. He was not interested in schemes to “accelerate” the speed at which the child would acquire various concepts, because he thought there were many interconnected processes that had to improve together to make changes. Advancement on one set of skills would not, in his theoretical account, be likely to accelerate the child’s whole cognitive structuring (called schemes) in a particular stage. So training in learning to measure the amount of water in different-sized glasses would not, in his view, improve the child’s overall competence at a concrete operational task such as understanding that the volume of water in a glass does not change just because it is poured into a different-shaped container.

Piaget’s theory was a contrast to earlier views of development that relied more heavily on notions of biological maturation. Arnold Gesell (e.g. Gesell & Ilg, 1949) argued that development followed a maturational timetable set by genetic factors. Piaget focused more on the interaction between maturational factors and their shaping by the child’s physical and, to a lesser extent social, milieu. His idea of readiness was based on the maturational unfolding of the child’s skills over time due to a genetic timetable, but with environmental factors intertwined at every point.

Much research since the 1980s has attempted to test the limits of Piaget’s theory. It now seems that children may achieve Piagetian developmental tasks such as object permanence at a much earlier age than previously envisioned (e.g. Baillargeon & DeVos, 1991). There has also been considerable critique of the notion of stages in Piaget’s theory. So, while generations of students still memorize the Piagetian stage sequence, these are less likely to be the basis of contemporary developmental research. Knowledge of Piaget’s views of changes in thinking could be helpful for teachers and educational psychologists for particular purposes, such as in working with a refugee child whose background and skills are unknown. The child’s performance on a Piagetian task might give important clues about the kinds of experience and education the child has had so far. But it would probably not be helpful in a comparison of that child to the “average” child of the

same age in their new classroom, because a single measure might not give a wide enough view of all the child understands.

The work of Lev Vygotsky has in many ways succeeded that of Piaget in popularity. In education, Vygotsky's notion of the zone of proximal development ("ZPD") has become a central notion, especially in the popularization of the term *scaffolding*. The ZPD is defined as the individual child's sphere of competent action with others that stretches the possibilities beyond what the child can do alone. An example of the zone might be the difference between what a particular child of a certain age could do with a set of blocks and what the child could accomplish with hints from an older child or adult helping the child. In this theory readiness can be seen as finding activities within the ZPD for the child, in other words, expanding the child's competence by a certain amount, not too small nor too great, to be effective.

CRITICISMS OF DEVELOPMENT: IMPLICATIONS FOR EDUCATIONAL PSYCHOLOGY

Most theories of human development share three assumptions that have implications for the concept of readiness to learn: (1) that processes and achievements are *universal* in all children, regardless of circumstance or culture; (2) that the *individual* person is the main unit of concern; and (3) that development is *progressive*, or that each child improves over time through a set sequence of positive changes. These assumptions about development have been taken to task by a number of critical writers. These criticisms have interesting implications for people interested in the ways that children's learning changes over time.

The first problem is the idea that children's development can be described with reference to universal principles. Developmental psychology has been criticized for its practices of normative regulation through notions such as "timetables" and "milestones" for talking and walking, or its emphasis on "age-appropriate" behaviors. These expectations, which have come from particular dominant middle-class cultural perspectives in Europe and the United States, may unintentionally create strong normative pressures for children living in many other cultures to "act their age." Every culture may have its own unique views of the timetable of milestones a child is expected to achieve as they grow older. For example, Goodnow et al. (1984) showed how differently Anglo- and Lebanese Australian mothers viewed the appropriate ages for children to act independently on such tasks as answering the phone or walking to a local store alone. However, in our current era of vigilance about crime and terrorism in countries such as the United States or Israel, "appropriate" ages for independent moves by a child might be increasing. In that case, the age of "readiness" may be largely shaped by social factors.

An example of mismatched cultural expectations could involve an educational psychologist working with an indigenous Australian child living in a tribal area in a central desert. If that psychologist expected the child to classify family members into a "family tree" pattern along the lines of some of Piaget's work, such testing could create a *colonizing* scrutiny of the child's actions. In other words, that minority child's reality would be measured against a standard set by the dominant culture (i.e., educated, middle-class, Euro-American researchers). Furthermore, such tests have in the past been used as a means for *regulating* what is considered acceptable or normal in the classroom. An example might be a classroom exercise that involves drawing or writing about family members, when there is a social norm (expectation) that most families consist of two married parents and their children (even if the nuclear family is no longer the statistical majority). A child whose parents are recently separated or who is from an alternative family structure might not feel confident about describing his or her own family in class. That child's silence could be an example of the subtle ways that our behavior is regulated by certain

(hidden) expectations about what is considered “normal.” This does not mean that all testing is bad; instead it suggests that we need to keep in mind the wider context involved in the creation of tests (and our own involvement with tests) and the way they might be used to mark a child’s progress.

How does this apply to the notion of readiness? A problem with universal ideas about human development is that one way of learning or doing things is seen as normal, or natural, which implies that any other way is automatically less valid. This happens through a logical device known as a *dualism*. In western thinking since the Greek philosopher Aristotle, there has been a tendency to understand the world by dividing ideas into two opposing camps. In other words, knowledge about anything is divided in two (e.g. good versus bad, strong versus weak), with nothing in between. The idea that forms of development can be cleanly divided into the “normal” and “abnormal,” or “natural” and “unnatural” or artificial, is based on a dualism that oversimplifies the diversity of development.

Beliefs about “natural” forms of development have been debated for well over a century. For example, Lewis Terman, the popularizer of the standardized intelligence test, did not think that children should be “pushed” to develop, as that would be like “pruning a tree to hasten its fruit” (Terman, 1905, p. 147; his talents were obviously not in horticulture!). He considered that talents should emerge at their own pace (i.e., when the child was “ready” to display them), and he was critical of school practices that might accelerate the child’s formal acquisition of knowledge ahead of the “natural” unfolding of the child’s learning. Terman later became famous for conducting one of the first large studies of “gifted children,” children he considered to be naturally faster in the development of their learning for their age group. His emphasis on development proceeding at a “natural” pace was based on an assumption that the pace was greatly determined by genetic inheritance. More recently in the field of the gifted and talented there has been wider acknowledgement of the special supports that many talented people have had in their lives (e.g., Bloom, 1985) as well as of the diversity of pathways that people with talent may take (see Mistry & Rogoff, 1985). So the whole notion that there is one universal path of development, that some children fly ahead while others trudge behind, lacks sensitivity to the diversity of cultural expressions of development.

A second problem with theories of development is that they tend to have a narrow focus on the *individual* person. This may be a reflection of a particular Euro-American cultural viewpoint. There have been a number of critiques in psychology about the individualism of U.S. culture (e.g., Sampson, 1984; Scheman, 1983). Rather than focus on interconnections between people and collective aspects of culture, Americans have been described as focusing on the individual as an independent person. This focus downplays the importance of wider social forces such as families and the ways that each person’s achievements may be intertwined with the efforts of others. These criticisms have been around a long time; John Dewey expressed worry about American individualism in the 1920s (Dewey, 1962). Some cultures have a more collective focus on group processes in development. In my own teaching of human development in Aotearoa, New Zealand, Samoan students have commented on the strangeness of studying infancy as a specific period in life, without considering the ways that infant and mother or caregiver may be together most of the time (see also Bradley, 1989).

A third problem in developmental theories is the notion that there is only one straightforward path of *progressive improvement* from immaturity to maturity, from infancy to adulthood. At the turn of the twentieth century, this view was linked with a stereotypical view of Darwin’s theory of evolution (Morss, 1990), which supposedly created a single ladder of all species, with lowly ferns near the bottom and an ascension upwards through reptiles, birds, and mammals to human beings at the top. In fact, Darwin was more interested in a widely branched family tree of species

without assuming that some species were better than others because they had lasted longer (see Gould, 1977). In this stereotypic view, infants are seen as lacking the skills of children, children as lacking the skills of adolescents, and teens lacking the full maturity of adults. John Morss (1990) suggested that Darwin's evolutionary theory has been used to give enormous scientific credibility to the idea that each individual human advances in development over time, from an earlier state that is somehow lacking to a satisfactory maturity.

Stereotyped views of evolution were also used to support the view, earlier in the twentieth century, that gifted children might somehow be the best of what evolution could offer, while children (e.g., with disabilities) who took longer to learn the same ideas might be at an evolutionary disadvantage (Gould, 1977). Elsewhere I have written about both the gendered and cultural biases in contemporary notions of "competence," particularly academic competence, connected with some of these ideas about development (Bird, 1999a). The whole notion that some children are "slower" than others is based on overuse of a single, linear scale to compare children. That linear scale (or ladder) is a misuse of Darwin's evolutionary ideas that were intended to apply only to species, not to individuals.

More recently, Morss (1996) has suggested that one of the ideas underlying the belief that human development has a linear path aimed toward constant progress is its inherent *modernism*. Much has been written about the way beliefs about the world as "modern" are part of our focus on the future, that leads to a valuing of new technologies as the way to overcome problems, of progress at any cost, along with a denigration of "tradition" and any lessening of consumer purchasing. There is a large body of literature criticizing modernism as a discourse with implications for the planet (e.g., Hall et al., 1992). French historian Michel Foucault (1977) used the term *discourse* to refer to the way a particular construction of reality shapes the views recognizable in a society, although the discourse's operations are likely to be subtle and hidden from our perceptions. For example, both Erica Burman (1994) and Valerie Walkerdine (1984) have written about ways that developmental psychology is involved in the regulation of the ways that individual children and families can "be," through the kinds of decisions made by early childhood teachers or family service professionals who draw on the language of developmental theories in reproducing a certain kind of reality with all its consequences. Discourses indicate the ways that the power of language and established habits maintain a certain "obvious" view of reality that seems "natural" and hence difficult to question. We become constrained by such ways of viewing the world, even if we try to identify and resist the discourses that make up our lives, because they are made up of so many little everyday practices, speech, and actions. "The modern" is an example of a discourse that seems ubiquitous even today. Though I can write critically about modernism, I also find it difficult not to get taken in by such views because they are so pervasive and subtle. For example, I might try to get students to avoid racist comments by urging them to take a more "up-to-date, modern" view of teaching, just as I might find myself complementing someone on their "modern" kitchen renovation. This particularly "Western" perspective on change (that everything is getting bigger and better) can be contrasted with a view—perhaps more central in many traditional cultures—that the child is interesting, valuable, and basically alright as she or he is, at any given moment, not just in the sense of a future potential.

In my view there is considerable healthy questioning of modernism in education, particularly in the special education or disability studies field. A focus on speedy learning traps us into a focus on each individual's path of progress as though each student were a unified, knowable quantity—if only the perceptive educational psychologist could determine that child's level of functioning. Doubts about speed have important implications for the notion of readiness. Instead of the teacher (or school psychologist) attempting to track where a child is on some linear scale of development, in order to push them along to advance as quickly as possible, the teacher might

instead be still listening to the unique sounds and watching the ways the child moves in the group of students. The five-year-old who does not yet speak might no longer be described as having abnormalities in development, but as having many ways of communicating and being in the world that are a joy to her parents or caregivers. In other words, that child may be fully appreciated “as she is,” and as being on an unusual yet nonetheless satisfying trajectory through life, even if it does not look like the path predicted in a developmental textbook. In my experience, teachers and psychologists do appreciate children’s uniqueness, but I think there are also likely to be contradictory expectations that the child will improve at a particular pace, to develop, to *fit in* to a display of speech often found in a “typical five-year-old.”

READINESS IN CONTEMPORARY PRACTICE

I do not want to downplay the importance of the concept of readiness for practitioners. I have been involved in teaching and supporting child therapists in training. As one senior clinician said to me, “It’s important for clinical trainees to know what “normal” is so that when a disturbed child comes to them they can know what to do.” I felt uncomfortable being the arbiter of what is “normal” in child development, because there may be so many different cultural views about what is acceptable.

At present I am interviewing small groups of educational psychologists in the field in New Zealand. Such professionals work in a variety of settings, as external consultants for schools or within schools, but their government-mandated focus is on students identified with the most pressing learning or emotional difficulties. (For an overview of special education provisions and their place in the wider education system see New Zealand Ministry of Education, 2004). Instead of using the word *normal* to indicate the child’s fit into a standard classroom, most psychologists used the word *regular*. This simple difference in terminology suggests a focus on the wider situation rather than on an individual child. Rather than concentrate on changing the acting-out or slower-reading child to “fit” the classroom, these psychologists spend much of their time coordinating the links across various groups, such as the extended family, social workers, child and youth services, teachers, principals, teaching assistants, special resource teachers for learning and behavioral difficulties, and perhaps the police. What particular groups will be involved depends on the particular issues for the student, such as whether their current difficulties are described as “behavioral” or disability-related. So the focus is not on changing the child to be more “normal” to fit the “standard” (unchanged) classroom, but on stretching the understandings and expectations of all involved with the student. This idea of a two-way process in which the student better fits the school and the school accommodates to better serve the student is called *inclusion*. However, inclusion is an ideal that can be elusive in practice. I would like to take these professionals’ views on board in next presenting some alternative ways to think about the students’ development and their “readiness” for learning.

ALTERNATIVE CONCEPTIONS OF DEVELOPMENT AND READINESS

We have looked at criticisms of modernism in developmental theories, with its assumption that there will be forward progress over time in the student’s development. Critics have presented some alternative perspectives beyond the modern, which collectively could be called “postmodern.” (Here “post” refers to questioning of modernism rather than to a later, more advanced stage.) A postmodern perspective on development that questions the universal, linear, individual path of development might emphasize a multiplicity of possible paths for a life-course full of interconnections with other people.

There are alternative perspectives on development that eschew universal principles in favor of principles defined flexibly depending on their context, and which include room for local cultural concerns. In our search for an approach to human development that would be sensitive to the multiple perspectives that can be found in Aotearoa, New Zealand, including indigenous cultural views, Wendy Drewery and I (Drewery and Bird, 2004) emphasized a number of developmental principles framed as dualisms that could be used by professionals and questioned at the same time. We built on some of the traditional dualisms that have been considered in developmental theory. For example, “nature” (genetic inheritance) was contrasted with “nurture” (everything else), universal features were contrasted with the local and particular, and the idea of development as change that is continuous and almost imperceptible was contrasted with the view that change is abrupt and noticeable (“discontinuous”). In addition to these, we contrasted single causal descriptions of development (such as saying a child’s attention problems were due to a particular gene) to multiple, multidirectional influences (e.g., considering a variety of factors such as genes, nutrition, parenting expectations, and cultural norms about activity levels for each gender). We also contrasted the linear view of maturation as knowable in advance with a view of development that emphasizes a plurality of outcomes and that acknowledges that we may show different kinds of maturity (and be different kinds of people) in different situations. We argued that this approach, presenting dualisms and then questioning and reflecting on them, is more likely to be sensitive to a range of cultural understandings.

An example of how this might work in practice could be useful here. In my own work as an academic educational psychologist, I attend an annual examiner’s meeting at which graduate students’ final grades are determined. Over the years there has been an encouraging shift in our deliberations. At first there were serious discussions about whether students are “able” or not, whether they have reached the peak of their development as thinkers, as though they could all be compared as being on a single ladder of development from average to gifted. Later, after considerable comment by several staff, there was more complex discussion about mitigating circumstances, about different cultural priorities in the use of time, and about different kinds of motivation. Lately this has gone further, to include humorous references to the regulations that require us to determine the “quality of mind” of students. I think this indicates a wider cultural shift away from the belief in a single, universal ladder of developmental (and evolutionary) progress in which some people end up right at the top and most others a few rungs further down.

I would like to add one more theoretical alternative here, in my search for new perspectives on human development. Recently Roy (2003) argued that educators could explore new creative possibilities by using the work of postmodern philosopher Gilles Deleuze and his collaborator, the political psychoanalyst Felix Guattari. For me there are tremendous possibilities for “development” in this approach. Within the framework of these theoretical ideas, the student is no longer seen as an individual completely knowable or identifiable in terms of family background, test scores, “developmental level,” ethnicity, gender, impairment, or typical behavior or appearance. Instead, all the different aspects of personhood (ontology) are seen as fragments that may be combined in various ways to make a diverse collection or “assemblage” (Deleuze and Guattari, 1987), depending on the desires emergent in a particular culture and era and locality. An example might be the kind of desire teachers may have for the productive, cheerful, rational student who participates confidently in classroom activities; this desire may emerge in various industrialized countries as a specific hope about “good students” and “successful education.” In different countries there may be different desires; for example, the good student sought may be one who demonstrates quiet obedience and respect for elders. (Of course there is great diversity among teachers in every country about these values.)

Another metaphor may be useful here, although it is difficult to pin down concrete examples that follow from Deleuze's philosophy. Instead of the teacher standing beside the road while the runner goes by, there might be a grouping that links the forward movement of all the runners moving in a mob with the bodies of those on the sidelines urging them on. Instead of focusing on the right moment of "readiness" to hand over the sports drink for a single runner, another collection might form around thirst, water, movement, a human reliance on moisture that links us all (literally, genetically) to tortoises and camels living in the desert, to children "being Roadrunner," on and on in an appreciation for water, which is the core of life.

The idea of an assemblage can also be applied to the classroom. There might be linkages across various students in a classroom, for example, in terms of sets of eyes bent studiously over papers on a desk, linked with eyes of all kinds of office workers in jobs requiring similar, literate concentration, and further outwards to the technologies of desks and chairs, to spines that work in particular ways in humans (and related species), a loose grouping that unites a host of disparate things for that moment of concentration. Deleuze might refer to that moment as centered on a desire, rather than in terms of knowledge or skills that some students might lack while others might have in abundance.

Deleuze's view of desire is wide and positive, having possibilities for new beginnings. For me, this very unusual theory offers a view of the "inclusive" classroom that is quite different to that which is based on a grouping of individual bodies that can be placed on a ladder that ascends from "slow learner" to "average" to "gifted." All the eyes focusing well would instead, in a Deleuzian view, be on the same "line of flight" or trajectory toward a certain kind of work, while those drifting off into reverie, or having trouble focusing, might be on a different creative path.

A concrete example could be useful here. A child with autism provides some challenges to developmental theories and expectations about the path to maturity. The "autistic" child staring in fascination at leaves of a tree moving against the window and then at the pattern on the paper on his desk might be part of that "good student" assemblage for a time, as all the eyes in the room are linked to papers on desks, and through to the textbooks writers and all those knowledges that link together; but then eyes move off, the assemblage reshaping into something different. For me, this is not just a fanciful way of talking about differences and education, but also a radically new way of thinking about students' competencies and capacities. It is based on a particular line of philosophical thinking that considers that what a body is capable of is not what the body is made of but what it can do at any particular time. For me, personally, there is sometimes a feeling of despair, as I see a child with autism "lost" on some other planet, laughing to himself at who knows what, showing excitement all of a sudden, "cause unknown." On one occasion I searched in some panic for a boy who had wandered off from a group visiting a house. I rushed out the front door and looked up and down the street, but there was no sign of him. Then I heard some noise on the top floor of the house and went upstairs to find him standing stock still, seemingly staring "at nothing." Then a wise and special educator suggested to me, "it's the clock: I think he's staring at the clock." Why would someone who does not speak or "tell time" look at a clock for several minutes? If I turn to Piaget or Vygotsky I am left only with some lack in the child's development of knowledge. But there are other possibilities, linking clocks/time/ticking noises, the little machine that we all stare at (collection of eyes pointed to the display), and then all of a sudden we speed up, picking things up and running for the door (hands, legs, speed, tick, tick, such a precise little sound, like the refrigerator slowing down on a hot day, like the car engine when it is turned off)—in other words, perhaps, making for the moment a larger, more encompassing assemblage that includes a range of things across different bodies and other objects. To consider clocks, time, and rushing movement is to begin to bring together an interesting collection that

could include the work ethic, the industrial revolution, the globalization of the world economy, and the teacher accountability movement; in other words a range of linked items from the very small object to larger social forces.

WHERE TO FOR READINESS?

I do not mean to imply here that a focus on development is wrong, because in most cases a single teacher may be working with a number of students and attempting to give each child tasks that “stretch” them beyond the skills and ideas already accomplished. It is the larger cultural “script” about appropriate times and ages that I think we could reflect on more tentatively and with greater openness.

So what does this mean for a perspective on developmental readiness? Most teachers have probably already experienced some sense of “postmodern” fragmentation in dealing with students who might differ from day to day depending on all kinds of things outside the school’s doors. Janey, a middle-class Puerto Rican ten-year-old who was so involved in reading a book about insects yesterday, may be listless, lost in some unknowable thoughts today, while fourteen-year-old Damien, from a poor German/English background, may show intense enthusiasms about sports that are never seen in his math classes. Instead of seeing these children as bodies moving up and down daily on a hierarchy of school success (dipping more over time toward the “dropout” end), their passions, desires, and knowledges could be part of a larger assemblage beyond an individual body. Janey instead is hooked into the collective world of insects and forest ecology, while Damien is linked with the eyes and twitching hands and feet of soccer players on the field or on a videogame screen.

Let’s return to the teacher, assisting the student in a footrace from the sidelines, on standby with the water or orange juice, trying to find just the right moment of “readiness” in the runner’s progress to pass on what was needed to speed the runner’s progress. Given some of the issues raised by postmodern and cultural questions about development, this imaginary teacher might leave the runners and see herself choreographing a village fair or school sports day in which there are multiple activities going on at the same time, with all kinds of different goals and achievements. Instead of focusing on an individual on a solitary path of development, the teacher might instead be part of a team of adults that includes parents and caregivers, extended family, social workers, ministers, educational psychologists, medical staff, youth aid workers and perhaps many others who know these particular students and their siblings. All these adults might be there on the school playground among students of all ages—such as might be painted by Pieter Breughel, the sixteenth-century Dutch painter of crowded village scenes. This may be a picture of school life you already have in mind, quite in keeping with the hectic nature of life these days, rather than the soft-focus lens aiming toward the single teacher and student working together.

Of course at the end of the day teachers and school psychologists must write reports commenting on the progress of individual students, perhaps suggesting interventions to students and their parents and caregivers. This reality of individual scrutiny, often with comparison to some linear timeline of developmental appropriateness, cannot be waved away so easily. It is difficult to know what Deleuze and Guattari might have said to educational psychologists, but their work is—if anything—unashamedly pragmatic and cognizant of the constraints people operate under. One possibility is that in the writing of the report, or in the filing of the case notes on a difficult student, there is much more than a positive statement about a student’s potential. There could also be greater openness, and acceptance of the mysterious unknowability of all the lines of flight that

might characterize the different developmental paths people happen along. Writing that report could be seen in a negative light, as taking all those flying fragments, those fragile possibilities, and turning them into rigid concrete. Deleuze and Guattari might then point to new lines of flight taking off from that very moment, whole new collections of interconnected possibilities emerging under, through, beside the concrete as the student looks at another student, and the teacher, and smiles. It's really just the beginning of the story, but one often very difficult for any of us to see.

ACKNOWLEDGMENT

I would like to thank Carol Hamilton for helpful comments on an earlier draft of this chapter.

REFERENCES

- Baillargeon, R., and DeVos, J. (1991). Object permanence in young infants: Further evidence. *Child Development*, 62, 1227–1246.
- Bird, L. (1999a). Feminist questions about children's competence. *Educational and Child Psychology*, 16(2), 17–26.
- . (1999b). Towards a more critical educational psychology. *Annual Review of Critical Psychology*, 1(1), 21–33.
- Bloom, B. S. (Ed.). (1985). *Developing Talent in Young People*. New York: Ballantine.
- Bradley, B. (1989). *Visions of Infancy*. Cambridge: Polity Press.
- Burman, E. (1994). *Deconstructing Developmental Psychology*. London: Routledge.
- Deleuze, G., and Guattari, F. (1987). *A Thousand Plateaus: Capitalism and Schizophrenia* (B. Massumi, Trans.). London: Athlone.
- Dewey, J. (1962). *Individualism Old and New*. New York: Capricorn.
- Drewery, W., and Bird, L. (2004). *Human Development in Aotearoa 2*. Sydney: McGraw-Hill.
- Foucault, M. (1977). *Discipline and Punish: The Birth of the Prison* (A. Sheridan, Trans.). New York: Pantheon.
- Gesell, A., & Ilg, F. L. (1949). *Child Development*. New York: Harper and Row.
- Goodnow, J. J., Cashmore, J., Cottons, S., and Knight, R. (1984). Mothers' developmental timetables in two cultural groups. *International Journal of Psychology*, 19, 193–205.
- Gould, S. J. (1977). *Ontogeny and phylogeny*. Cambridge, MA: Belknap/Harvard University Press.
- Hall, S., Held, D., and McGrew, T. (1992). *Modernity and Its Futures*. Cambridge: Polity/Open University.
- Mistry, J., & Rogoff, B. (1985). A cultural perspective on the development of talent. In F. D. Horowitz and M. O'Brien (Eds.), *The Gifted and Talented: Developmental Perspectives* (pp. 125–148). Washington, DC: American Psychological Association.
- Morss, J. R. (1990). *The Biologising of Childhood: Developmental Psychology and the Darwinian Myth*. Hove: Erlbaum.
- New Zealand Ministry of Education. (2004). A summary of Special Education Services. Retrieved March 1, 2006, from <http://www.minedu.govt.nz/index.cfm?layout=document&documentid=7325&indexid=7954&indexparentid=6871>
- Roy, K. (2003). *Teachers in Nomadic Spaces*. New York: Peter Lang.
- Sampson, E. E. (1984). Deconstructing psychology's subject. *The Journal of Mind and Behavior*, 4(2), 135–164.
- Scheman, N. (1983). Individualism and the objects of psychology. In S. Harding and M. B. Hintikka (Eds.), *Discovering Reality: Feminist Perspectives on Epistemology, Metaphysics, Methodology, and Philosophy of Science* (pp. 225–244). Boston: D. Reidel.

- Terman, L. (1905). A study in precocity and prematuration. *American Journal of Psychology*, 16 (2), 145–183.
- Walkerdine, V. (1984). Developmental psychology and the child-centred pedagogy. In J. Henriques, W. Hollway, C. Urwin, C. Venn, and V. Walkerdine (Eds.), *Changing the Subject: Psychology, Social Regulation and Subjectivity*. London: Routledge.

Educational Purpose

CHAPTER 53

Foundations of Reconceptualized Teaching and Learning

RAYMOND A. HORN JR.

The educational and psychological foundations of reconceptualized teaching and learning are grounded in the traditions of postpositivist thinking as exemplified by poststructuralism, postmodernism, critical theory, critical pedagogy, cultural studies, critical pragmatism, cultural studies, and postformalism. In addition, aspects of cognitive science and psychology are part of the foundation of a reconceptualized teaching and learning. The purpose of this chapter will be to synoptically describe the positivist foundation of traditional education and psychology, highlight the essential foundations of reconceptualized teaching and learning, and discuss how this postpositivist foundation has influenced the reconceptual view of teaching and learning.

POSITIVISTIC FOUNDATIONS OF TRADITIONAL TEACHING AND LEARNING

In the traditional perspective, which currently dominates education through No Child Left Behind (NLCB), the determination of valid knowledge, appropriate inquiry methodology, and effective knowledge acquisition is grounded in the traditions of Cartesian dualism, empiricism, and positivism. Generally, these rationalist traditions promote the assumption that physical and human phenomenon can be objectively studied and manipulated with a great degree of certainty when rational thinking and science are used to uncover the causes and effects that underlie the phenomena.

Initially, in a rationalist attempt to reconcile faith and reason, Rene Descartes theorized that the subjective reality of the mind and the objective reality of matter were forever separate. Building upon Descartes' theory, the classical empiricists promoted the idea that true or objective knowledge can only be uncovered through sensory experience. The radical dualism of Descartes separated knowledge into a binary classification of a priori knowledge, or knowledge of innate ideas that is acquired through the mind's employment of reason, and a posteriori knowledge, or knowledge of the objective world that is acquired through observation. Cartesian dualism further resulted in the bifurcation of knowledge and human activity into oppositional categories, such as "fact/value, objective/subjective, rational/irrational, analytic/synthetic, scheme/content, theory/practice, ends/means, description/prescription, and logic/rhetoric that have long characterized modern, analytic, and scientific thought" (Cherryholmes, 1999, p. 42).

Later empiricists theorized that the only significant knowledge was the knowledge of the objective world that could only be gotten through one's senses. British empiricists such as John Locke concluded that the mind is a blank slate upon which experience writes, thus further valuing the objective over the subjective as posed by Cartesian dualism. The empiricist position was strengthened by the work of scientists such as Isaac Newton and Francis Bacon, who extended the ability to objectively measure natural phenomenon through the invention of scientific instruments and constructed scientific procedures that further facilitated the acquisition of objective knowledge about the material world.

In the United States, this empirical view is currently promoted in the definition of scientifically based research in NCLB. NCLB explicitly states that scientifically based research is that which employs systematic, empirical methods that draw on observation or experiment. This emphasis on empirical research values formal knowledge of this type over knowledge that is not empirically derived, thus perpetuating such epistemological binaries as objective/subjective, rational/irrational, and theory/practice. Besides the NCLB mandate, educational preparation and practice that distinguishes between expert and practitioner or scholarly and practitioner knowledge is also grounded in the empirical tradition.

Two significant aspects of Newtonian/empirical thinking are determinism and reductionism. Determinism is the belief that all actions or effects are determined or caused by a preceding event or condition. Therefore, by using scientific methods, an individual can identify the causes of a phenomenon and by controlling those causes can predict with certainty the outcome or effect. Determinism promotes a linear view of activity from cause to effect, not from effect to cause. This activity sequence is important when deterministic thinking is applied to human activity. In deterministic thinking, "we do not need to try to discover what . . . plans, purposes, intentions, or the other prerequisites of autonomous man really are in order to get on with a scientific analysis of behavior" (Skinner, 1971, pp. 12–13). In other words, the affective nature of the individual (i.e., feelings, thoughts, desires) is not a necessary area of investigation. As Skinner later hypothesized, individuals are not free, purposeful, and responsible, but objects that are motivated by causative agents or environmental stimuli and reinforcement.

Deterministic thinking denies the need to understand the larger context of a complex phenomenon that includes human subjectivity. This kind of thinking is also reductionistic in its proposition that, by reducing the whole to its parts for scientific study, an individual can attain true knowledge about contextually complex phenomenon. Therefore, deterministically, the understanding of reality is a deductive process. Empiricists readily apply deterministic thinking that successfully uncovers natural laws on a macrophysical level to human activity that contains a subjective component. This belief is based on two assumptions. "The first is the belief that the *aims*, *concepts*, and *methods* of the natural sciences are also applicable in social scientific inquiries. The second is the belief that the model of *explanation* employed in the natural sciences provides the logical standards by which the explanations of the social sciences can be assessed" (Carr and Kemmis, 1986, p. 62). In other words, like nature, value-neutral immutable laws govern society, and the same scientific processes can be used to understand both.

Once again, in the United States, mandates such as NCLB represent deterministic and reductionist thinking when they identify the only appropriate inquiry methods as those that seek to understand educational phenomena in a cause-and-effect context in which the complex nature of the phenomena are reduced to decontextualized variables. Of course, the further assumption is that the only valid knowledge is knowledge that is derived through this reductionist process, and that there is a high probability of a cause-and-effect relationship.

During the seventeenth and eighteenth centuries, known as the Age of Enlightenment, scientific inquiry became the preeminent means to uncovering knowledge. In the modern era, from this time through the twentieth century, Cartesian–Newtonian thought became the dominant foundation of

Western political, economic, social, and cultural activity. Beginning with the theory of Auguste Comte (1798–1857), empirical–rational views of reality coalesced into a philosophical theory or doctrine called positivism. The essential belief of positivism, grounded in empirical thinking, is that only scientific knowledge is valid, and that other knowledge represented by nonscientific methods of inquiry, religion, metaphysics, and other nonpositivistic ways of viewing reality are at best suspect but most likely inaccurate.

In the early twentieth century, proponents of positivism attempted to boost the view of science as the only way that leads to true knowledge. Through the verification principle, the Logical Positivists connected all meaning to empirical verification. This resulted in the view that if empirical verification was lacking, then meaning was erroneous. This view led to the belief that only experimental quantitative methods could lead to true objective knowledge.

Related to this argument is the modernistic view of the value-neutral nature of scientifically generated knowledge. Since scientific procedures are objective, positivists argue that scientific procedures, scientific knowledge, and individuals who employ these procedures are not influenced by political, economic, cultural, or ideological factors. In addition, positivists argued that scientific thinking should be applied to political decision making, thus creating the potential for positivism, specifically scientific thinking, to be used as a social control measure.

The characteristics of knowledge acquisition within the empirical, positivistic, and modernist perspective align with the view that expert-derived scientific knowledge can be accepted with certainty, is value-neutral, can be discovered by an individual who is scientifically skilled, and can be transmitted by experts to others. In the United States, the educational research infrastructure that is being constructed through NCLB is grounded in this view of knowledge acquisition. Federally funded organizations such as the U.S. Department of Education's Institute of Education Sciences (IES) and the What Works Clearinghouse (WWC) function to promote empirical research and educational decision making that is exclusively based upon this view of knowledge and inquiry. The IES and the WWC have been established to promote scientific evidence, in the positivist tradition, as the only trusted source of knowledge for educational policy and practice.

During the early twentieth century, modernistic thinking in the form of technical rationality became entrenched in American education. The term modernism is associated with the time period "where the motivation to be rational, logical, scientific, and utility-maximizing in seeking progress, profits, accountability, and value-added outcomes produces behavior where solutions precede the search for problems, which they, our previously identified solutions, can answer" (Cherryholmes, 1999, p. 88).

The modernistic social efficiency movement that promoted the scientific management of education introduced the technical rationality of the business community into American education. During this movement, the structure of education became hierarchical and hegemonic in order to better promote the specialization and bureaucracy found in the business community. The implementation of technical rationality created a need for control of every aspect of the educational process, the standardization of every task, planning and control by management departments instead of individuals, detailed record keeping, specialized roles in and precise execution of curriculum and instruction, and assessment procedures that guaranteed performance and accountability to the curricular and instructional decisions of the planners.

In the early 1920s, as a backlash to the Progressive influence in education, the essentialist movement promoted the teacher as the manager of the classroom to ensure more student discipline and work. In this context, just as theory and practice were separated, teachers became practitioners separate from others who as experts and scholars would generate the theory and policy that teachers would implement. Also, during this time period, the progressive influence of John Dewey gave way to the educational ideas of the behavioral psychologists led by Edward Thorndike. The increasing influence of Thorndike situated the empirically driven field of psychology as the

dominant influence in education to the present, and solidified the separation of theory and practice and scholars and practitioners.

Historically and currently, the dualistic aspect of technical rationality is evident in the quantitative versus qualitative binary in educational research, in the separation of expert and practitioner knowledge, in the measurement of intelligence to categorize students, and in the sorting of students into mainstream and special-education categories. Likewise, the technical rational emphasis on scientific validation and predictability is evident in the extensive use of standardized testing and other measurement tools such as grade point average and the Carnegie unit. Cause-and-effect determinism guides the use of behaviorally oriented classroom management systems, the use of extrinsic rewards as motivational devices, programmed instruction, and teacher-proof materials in an attempt to technically control the variables that affect student learning. In addition, the regulation and restriction of practitioner and student input into their teaching and learning is representative of a deterministic disregard for human subjectivity.

Also, the modernistic emphasis on reductionism is evident in the separation of knowledge into discrete and separate disciplines as well as in the promotion of teaching as a disciplinary rather than interdisciplinary activity. There is a reductionist perspective in the specialization of roles and knowledge within a rigid and hegemonic hierarchical organizational structure. In describing a modernistic bureaucracy, Cleo H. Cherryholmes (1999) provides an apt description of the culture of a technical rational educational system, a system “that is rational and hierarchical; that has clear lines of authority, fragmented tasks, and a body of expert knowledge and skills in the hands of administrators and staff; and where systematic reforms can be implemented and evaluated” (p. 85).

Within a technical rational environment, educational culture mirrors the hierarchical structure. The separation of stakeholders into well-bounded different groups (i.e., administrators, teachers, students) as well as the role delineation of individuals within these groups (i.e., superintendents, principals, assistant principals; department chairs, grade-level distinctions, and teacher specialties; student grade levels, tracks within grades, and vocational preparation groups, such as college, business, or vocational preparation) facilitates the development of balkanized and individualized cultures within the school. Finally, the dominance of technical rationality is facilitated by how all of these components are interconnected and mutually reinforce a technical rationality perspective.

In modernistic technical rational school systems, the rigid differentiation of roles along with individualized and balkanized culture results in educational communities that sharply mirror the nature of community found in industry and business. Community vision and mission are bound to corporate goals, and the reproduction of the corporate culture is an essential activity that mediates all other community activity. Individuals within the technical rational community tend to be motivated to work together primarily because of self-interest with idealistic and spiritual motivators subsumed by the eventual need to comply with the goals of the organization. Ironically, many educational institutions have idealistically grounded vision and mission statements constructed by a representation of the different stakeholders. However, their implementation tends to be pragmatically shaped by less than idealistic external pressures, and often become subverted by the reproductive activity of the technical rational culture. Contractual relationships are the norm and guide stakeholder activity within the community. Seldom is stakeholder activity the result of a shared covenant whose motivational power transcends all stakeholder groups, and whose principles or spiritual focus binds them in common purpose and activity.

POSTSTRUCTURAL AND POSTMODERN FOUNDATIONS OF RECONCEPTUALIZED TEACHING AND LEARNING

In contrast to the positivism of modernistic education, poststructural and postmodern thinking have provided analytical strategies and methods that facilitate the critical interrogation of

modernistic education. A critical interrogation of education is an essential activity if the complexity of education is to be engaged. Poststructural and postmodern analysis not only uncover the inconsistencies, flaws, contradictions, and exclusions found in education, but also facilitate an awareness of educational complexity as opposed to the simplistic reductionism of traditional understandings of education.

While structuralism created an awareness of wholeness and the systemic relationship between the individual parts of a phenomenon such as education, poststructuralism has enhanced the structuralist methods that are used to analyze the multiple and hidden meanings found in language and discourse practices, and subsequent human activity and organizations. The structuralist and poststructuralist understanding that the meanings that are created through discourse are relational provides the understanding that the construction of meaning is influenced by other entities. In relation to education, this means that the discrete parts of an educational system cannot be understood by isolating them and by denying their interconnection with the larger systemic context. Another important contribution to the reconceptual process is the recognition that institutional structures limit and control the choices that people have in constructing meaning.

Michel Foucault has provided an understanding of the impact of historical power arrangements on the nature of discourse. Through the practice of countermemory the relationship between past and present is better understood through Foucault's critical reading of how the past and present inform each other. Recognizing that historical periods and geographic locations are dominated by discourses, poststructural analysis allows an interrogation of authority and of how that power is arranged by that authority.

Another poststructural contribution to understanding human activity is Jacques Derrida's concept of deconstruction. In this concept, when subjected to critical analysis, all texts deconstruct, or disclose the inconsistencies, flaws, internal differences, repressed contradictions, and exclusions in their fundamental premise. These and other poststructural methods of analysis are important strategies that can be used in the reconceptualization of teaching and learning.

Postmodernism refers to an intellectual and cultural critique of modernist society, and challenges the existence of any foundational knowledge that individuals would go to in order to find truth (i.e., religion, political ideology, scientific theories). Postmodernists argue that all social reality, human constructions represented through language, discourse, and symbolic imagery, employ analytical processes that problematize foundational knowledge. As antifoundationalists, they believe that without a foundation or a center to attach oneself, the meanings created by individuals are seen as essentially relative to the individual and the cultural influences on the individual.

CRITICAL THEORY, CRITICAL PEDAGOGY, AND CULTURAL STUDIES AS FOUNDATIONS OF RECONCEPTUALIZED TEACHING AND LEARNING

Historically related to the philosophies of Hegel and Marx, critical theory is not a uniform or unified approach in the critique of social and political phenomenon, but rather a changing and evolving critique in light of new insights, problems, and social circumstances. Critical theory originally referred to the theoretical work of the Frankfurt School, which consisted of scholars such as Max Horkheimer, Theodor Adorno, Herbert Marcuse, and later Jurgen Habermas. Their ideas became a significant part of the theoretical base of the New Left in America during the 1960s. In their critique of Marxist theory, they laid the groundwork for an understanding of the diverse forms of oppression such as race, gender, class, sexual, cultural, religious, colonial, and ability-related concerns. Contemporary forms of critical theory generally coalesce in their desire to promote critical enlightenment or the awareness of competing power interests between groups and individuals; critical emancipation or the attempt by individuals to gain power over their lives;

the rejection of Marxian economic determinism or the recognition that there are multiple forms of oppression; a critique of technical rationality; critical immanence or going beyond egocentrism and ethnocentrism to build new forms of social relationships; and a reconceptualized critical theory of power that interrogates hegemonic relationships, ideological positions, and linguistic/discursive power (Kincheloe, 2004). Integral to critical theory is the necessity to uncover the oppressive nature of one's own actions through critical self-reflection.

One recent application of critical theory to an investigation of the production of culture has resulted in cultural studies. The field of cultural studies involves the critical awareness and investigation of high and popular culture as contested sites in the reproduction of ideological, economic, and social interests, and in the oppressive consequences of this reproductive activity. An analysis of how culture is produced, distributed, and consumed creates an awareness of the oppressive nature of the hidden curriculum that pervades all human activity. In order to understand how power and domination play out in a society's culture, proponents of cultural studies apply an eclectic array of inquiry methods in the critical analysis of mass media and popular culture. Through the use of these methods, individuals who engage in cultural studies critically interrogate the actions of mass media and corporate structures that silence the voices of subordinate groups and individuals.

In the 1970s, critical theorists began the reconceptualization of education as another site of political struggle in the reproduction of ideological interests. Grounded in the radical pedagogy of Paulo Freire, critical scholars pioneered the idea of critical pedagogy, or the view of education as an empowering activity that would facilitate individuals to resist the oppressive social, political, and economic structures encountered in their lives. In advancing the idea of critical pedagogy, the purpose of education was redirected to the emancipatory goals of Freire and to the Deweyian promotion of a participatory democracy. Pedagogy was no longer merely about teaching, but was transformed into a critical project with the additional goals of creating critical awareness through a critical literacy and promoting resistance to oppression. Therefore, this radicalized pedagogy is grounded in the promotion of social justice, an ethic of caring, and participatory democracy. To accomplish this goal, critical pedagogy employs a diversity of knowledge bases and research methods such as African American studies, feminist perspectives, indigenous knowledge, critical theory, poststructural analysis, postmodern deconstruction, phenomenology, semiotics, discourse analysis, psychoanalysis, critical hermeneutics, and queer theory. Through the use of these eclectic epistemologies and methodologies, the inherent complexity of education can be better understood.

CRITICAL PRAGMATISM AS A FOUNDATION OF RECONCEPTUALIZED TEACHING AND LEARNING

Building upon Deweyian pragmatism, postpositivist inquiry, and critical theory, critical pragmatism promotes the pragmatic examination of the consequences of our actions through critical and postpositivist lenses of critique. Understanding that our consequences are "socially constructed within contexts that are political, economic, cultural, ethnic, socially stratified, linguistically diverse, and gendered" (Cherryholmes, 1999, p. 36), critical pragmatists are concerned about the consequences of their actions in relation to "the context of power, ideology, and history" (p. 37). Cherryholmes describes critical pragmatism as fallibilistic, contextual, contingent, and holistic. In other words, critical pragmatists understand that consequences may include unanticipated and unappealing outcomes, that how things will work out depends on the different context of each situation or locale, that there is no assurance that things will work out because of the changing context, and that we cannot view a situation as its parts but instead must engage the whole context. In addition, critical pragmatists must critique their own positionality so that all of the possible consequences become apparent.

Within a critical pragmatic perspective, technical definitions of participatory research that limit the questions that educators and students can pose about their problems and the potential consequences of their actions are replaced by emancipatory and pragmatic concepts such as teachers as researchers, students as researchers, and administrators as moral leaders. In these new roles, educators and students engage in problem posing and problem solving with the understanding that the knowledge that they produce and critique is pragmatically relevant to their teaching and learning, to their own personal experience, and to the communities in which they live.

POSTFORMALISM AS A FOUNDATION OF RECONCEPTUALIZED TEACHING AND LEARNING

In opposition to the highly structured and formulistic thinking of technical rational education, postformal thinking reconceptualizes teaching and learning as creative activity whose purpose is to facilitate teacher and student engagement of the complexity of the educational process. Two questions need to be answered in order to understand the postformal nature of a reconceptualized teaching and learning. How is postformal thinking different from formal thinking? What is the role of postformal thinking (Kincheloe et al., 1999) in reconceptualized teaching and learning?

First, it must be recognized that formal and postformal thinking are fundamentally different ways of viewing natural and human phenomenon. As previously described, formal thinking is characteristically reductionist in its attempt to exclusively reduce inherently complex social phenomena into discrete parts whose cause-and-effect relationships can be determined and predicted through an objective scientific process that is value free. In addition, knowledge is viewed as information that exists apart from human cognition and therefore requires the expertise of individuals who through their technical training can discover knowledge and pass it along to others. This reliance on experts creates a social hierarchy that through its controlling organizational structure fosters arrangements of power that have the potential to be oppressive and marginalizing to individuals who are lower in the hierarchy or have views that differ from those who control the structure. Another outcome is the promotion of specialized roles, standardized processes, and generalized application of specific knowledge, skills, and values to all individuals and schools without a regard for the contextual differences of individuals, schools, and communities. In this formal context, theory and practice, as well as scholars and practitioners, become separate entities connected only within the rules established by those in control. Uncertainty is rendered undesirable, uncontrolled variables must be statistically controlled, and complexity is problematic if it cannot be reduced to parts that can be scientifically managed.

In opposition to this formal view, postformal thinking views human phenomena holistically. All human activity, including the production of knowledge, is viewed ecologically and systemically in that understanding one aspect of this activity requires a concomitant understanding that the activity under investigation is dynamically interconnected and interrelated to all other parts of the human activity system. The significance of this holistic view is that to gain a deep and broad understanding of the activity in question and the consequences of our conclusions about the activity, a simultaneous engagement of the whole system in which the activity is embedded is required. Postformal thinking recognizes the value of reductionist analysis as one technique in knowledge production but further requires this analysis to be critically interrogated within the larger systemic context. Just as in the investigation of natural phenomena, such as weather systems, the investigation of social phenomena requires a commitment to recognize and engage the systemic complexity of which the phenomenon is a part.

The holistic orientation of postformal thinking recognizes that there are patterns of human activity that once detected can expand our understanding of social problems within this activity. Some superficial patterns are easily detected but offer only a limited understanding of the problem

and the consequences of our solutions. In this case, because of our narrow understanding, the solutions that are employed may have a minimal positive effect or even exacerbate the problem. However, through a postformal inquiry into the problem, deep and hidden patterns are uncovered that more substantially increase our understanding and create the potential for more effective action. By detecting and engaging these deep and hidden patterns in which the problem is nested, we are now becoming aware of the greater complexity of the problem and can construct solutions that will accommodate this larger context. The use of postformal strategies in pattern detection allows relationships between seemingly unconnected phenomena to become apparent. For instance, a formal investigation into ineffective education in an urban setting will focus on easily detected patterns involving curriculum, instruction, assessment, funding, resource allocation, teacher quality, inadequate facilities, and other easily detected conditions. However, a postformal inquiry will uncover how these conditions are connected to pervasive economic, political, social, and cultural policies and actions that result in patterns of social organization and behavior that are manifested in specific patterns of resegregation, systemic poverty, a lack of health care for segments of the population, pervasive crime, discriminatory economic policies, political and economically directed media representations of schools and individuals, and educational policies designed to achieve outcomes that benefit those who are in control at the expense of those with little power. In relation to the problems of urban education, an awareness of this more complex relationship of seemingly unconnected individuals, policies, and actions allows us to understand that a reductionist focus on standards and personal accountability will not alleviate the problems of urban education, and in actuality mask the complicity of others, who are outside of the urban education context, in this problem. In this case, the problems of urban education are seen as directly connected to larger patterns of economic, political, cultural, and social policies. In turn, this systemic awareness requires those who seek solutions to move beyond an understanding that results in solutions that are enervating and ineffective because of their simplicity, and to engage their greater awareness of the complexity of the problem by formulating equally complex solutions.

The detection of these less obvious patterns requires an ongoing expansion of our awareness of the context and contextual connectivity of any social problem. As just explained, a situation such as the problems of urban education exists within the urban context; however, this context is both unique and connected to other contexts. To understand what this means requires a postformal understanding of contextualization. When individuals postformally inquire into the context of a situation, they engage issues such as place, culture, and power arrangements. Our understanding of a situation is dependent upon our understanding of the context of the situation. For instance, urban, suburban, and rural places are different. The social and cultural norms, roles, and values of a place mediate and inform what people know and how people act within the context of their place. The meaning that they construct of the purpose and functioning of education is dependent upon the social and cultural characteristics of the place in which they live. Therefore, if education is to be an important, effective, and valued part of their lives, it must reflect the context of the place in which it occurs and the uniqueness of the individuals in that place. This postformal understanding is in opposition to the standardization and generalization of educational curriculum, instruction, assessment, and classroom management that is characteristic of formal thinking. A relevant educational psychology must accommodate the unique characteristics of the individuals and the place in which education occurs. Rigid educational strategies based upon generalized behavioral, developmental, and cognitive psychological research that essentializes educators and students cannot provide authentic, relevant, and effective education. In addition, there must be a postformal recognition that besides scientific knowledge other types of knowledge must be valued. Knowledge that is indigenous to the local place and culture as well as knowledge derived from faith and metaphysics is valued as an important aspect of the educational context. Likewise, reason and emotion are no longer separated as binary constructs, but viewed as interrelated expressions

of the human experience. Knowledge mediated by emotion is valued as much as knowledge that is mediated by reason in the context of a postformally aware educational environment.

A postformal understanding of contextualization also includes an understanding of how power arrangements shape our lives. What we know, what we are expected to know, who we are, and who we are to become are all meanings that are informed and mediated by how power is arranged within the place that we live. As previously discussed, reconceptualized teaching and learning is inherently critical in nature. This criticality is also foundational to postformal thinking. When examining context to uncover hidden patterns of social activity, postformalists seek to understand how power is arranged within a place, and consequently how that arrangement empowers, silences, or oppresses those in that place. In any place, whether it be a city, a school, or a classroom, the arrangement of power is a context that needs to be critically interrogated. One aspect of this interrogation involves an examination of the educational psychology, which is the foundation of what happens in the educational setting. Postformalists recognize that traditional educational practice and its psychological foundation promotes specific power arrangements that seek to establish or perpetuate hierarchies of control. A reconceptualized educational psychology utilizes postformal strategies to critically interrogate educational practice and its psychological foundation with the explicit intent to promote a socially just and caring educational experience, and to facilitate the development of critically aware individuals who will participate in the promotion of a democratic society. This outcome cannot occur without an ongoing attention to the context of power.

Related to the postformal attention to context is recognition of the necessity to explore the origins of the meanings that we hold. In a postformally aware educational environment, individuals understand the necessity to critically probe the origins of what we know, the process of our knowing, our attitudes, and our values. Postformalists understand that social and historical forces mediate all our personal knowledge and the collective patterns of which we are a part. Simply, these social and historical forces are a significant contribution to our construction of the present. An understanding of the origins of what we believe occurs through processes of critical reflection and reflexion. An understanding of the connections of the past, present, and future is the outcome of our critical thinking about why the things that are around us and influence us are the way that they are. In addition, critical reflexion is when we turn our critical gaze inward and interrogate the origins of our own beliefs, actions, and the thought processes that we use. An essential aspect of this etymological inquiry is the ability to ask questions—questions that will uncover problems and aspects of problems that are undetectable without this critical interrogation.

A final way in which postformal thinking differs from formal thinking is in the inquiry process. Formal thinking requires adherence to the scientific method, which is too often narrowly defined as quantitative research. The insistence of postformal thinkers to continuously expand the complexity of a situation through the exploration of origins, context, and patterns requires the use of any research epistemology or methodology that can lead to a better understanding of the complexity of a situation. Because of this purpose, postformal inquiry utilizes an eclectic array of research knowledge and methods. Poststructural and postmodern methods are situationally applicable along with both quantitative and qualitative strategies. As postformal researchers, individuals function as bricoleurs who utilize these diverse methods and strategies to creatively uncover the contexts and patterns that are necessary to engage the complexity of educational phenomenon. Unlike formal researchers who focus on the acquisition and analysis of knowledge within the constraints of the rules of positivistic research, postformal researchers use their creativity in the employment of individual research methods and in the mixing of methodologies to enhance the potential of the inquiry process. In addition, this allows the postformal researcher to go beyond a simplistic cause-and-effect understanding of a phenomenon, and to allow this research process to synergistically construct more complex meaning.

In conclusion, those individuals who utilize postformal thinking to reconceptualized teaching and learning are neither scholars nor practitioners but are scholar-practitioners. Unlike the artificial positivist separation of experts/scholars and practitioners, postformal inquiry requires the integration of scholarship and practice. The effective engagement of complexity requires both the formal knowledge of scholarship and the experiential knowledge of the practitioner. By drawing from both sources, the postformal inquirer is able to become critically aware and literate, and from this position perform a critical reading of any phenomenon. Additionally, in the tradition of critical pragmatism, scholar-practitioners are also well positioned to take the social actions necessary to promote social justice, an ethic of caring, and participatory democracy.

REFERENCES

- Carr, W., and Kemmis, S. (1986). *Becoming Critical: Education, Knowledge and Action Research*. Philadelphia: Falmer Press.
- Cherryholmes, C. (1999). *Reading Pragmatism*. New York: Teachers College Press.
- Kincheloe, J. L., Steinberg, S. R., and Hinchey, P. (Eds.). (1999). *The Post-formal Reader: Cognition and Education*. New York: Garland Press.
- Skinner, B. F. (1971). *Beyond Freedom and Dignity*. New York: Alfred A. Knopf.

CHAPTER 54

The Diverse Purposes of Teaching and Learning

RAYMOND A. HORN JR.

Unlike the current federal proposition, as seen in No Child Left Behind (NCLB), that teaching and learning is a complicated process that can be controlled through the identification and implementation of curriculum, instruction, and assessment formulas and prescriptions, teaching and learning is more than complicated, it is complex. There is a significant difference between complicated and complex. Complicated infers that due to a plethora of variables, simple solutions to a problem will not be found, and, therefore, extensive validated research is necessary to uncover solutions and enact implementation processes that will bring the problem under control and eventually to an acceptable resolution. In seeing problems as complicated, individuals of this perspective believe that the variables contributing to the problem can be identified, organized into groups, and controlled through standardized procedures that are applicable to all individuals and environments. In this context, the federal government has identified one research paradigm, quantitative research, that is based on inferential statistical longitudinal studies, as the research method that can effectively identify the salient variables that contribute to specific educational problems. Once identified by research experts, other experts can construct programs and processes that will remedy a specific educational problem. For instance, if children are not doing well on internationally competitive standardized tests in mathematics, math programs can be expertly developed and subsequently required for all math instruction. To ensure compliance with the expert-derived programs, curriculum, instruction, and assessment is packaged as a teacher-proof, scripted educational activity. One outcome of this control is that good teaching and effective learning are now defined by the teachers' ability to not deviate from the package, and the students' ability to learn within the constraints of the package. However, this scenario along with its consequences is quite different when educational problems are viewed as complex.

Likewise, complexity also infers that due to a plethora of variables, simple solutions will not be found, and that extensive validated research is necessary to uncover solutions and enact implementation processes that will bring the problem under control and eventually to an acceptable resolution. However, individuals who see problems as complex additionally recognize that there is a larger context and hidden patterns that greatly expand the dynamic interrelatedness of the variables to the point where selected research methods and individuals cannot understand the whole complex phenomenon. Individuals who view education as complex believe that without

expanding the inquiry process to include a diverse variety of research methods and individuals, any attempted solution will fail, or even exacerbate the problem. Another important difference between complicated and complex is the understanding that things change—often quickly change. In recognizing change as a factor that enhances the complexity of a situation, research-driven solutions are seen as part of an ongoing process, not as an endpoint that can be unrelentingly generalized to different individuals in different environments. Change requires flexible response. For instance, any teacher knows that each school year brings different variables into the mix—different students, different funding levels, and different societal and cultural contexts that place different requirements on the school and teacher. Last year's math curriculum, lessons, and assessments now need to be modified to meet the special and diverse needs of this year's students. Because of these changing variables, teaching effectiveness and student achievement are in a state of constant redefinition.

How do these distinctively different orientations toward educational problem solving relate to the different purposes of education? First, how one defines research, validity, the production of knowledge, the roles of stakeholders in the problem-solving process, and what constitutes an acceptable outcome is directly dependent upon one's purpose. Certain research methods, definitions of validity, methods in producing knowledge, and the organization of the activity of the stakeholders will produce results or outcomes that are quite different from the outcomes of other methods. Therefore, the purposes that individuals want to achieve dictate the processes and organizational arrangements of power that will lead to the desired outcome. The desired outcome focuses their purposeful behavior. Therefore, when educational problems need to be engaged, in order to fully understand the problem and the effects of the proposed solution, it is necessary to explore the full context of the problem and the purposes of the groups who propose very different solutions. Adding purpose to the mix increases the complexity of the problem, and, in turn, creates the opportunity to more effectively understand the problem and the effects of the proposed solution. Critically understanding how multiple and different views concerning the purpose of education affect the definition and resolution of educational problems represents a reconceptualized view of education.

FUNCTIONAL PURPOSES OF EDUCATION

One purpose of schools is to ensure individuals are able to function effectively in society. Today's schools are asked to perform multiple functions that are unrelated to the traditional purposes of reading, writing, and arithmetic. Besides promoting basic skills, the educational purposes of schools include learning knowledge provided by other disciplines such as the social sciences, science, language arts, music, art, physical education, health education, technology, vocational training, and others. Add to the list extracurricular activities such as the fine arts and sports, and one can easily see how complex the functional purpose of contemporary education has become. In addition, purpose has been expanded to meet the needs of special students such as the gifted, the disabled, and the mentally challenged. Of course, citizenship development is an additional purpose along with the promotion of values (e.g., character education, sportsmanship, environmental protection), and social behavior (e.g., student assistance programs, counseling, and psychological services).

The attempt by schools to meet these functional purposes is complicated by society's demand that schools must be sensitive to the poverty, gender, race, ethnic, sexual preference, lifestyle preference, and other aspects of diversity that are brought into the school by the children. To achieve these multiple and often diverse purposes, schools are further required to work in concert with governmental and community organizations and agencies. All of these many functional purposes add to the complexity of problems that occur in the classroom and school. However, a

reconceptualized view of education requires a deeper analysis of how these functional purposes are contextualized. A reconceptual view requires a critical interrogation of how groups with quite different philosophical and political purposes in mind attempt to control, shape, and possibly eliminate some of these functional purposes to promote their own agenda.

PHILOSOPHICAL AND PSYCHOLOGICAL PURPOSES

To understand the effect of philosophical purposes on how schools attempt to meet this plethora of functional purposes requires a more complex interrogation of questions such as “What is appropriate knowledge?” “How is knowledge produced?” “How should the school be organized to achieve its functional purposes?” “Who should be the focus of school activity?”

All of these questions are good questions because in the attempt to answer them one’s understanding of education and its problems gains complexity. For instance, the function of health education can be quite different if it is grounded in an idealistic, realistic, pragmatic, or existential view. Idealists and realists believe that truth, reality, and knowledge are fixed entities external to students, either in the form of virtues or ideals, or, in the case of realists, natural laws. In both cases, students can be brought to discover this knowledge through the guidance of experts who use the objectivist methods that are acceptable to their philosophical paradigms. However, a pragmatic view opens the door to a constructivist understanding of truth, reality, and knowledge. In this view, students are seen as co-constructors of knowledge, thereby leading to quite different views on curriculum, instruction, and assessment. An existentialist view would focus on the individual student as the sole creator of truth, reality, and knowledge and would attempt to facilitate the students’ understanding of the nature of health within their own individual context. Basically, the philosophy that is the foundation for one’s view of reality will mediate and inform one’s decision making concerning the functional purposes of schools.

In the context of psychological theory, the functional purposes could be again influenced by these different ways of understanding human behavior. If a behavioral, developmental, cognitive, or humanistic perspective dominates the purposes of the school, then curriculum, instruction, assessment, and classroom management will differ. In addition, different philosophical and psychological stances will answer the previous questions quite differently. However, related to the different philosophical and psychological purposes and much more important in understanding the complexity of educational activity are political and ideological purposes.

POLITICAL AND IDEOLOGICAL PURPOSES

Individuals with similar worldviews (i.e., idealists, realists, pragmatists, existentialists, conservatives, liberals, and radicals) understand that one of the most important social institutions is education. Formal education, whether public or private, is the fundamental activity in which future generations acquire knowledge, skills, attitudes, and values that complement or contradict the worldview that is promoted in family, religious, or social contexts. Therefore, if the public education process appears to not align with views that are elsewhere promoted, than those whose views are not being reinforced see the need to gain control over public education. Historically, this battle over control of education has been fought in local (i.e., school boards), state (i.e., state departments of education), and national (i.e., federal education initiatives such as funding requirements, proclamations, and federal laws) contexts. The recent NCLB act requires educational compliance to very specific educational practices, which are grounded in specific philosophies, psychologies, and ideologies, and are enforced through the disbursement of federal funds for state and local education. In other words, if states and local schools do not comply, then they do not receive federal funds for education.

Individuals with similar ideological positions form interest groups whose purpose is to promote their beliefs through public and private education. Private or parochial schools can be established that overtly promote a specific agenda of knowledge, skills, attitudes, and values. However, the cost of this strategy to an individual is not offset by taxpayer dollars but requires an outlay of tuition beyond any taxes that the individual is required to pay. Therefore, the idea of vouchers, in which tax money is returned to the individual to offset the cost of private education, becomes a viable strategy that appeals to supporters of private schools, whose purpose is to promote a specific worldview. Another option would be to diminish the effectiveness of public schools. With public schools viewed as inferior to private schools, a stronger case can be made for the promotion of private schools. A final strategy would be for proponents of private schools to gain control of the schools and reconstruct them to accommodate a specific ideological position or economic advantage.

However, the very idea of a public school is incongruent with some ideological positions. For instance, historically, conservatives have argued against government involvement in the lives of individuals, and have acted to either directly diminish the size of government or to use government to enact policies that will require less government in the future. Individuals who take this position recognize that one of the largest governmental intrusions into the lives of individuals is public education. Therefore, a credible goal would be to undermine public education through policies and required practices that ensure the demise of the effectiveness of public education in the eyes of the public. In this way, the general public would become more receptive to policies that diminish public control over education through governmental agencies, and subsequently embrace the privatization of education.

This sort of political activity is ideologically focused; however, there are other nonideological interests who also engage in this sort of educational political activity. Some of these interests are economically based, such as specific corporations or the business community in general. If the scarce resources allocated for public education can be reallocated for functional purposes that create more profit for business and industry, the financial bottom-line is maximized. Also, the schools house a significant population of consumers, who can become the target of marketing efforts, either as immediate purchasers of goods and services or as the objects of efforts to inculcate consumer attitudes and practices through which businesses will reap future benefits. In addition, the failure of business policy and practice and federal economic policy can be masked and redirected by placing the blame on the schools. Finally, some groups simply desire to gain political control over others through the domination of the schools.

Whatever the reason for the political activity, the important understanding is that if one ideology or other interest is in control, then the teaching and learning that occurs will be very different from the nature of the teaching and learning promoted by a different interest group. There is a discernable pattern of alignment between political, philosophical, and psychological views on the purpose and conduct of education. As discussed throughout this encyclopedia, specific philosophies and ideologies will recognize and require specific educational psychology pedagogical strategies, and deny the use of others that may result in outcomes that contradict the intent of the philosophy or ideology that desires dominance.

THE PURPOSE OF RECONCEPTUALIZED TEACHING AND LEARNING

As promoted by this encyclopedia, a reconceptualization of education and psychology has a quite different purpose. Grounded in radical ideology, this reconceptualization poses additional questions about education. Individuals holding a reconceptualized view also ask questions such as “What is appropriate knowledge?” “How is knowledge produced?” “How should the school be organized to achieve its functional purposes?” “Who should be the focus of school activity?”

However, a reconceptualized position inquires into the critical consequences of how these questions are answered. This critical inquiry expands the context of these questions to include “How is power arranged in relation to how these questions are answered?” “Which individuals, cultures, and perspectives are being excluded, silenced, or marginalized?” “What are the consequences of these answers in relation to social justice, caring, and participatory democracy?” The answers to these questions are significant in that they require critical reflection and reflexion that leads to a critical consciousness. Once critically aware of the consequences of specific educational policies and practices, critically conscious individuals are positioned to take informed and morally grounded action intended to result in educational policy and practice that is socially just, caring, and democratic. These individuals engage in a critical pragmatism that critically interrogates the potential consequences of a course of action, and then engage in a critical praxis of action, critical reflection, and subsequent action.

Returning to the issue of educational complexity, a reconceptualized view of teaching and learning desires to uncover and engage complexity through postformal inquiry. Only through a critical engagement with educational complexity can education achieve its multiple purposes of meeting the needs of all individuals and society in a socially just, caring, and democratic context. The achievement of this goal requires an understanding of the origins, the greater context, and the hidden patterns in which the answers to these questions are grounded. This broader and more substantive understanding is not possible without the use of an eclectic array of research epistemologies and methodologies. To use a modernistic metaphor—a toolbox—is appropriate in that it explains how all research knowledge bases and methods can be used in various situations individually and collectively to critically interrogate educational policy and practice.

In addition, the engagement of complexity requires a critical systems view concerning the dynamically interrelated organization and functioning of human activity systems. This systemic perspective provides the foundation for an idealized design of educational systems—an idealism grounded in a concern for social justice, caring, and participatory democracy. Through the design of egalitarian, caring, and democratic educational systems, society can guide their social evolution to achieve these critically idealistic outcomes.

However, in the end, the use of a fundamentally critical postformal inquiry and critical systems approach in the reconceptualization of education is required to attain the critical educational purposes of including all individuals in the process, building egalitarian community, and meeting both the individual and collective needs of those whom education serves.

CHAPTER 55

Postmodern Pedagogy

LOIS SHAWVER

Postmodern pedagogy is about teachers building an educational spaceship. The point of the spaceship is to help students escape the gravitational field of their disinterest, help them find the motivation and inspiration to invent their own futures in a rapidly changing world, the futuristic world of their maturity, a world that their teachers of today will scarcely recognize.

The impulse for such postmodernism seems to begin with the teacher's private and sometimes lonely skepticism toward established methods of teaching in schools. That follows with curiosity and puzzling, an uncertainty. Next comes a surprise, a quite pleasant surprise, and then a flood of new ideas about teaching. Finally, there sometimes develops a productive fascination with postmodern philosophies and, simultaneously, a new hope that the postmodern impulse can promote a pedagogic breakthrough. Somehow, along the way, the early sense of loneliness is lost. In its place is a sense of adventure.

Postmodern ideas shed light on educational psychology as a whole and help in the larger effort to recontextualize all of educational psychology. This is because postmodernism is less a theory unto itself than a point of view, a point of view that fosters a contextually nuanced appreciation of the teaching process. It is a perspective that diminishes the tendency of teachers to overgeneralize and it frees them from needing to make universal pronouncements about such things as child development schemes or cognitive stage theory. After all, no one method works in all contexts for all students, and no two students are exactly alike. What seems most valuable, from the postmodern perspective, is that the teachers develop a contagious sense of inspiration that infuses the classroom. This sense of inspiration is easiest to achieve when the teacher is seen and valued for being an innovator, when teachers place great value on their own practitioner-based knowledge, and also on that of their colleagues. Postmodern teachers work to tailor their ideas to particular students or particular classrooms or situations. And, when it all comes together, postmodern teaching becomes, quite simply, an effective quest for planning and developing situationally based teaching masterpieces, masterpieces that might not work for others, or in other contexts.

The first part of this postmodern teaching adventure can be called "skeptical postmodernism" and the second part, "visionary postmodernism."

SKEPTICAL POSTMODERNISM

Postmodernism begins with a serious skepticism about prevailing practices in a given field. This is not a discarding of everything in a field or a radical rejection of specific theories. It is a skepticism toward highly generalized theories that are applied indiscriminately, theories that are taken for granted, institutionalized, and routinized, and are no longer very available for critique or reexamination. For example, when Einstein was a young physicist, Newtonian physics was typically treated as a metanarrative, that is, taken as proven, taken for granted. But Einstein did not take Newtonian physics as a metanarrative. He rethought it. This does not mean he discarded Newtonian physics and went back to an earlier way of thinking. He moved forward. Einstein simply improved Newton's theories, noted that Newton's formulations did not apply in unusual contexts, such as the context of high-speed particles. It is the questioning of what is largely accepted without totally discarding everything being rethought that is uniquely postmodern.

The notable postmodern, Jean-Francois Lyotard, called these taken-for-granted theories "metanarratives." A metanarrative is a narrative (or theory) that provides an umbrella theory for everything. Every new detail in the theory is first tested to see if it fits in the more general grand theory, that is, the metanarrative. Postmoderns don't accept such grand theories. Lyotard put it succinctly when he said, "Simplifying to the extreme, I define postmodern as incredulity toward metanarratives." Postmodernism, then, is a kind of skepticism that does not try to build itself on assumptions. It uses what seems to work best but only temporarily while it both questions assumptions and looks for new ways to cope with the lack of unquestioned assumptions.

But the questioning of assumptions comes first. For example, postmodern teachers might question the use of standardized tests to categorize and evaluate students. In today's educational world, standardized tests are assumed to be established and scientific, especially to those not trained in test construction, even though the interpretation of the tests is often challenged in the courts and controversial in the wider field of psychology. The postmodern educator is likely to point out how standardized tests can falsely pigeonhole students (creating self-fulfilling failures).

Or it might be noted that standardized tests can affect curriculum in a questionable way. Suppose a teacher expects to have her teaching evaluated on the basis of her students' performance on a standardized test, a test that includes some items that are politically correct but highly controversial. In a modernist environment it would be all too easy for such a teacher to assign homework to students so that they did well on the tests even if what they were learning was questionable. Such teaching practices can inculcate discriminatory thinking in students, imposing implicit racist or sexist values on the student's development. The postmodern teacher, therefore, might develop a skepticism toward such practices.

The established literary canon is another example of an educational metanarrative. A canon, of course, is just a list of what is ostensibly the world's greatest writings, must reading for students of a certain level. Postmoderns are likely to think that unquestioned assumption of the accuracy of such a list can trap the imagination of students and prevent their discovering new kinds of literary merit. It is not that any particular item on the usual canon list is being universally challenged but that postmodern consciousness encourages sensitivity toward new idea writing, or writing authored by women and minorities, writing that students might not study if the traditional canon was taken too literally, as the only correct subject matter for literature students.

Many teachers today are postmodern without knowing it. It would be like being a romantic without knowing it, or like being an idealist without thinking of oneself as one. Postmodernism is not a school of thought. Postmoderns are eclectic, selecting ideas from various schools. People from all persuasions are postmodern if they take their current theories and practices as working drafts, subject always to a revision. The same theories might inspire postmodern teachers that inspire

others, so long as the theories are reconceptualized as working drafts and not assumed to be absolutely correct in all their detail. Also, people may be postmodern in some areas and not in others; they might sit in a balance between endorsing metanarratives and moving toward postmodernism.

It is possible to think of postmodern authors prior to current times, but there is much that has happened to foster a postmodern skepticism today, enough to encourage some to speak of this current era as “a postmodern era.” Much of this increasing postmodernism results, surely, from the astonishing way the Internet is restructuring our picture of knowledge, and this restructuring is arguably the reason for the current flood of postmodernism.

However, the Internet is not the first restructuring of knowledge. Our concept of knowledge was restructured over a period of a few centuries starting with the invention of the printing press in the late fifteenth century and the subsequent growth of popular literacy in Western culture. Prior to that time, knowledge was generally thought of as something stored in the minds of an elite authority. The common folk could do little more than rely on the wisdom of the authorities to know what to think and do. But, with the increase in books and literacy, knowledge shifted subtly to become something that could be stored in the library of a culture. This made knowledge much more accessible. The knowledgeable people were increasingly seen as the authors of books and, to a lesser extent, those who read these books and remembered what they said. Thus it became possible for common folks to study, go to school, and to become more “knowledgeable.” Naturally enough, as knowledge became more widespread and democratic, people referred to the emerging seventeenth century as “The Enlightenment.”

And today, the Internet is stimulating another period of “enlightenment,” potentially bigger than the first. The Internet and other electronic advances offer the vision of fingertip knowledge. One only needs to know how to do an Internet search to have seamless access to a store of knowledge never dreamed of a century ago. One need only press a few keys for the answer to a math problem, a spelling question, a biography on anyone, and virtually any other tidbit of information one might desire. In a culture of such instant information, it is harder to endorse the exceptionless generality of metanarratives.

At least in the postmodern culture, metanarratives seem to belong to another era, a bygone era when people studied a couple of books in their libraries as if there were no others, a time when readers were more gullible. Such a gullibility was natural enough. With the book, the reader turning each page is being guided by a trail of thought that leads from assumption to conclusion. This gave authors an enormous cultural power to define conclusions.

Things are different with today’s electronic texts. Here the reader can run a search through a database of abstracts, or choose which links to follow on a Web page. No longer is the author the unquestioned guide for the passive reader. Instead, each reader cuts a distinctive path through the available writing, leading, potentially, to new and distinctive conclusions, conclusions that no one before has drawn. If a document is published on the Web, leading from assumptions to metanarrative conclusion, another essay will follow with contrary assumptions and conclusions.

Can it be any wonder, then, that many people today are increasingly skeptical of metanarratives? What is being questioned is the magical ability of the author, or any human mind, to wrap truth up in perfectly chosen words, or for the author to arrange a telling of truth so that, when examined in more detail, or from a variety of angles, every conclusion remains exactly the same. For the postmodern, the instructor who teaches a simple metanarrative as if it were a universal truth is hiding the tools that the student might need to find a new path to an unexpected and helpful conclusion.

THE PUZZLING IN POSTMODERN PEDAGOGY

This leads to the puzzling in postmodernity. The puzzling is just the group of postmodern teachers scratching their collective heads and wondering how to proceed, asking themselves

things like, “How is a postmodern teacher like myself to teach?” And then adding, “I have no idea how to replace these old practices. Still, too many of my students are simply bored. There must be better ways to do things, ways to energize my classroom. But how?”

In the past, things did not seem so complicated. Before postmodern skepticism, the teacher was the unquestioned authority, the person who knew the right answers, the one who handed out grades. The student, almost by definition, was the one in need of information, the one who wrote and spoke only to be corrected. The good teacher instructed and guided. The good student listened and absorbed.

Then comes postmodernist skepticism with its countless questions. What becomes clearer is that, sometimes postmodernity needs to continue with the old ways until better ones can be developed. Sometimes it is better to keep the old car until a new one can be found, and sometimes it's better to ditch the old one and catch the bus for a while. That is what is most puzzling: how much to accept provisional metanarratives until something better can be imagined.

It is not always easy working with so little guideline. It is easier to repeat the past unquestioned methods. Moreover, supervisors and administrators are often more comfortable with teachers working within a traditional frame—but an educator does not become postmodern because it is easy, or because the postmodern solutions are glaringly apparent—quite the opposite. A teacher becomes postmodern without any decision to do so. It begins with a skepticism and then becomes a puzzling.

Then comes the surprise, and, finally, a flowering of new ideas.

THE POSTMODERN SURPRISE

So, what is the postmodern surprise? It is the unexpected camaraderie that develops around postmodern conversation. Sooner or later a person expresses a postmodern skepticism, or a postmodern puzzling, and is surprised to discover that there are many people who share this skepticism. A surprising dimension of postmodern thinking is the way it breeds social bonding with other postmoderns. Once people discover each other, they have good social times—postmodern discussions, mutual brainstorming and collaborative thinking, and sometimes debates that, usually, do not disintegrate into rage and mutual disgust.

Why does postmodern conversation become cohesive like this? At first glance it might seem that postmodernity would be less cohesive than the conversation in traditional circles. After all, in traditional circles people can identify with each other for sharing faith in a metanarrative while postmodernism lacks such a unifying metanarrative. But sharing a metanarrative can invite divisive controversy over who has the best version of the school they share. Consensus about the correct metanarrative is not, therefore, the end of divisiveness. When it is clear from the start, on the other hand, that there is no common denominator in opinion, then people seem to listen better and tread more gently over other people's beliefs. Dissension increasingly becomes valued and reframed as “diversity of opinion” so that it does not become a threat to the discussion.

So, the postmodern surprise is the delightful discovery that conversations work more agreeably when they become more postmodern. In postmodernity it is easier to consider ideas other than one's own because one is not buying an entire theoretical package. It is easier to find something useful in another's theory when one does not have to buy all its parts.

Or perhaps the surprising postmodern bond results from the blurring of authorship and the continuous reweaving of each other's thoughts in the paralogical conversation. In postmodern circles, so Lyotard tells us, “The self does not amount to much.” Minds and personalities exist in a network together. The people in postmodernity are often less desperately engaged in frantic competition. There is enough victory for all to share. Also, in postmodernity there are a few more tools for defusing endless disputes and thus more opportunities for all players to win.

And what could be a bigger surprise than this new kind of conversation that Lyotard has named “paralogy.” Paralogy is known for its shunning of authority, for its toleration of a wide range of opinion from people present in a conversation—and for its facilitation of a cohesive bond. It is also a veritable greenhouse for postmodern ideas.

VISIONARY POSTMODERNISM

The New Ideas

Over time, skeptical postmodernism becomes visionary in that it brings forth a flowering of new ideas. These new ideas emerge in the postmodern conversational paralogy. Lyotard calls them “little narratives” and he said that these little narratives are “the quintessential form of postmodern invention.” These little narratives facilitate the shift from a skeptical to a visionary form of postmodernism.

Especially prized in visionary postmodern pedagogy are the teaching of ideas that break out of old paradigms, ideas that find breakthrough paths that might ignite the learning process, especially for a specific group of students in a particular moment. Contrast this kind of teaching with teaching students to pass a standardized test.

“Which student wants to have ten minutes to be teacher tomorrow?” asks one postmodern teacher hoping to inspire more motivated study. “Let’s create a panel of the American founding fathers tomorrow,” says another postmodern teacher. “You choose which founding father to study. Then you can be on a panel with the other founding fathers and have a debate. Oh, yes, girls can play a founding father too.” Those students will read their history books tonight, hopes the postmodern educator.

Such little narratives, sketchy plots, mini-theories, local practices, can arise automatically once the teacher is released from the script of traditional metanarratives. All these forms of new ideas are greatly fostered, so it seems, by the conversational brainstorming in which ideas are thrown out without being turned into metanarratives, without anyone claiming, or needing to claim, that they have discovered the final, best answer. Almost as cherished as the invention itself is the spirit of invention and the adventure, the mutual sparking of each other’s dreams, the collective sense of possibility. Postmodern pedagogy is about ways to inspire students to identify with their own creativity. And since inspiration between students and teachers is often contagious, it is important that teachers find ways to think about teaching that they also find exciting. It is important for the students as well as the teachers.

THE STUDY OF POSTMODERN PHILOSOPHIES

After enjoying their postmodernism for a while, teachers can become fascinated with the work of certain philosophers—and it’s no wonder. Today’s postmodern era deconstructs the authority of authors, turning their books into recorded streams of ideas written by thoughtful people communicating across time and place barriers. The philosophers’ theory as a unified whole wanes in importance. Instead the text is read for inspiration, for ideas. This reading of philosophers for inspiration might be hard to imagine for many teachers, raised as many are in the culture of books, thinking the study of philosophers means grasping the whole of the philosopher’s thought, but postmodern teachers who study these philosophers with their compatriots learn to discuss their work without converting the human author into soothsayers.

Among the most inspiring authors for these purposes are Ludwig Wittgenstein and Jean-Francois Lyotard. Both authors have much to say of value for postmodern teachers. Compare the kind of teaching their work fosters with teaching that is routinized around standardized

evaluation, pigeonholing students in preformed categories and the routinization of teaching prescribed information and even values.

PREPARING A PLACE

For example, a concept that Wittgenstein left us is the concept of “preparing a place”. Wittgenstein asks us to imagine a child watching a chess game. Suppose a five-year-old boy points to a particular chess piece and asks, “What’s that?” An adult replies, “It’s a rook.” But unless the child knows the names and functions of the chess pieces, such an answer will not be meaningful. Still, in some sense, the boy is educated by the answer. At least, he can now answer his adolescent sister who soon asks him, so we might imagine, “What’s that you’re holding in your hand?” Picture the boy answering with an air of pride and authority. “It’s a rook,” he tells his big sister.

Now, suppose this big sister knows how to play a little chess—at least, she knows the names of the pieces and how each piece moves differently on the chessboard. Usually she can recognize a rook. However, this is an odd chess set. The pieces have nonstandard shapes. She has heard there are sets like this, but she has never actually seen one. Yet the moment she heard her brother say “It’s a rook!” it all came together for her. She knew immediately quite a bit about that piece, quite a lot more, in fact, than her little brother. She knew how to move the rook and its part in the game. Her brother didn’t even know what chess was, and had only the vaguest idea of any kind of a board game. In a sense the little boy taught his big sister something that he himself did not understand. She understood more from the name “rook” because she had some experience with chess, which had, to use Wittgenstein’s phrase, “prepared a place” for this new piece of information that her brother gave her.

Do not think of “preparing a place” as a concept merely for the instruction of infants. Normal adults hear information now and then without an adequately prepared place for the hearing. When that happens, any instruction goes over their heads, much like it does with the children. If one knows nothing about modern artists, say, then reading a book comparing several will not be meaningful because a place has not yet been prepared. But if one has studied each of these artists in depth, the comparison could be meaningful. If a philosopher seems obscure, it may not be that the work is poorly written but that the reader has not yet established background hooks on which to hang the material being read. That is, the problem may be that the reader has not prepared a place for understanding the book.

Unless the reader has a place prepared for the new information, that information is likely to seem nonsensical, no matter how well written it appears to the people more prepared for it. Compare the teaching that exploits the background knowledge students bring to their education, building new ideas from old, with teaching that packages all lessons the same and tailors them to performance on a standardized test.

HOW DO TEACHERS PREPARE A PLACE?

Which brings us to another pedagogical question. Not only does the postmodern teacher learn to exploit the teaching opportunities afforded by the student’s background training, but also to prepare a place for new knowledge. The question is, How can teachers help students prepare a place that will help them make sense of what they are about to study?

The initial preparation is, according to Wittgenstein, through a certain kind of training he called “primitive language games.” Teachers teach primitive language games whenever they teach a child who has little or no background for a subject, and when teaching by explanation is completely useless. How can teachers do this? Or, perhaps the better question is, How is it possible to prepare a place for future learning?

One does it by engaging the student in primitive language games. “Puppy!” says a mother pointing to the dog outside the window, and before long, the child says “puppy!” too. Then, both mother and child laugh with delight. That is an example of what Wittgenstein called “a primitive language game.” The child has no way of knowing what exactly the word means, whether it refers to a class of animals or to this single puppy. How would the child know? Or maybe the child thinks “puppy” means “brown” or perhaps that all animals are “puppies.” Children do not need to understand what they say in order for such memory work to be preparing a place for more advanced learning. Primitive language games give little more than the most rudimentary kind of exercise and drill, mixed often with a little fun, yet they do not provide understanding. Nevertheless, their role is critical. Primitive memory work lays a foundation for richer understanding to come. Even children in postmodern classrooms need to learn their alphabet and that two plus two equals four.

Here is another kind of primitive language game: A two-year-old skins her knee and cries. Her mother says, “Oh, you’ve hurt your knee!” It’s the child’s first introduction to the concept of “hurt”—but what exactly do we imagine the child thinks the mother is referring to by the word *hurt*? Perhaps she is referring to the red stuff dripping down her leg, or the fact that her knee seems to have tiny pebbles stuck in it. In other words, the child does not have a place prepared for these distinctions. If she learns to say that something hurts at this point she is simply replacing “hurt behavior” (such as crying) with a phrase that she does not fully understand—because she does not yet have the language tools for understanding, a place has not yet been prepared for understanding.

Training in primitive language games, all done without in-depth understanding, it seems, is what prepares a place for more mature understandings, independent thought and reflection as well self-directed education.

THE BIGGER PICTURE OF LANGUAGE GAMES

Wittgenstein thought of all language as consisting of language games, subunits of the language, existing like little languages within the language as a whole. He never carved these little languages up into specific language games with enduring names. Instead he wrote saying, almost with a sweep of the hand, that all of language consists of countless language games, some emerging while others withered away. These rich but disorderly language games of older children and adults were all of particular interest to Wittgenstein. It was with these more mature games that people could talk about minds, or philosophize about the universe. Primitive language games were vital because they prepared a place for the more sophisticated games. The more sophisticated games, in their turn, made possible each human form of life. Is the cultural emphasis on religion? Then expect a predominance of prayer and sacred language rites. Is the emphasis on science, or commerce? Then look to these vocabularies and language games to be shaping the form of the culture.

How do primitive language games prepare a place for more sophisticated ones? It is all outside our immediate awareness, and it happens differently in different language areas. However, in many areas the elaboration of primitive games to create more sophisticated ones takes place through a kind of metaphorical extension of the vocabulary. It apparently works like this: The child learns the primitive games and then learns to borrow their meanings to say things that could not otherwise be said.

Imagine a child having learned a primitive language game with the word *sharp*. Picture the toddler copying a parent who is saying, “No, Tommy! That’s sharp! Don’t touch! Sharp!” Then, picture Tommy standing there with his mother, pointing a little finger at the blade, and staring at her as he says “sharp!” He is captivated by the new term, but he has, as yet, no real idea what *sharp* means. Still, he can read her frown, and make some sense of her hand pushing him

away. A deeper understanding of the word *sharp* awaits further training or experience. Gradually, however, the necessary experience and training accumulates.

Finally, as an older child, Tommy might be taught to use the term *sharp* metaphorically. “Is the pain sharp?” the doctor of nine-year-old Tommy asks—but Tommy does not understand the question. Seeing a blank look on the child’s face, the doctor explains, “You know, a sharp feeling, like when something sharp sticks you?” Tommy winces. He doesn’t remember his original lesson in “sharpness” but he has acquired a number of unpleasant associations to the term. “Do you have a pain like that,” the doctor continues, “or is it just uncomfortable like wearing clothes too tight?” Suddenly, a look of comprehension washes across Tommy’s face. Tommy understands that a “sharp pain” is like the pain of being stuck by something sharp. The primitive language games of his past prepared a place for the growth of his understanding. The doctor’s explanation would have gone over the head of a two-year-old Tommy. Can you imagine trying to explain what a sharp pain is without such a metaphor?

Wittgenstein’s philosophy suggests that this kind of metaphorical extension of primitive language is a key means for humans to develop introspective language, philosophical language, and languages for observing nuance and aspect. These higher orders of language are rooted in the places prepared for them by a training in primitive language games.

And while we seldom notice, ordinary adult language contains many metaphors sprinkled through out. (Take the word *contains* and *sprinkled*, for example, in the last sentence.) Part of our sense of understanding things in more depth comes from seeing metaphoric connections that we cannot see without the mastery of the primitive language games. Sophisticated games build one on top of each other, creating lattices of improved and enriched understanding by connecting topics and exposing the wealth of their relationships, permitting us to talk much more meaningfully than we could otherwise do.

Postmodernity has much to learn and to offer in this challenge of enriching the advanced language games through more deliberate teaching. This brings us to the frontier of pedagogy for maturing students, paralogy. And, since we have already talked about paralogy, we are now at full circle.

THE PARALOGY OF POSTMODERN LANGUAGE GAMES

Paralogy is the concept discussed earlier in this chapter when talking about the way skeptical postmodern teachers discover each other in conversation. Paralogy is the kind of conversation they use that creates social bonding. Its parameters are still being discovered, except for the fact that the conversationalists are not reaching for universal metanarratives. They are discussing more specific situations and have tolerance for different points of view, considering ideas, not whole theories.

Paralogy helps postmodern teachers, but is not just for teachers. Teachers can learn to facilitate it in their student groups—once a place for doing paralogy has been prepared. Good seminar leaders, for example, know how to initiate paralogical discussion by seeding the discussion with interesting and meaningful remarks and questions. In such a discussion, new metaphors, new associations, based on a common set of primitive language games, can emerge to enrich everyone’s understanding. This is done in part by inventing new language games, language games that the teacher could not have invented independently for the students, language games that grow out of the creative interaction of the students themselves while engaged in their own paralogy.

This is a very advanced form of instruction. Infants have much to learn before they can enter into paralogy. At the same time, the student who is not encouraged to engage in paralogy is infantilized by being taught only through the mastery of primitive language games. That is surely a stultifying form of education for most adolescents and adults, except, perhaps, in the

very beginning of a subject being studied. Primitive language games can mesmerize the mature student into the false sense that everything has already been figured out, that there is nothing to do but commit the work of wise teachers to memory.

And, again, shattering that sense of an already understood universe, of course, is what postmodernism is about. It is about building a spaceship that permits the student to escape disinterest in the service of fashioning a future life even before the parameters of that life are known.

TERMS FOR READERS

Language Game—This is Wittgenstein's term. In general, *language game* refers to a somewhat bounded rule-governed subsegment of ordinary language. For example, answering the question "How are you?" would differ depending whether the speaker was playing the greeting language game, or the language game of doctor and patient. The term *language game*, however, is used in several related senses. For example, a *primitive* language game is a training tool for the most elementary forms of language. Wittgenstein, however, felt that the whole of language consisted of countless language games, many being invented, and many passing away. Some of the most interesting language games are the ones that require prior training with primitive language games. The term *language game* is also sometimes used for the whole of language.

Meta-narrative—This is Lyotard's term. It means a story or narrative that is presumed to have great generality and represents a final and absolute truth. Lyotard's famous definition of postmodernism is, "Simplifying to the extreme, I define postmodern as incredulity toward metanarratives."

Paralogy—It is a stimulating conversation that generates ideas without necessarily resulting in consensus. These new ideas emerge, in large part, because paralogy encourages speakers to define the rules of language terms locally and provisionally. That is, in a local conversation a person might say, "I am using the word in this sense." Also, in paralogy, the speakers do not strive for consensus but value a diversity of opinion because the point is to create new ideas, and new ideas seem to emerge best when there are varied opinions being expressed and when the listeners are looking for inspiration rather than mastery of complete theories.

REFERENCES

- Lyotard, J. F. (1984). *The Postmodern Condition: A Report on Knowledge*. Minneapolis: University of Minnesota Press.
- Shawver, L. (2006). *Nostalgic Postmodernism: Postmodern Therapy*, Vol. 1. Oakland, CA: Paralogic Press.
- Wittgenstein, L. (1953). *Philosophical Investigations*. New York: The Macmillan Co.

CHAPTER 56

Complexity Science, Ecology, and Enactivism

BRENT DAVIS AND DENNIS SUMARA

COMPLEXITY SCIENCE: THE STUDY OF *EMERGENT* AND *STRUCTURE DETERMINED* SYSTEMS

Complexity science is a nascent field of study that defines itself more in terms of *what it investigates* than *how it investigates*. It focuses on the question of how relatively simple components in a system can come together into more sophisticated, more capable unities—and how, in turn, those grander unities affect the actions and characters of their components. One intertwined set of examples includes cells that cohere into organs that cohere into bodies that cohere into social groupings that cohere into societies.

Complexity science first arose in the confluence of very diverse fields, many of which had begun to appear in the physical sciences in the mid–twentieth century, including cybernetics, systems theory, artificial intelligence, and nonlinear dynamics. More recently, complexity theories have come to be taken up and developed in the social sciences in many and various ways, ranging from the highly technical, philosophical, narrative, and more recently the applied. In fact, interest in what are now described as complex phenomena pre-date the emergence of complexity science by more than a century. Complex sensibilities were well represented in Charles Darwin’s studies of the intertwined evolutions of species, in Frederick Engel’s discussions of social collectives, and in Jane Jacobs’ characterization of living (and dying) cities. Many dozens of examples could be cited, in both the physical and the social sciences.

There are some important qualities that are common to all complex forms. Most important, complex phenomena are *emergent*: they self-organize. Coherent collective behaviors and characters emerge in the activities and interactivities of individual agents. Such self-organized forms can spontaneously arise and evolve without leaders, goals, or plans. This quality of transcendent collectivity—of being “more than the some of the parts”—is useful for drawing a further distinction between analytic science and complexity science. Complexity science does more than argue for a new category of phenomena; it asserts that reductionist analytic methods are not sufficient to understand such phenomena. Complexity scientists (or complexivists) contend that unpredictable behaviors and new laws arise as more complex systems emerge, and those systems must thus

be studied at the levels of their emergence. They cannot be understood in terms of lower-level activities.

Complex phenomena are also *structure determined*; they are able to adapt themselves to maintain their coherence in the face of changing circumstances. Phrased differently, they embody their histories. That means that, unlike mechanical systems, complex systems can be highly unpredictable. They are thus better described in terms of Darwinian evolution than Newtonian mechanics. The property of structure determinism helps to explain why classical experimental methods, encumbered by the criterion of replicability, are not particularly useful to study complexity. For reasons that might never be apparent, similar complex systems can respond very differently to identical circumstances. In fact, the *same* system can respond differently to virtually identical conditions—since the system, not the conditions, determines the response.

COMPLEXITY SCIENCE AND SOCIAL SCIENCES RESEARCH

Within the arts, humanities and social sciences, complexivist sensibilities have begun to show up in an array of new subdisciplines whose titles transgress traditional disciplinary boundaries, including, for instance, social cybernetics, ecopsychology, neurophenomenology, and biological psychiatry. These titles are explicit in their acknowledgment of the biological roots of personal knowing, the cultural nature of collective knowledge, and the more-than-human contexts of human activity.

The notions of emergence and structure determinism mark important breaks of complexity science sensibilities from the assumptions and emphases that oriented much of the work in social sciences in general, and psychology in particular, through the twentieth century. For example, the notion of emergence might be interpreted as a problematization (if not an outright rejection) of the tendency to think of the individual as the proper site of learning and cognition. For the complexivist, all complex phenomena are learners. Cells, bodily organs, social groupings, societies, species—among other nested, co-implicated forms—are all cognitive agents. They obey similar adaptive dynamics, albeit at very different time scales; they all exist far from equilibrium; and they all arise from and have the potential to contribute to the emergence to other orders of complexity.

These realizations have prompted descriptions that often violate a rule of psychological research—namely, the avoidance of anthropomorphic expressions (see, e.g., *The Publication Manual of the American Psychological Association*, 2001). Individual human qualities and intentions are not to be applied or ascribed to nonhuman, subhuman, or superhuman events. Despite this interdiction, complexivists contend that it might be quite appropriate to describe complex adaptive systems, such as classrooms and societies, in terms of moods, personalities, beliefs, and so on.

In a further break from psychology, and specifically behaviorist psychology, the notion of structure determinism represents a challenge to the thoroughly critiqued, but still pervasive assumption that experience *causes* learning. For the complexivist, learning is not a change in behavior due to experience; it is a change in structure that contributes to the ongoing coherence of the learner. Learning depends on experience, but it is determined by the learner's structure, not by the experience.

The notion of *structure* is critical here. Invoking the biological definition, structure is understood as a system's ever-evolving form. The brain's structure, for example, is more than just the biological organization that was present at birth, simply because the brain is constantly changing. Each event of learning entails a physical transformation whereby subsequent events of learning are met by a different brain. The word *structure*, then, refers to the physically embodied, biological–experiential history of a system.

Through most of its brief history, complexity science has been focused on efforts to better understand the emergent and self-determining character of structures, understood in the sense described in the preceding paragraph. The principal strategies in such study have been close observations of actual complex systems and computer modeling. For the most part, this work has been descriptive in nature, through which researchers have attempted to identify features and conditions that are common to complex systems. More recently, there has been an increased emphasis among complexivists on the deliberate creation and nurturing of complex systems. This shift has been a significant one for domains like psychology and education, where the concern is not just with understanding complex behavior, but with affecting it. To this end, several key conditions that are necessary for self-organization and ongoing adaptation have been identified. For example, for complexity to arise, systems must have considerable redundancy among agents (to enable interactivity), some level of diversity (to enable novel responses), a means by which agents can affect one another, and a distributed, decentralized control structure. We return to a discussion of some of these pragmatic considerations of complexity science research after we introduce two closely related discourse fields, ecology and enactivism.

ECOLOGY: THE STUDY OF RELATIONSHIPS

Complexity science has helped to legitimate a topic that had almost become taboo in Western academia: transcendence. The ideas that higher-order unities can emerge spontaneously and that they obey their own rules simply do not fit with the mindset of analytic science, oriented as it is by quests for basic parts and universal laws.

However, despite its contribution to discussions of interconnectivity and transcendence, complexity science has retained some of the attitude of analytic science around matters of how arguments are presented, what constitutes evidence, and so on. This is not to say that complexity scientists are unaware of their participations in cultural and natural forms. Quite the contrary, such issues are prominent (see, e.g., Varela et al., 1991). Nevertheless, the moves to collect humans, hearts, social collectives, anthills, and the biosphere (among other forms) into the same category and to redescribe them in terms of systems rather than machines reveal that, conceptually, complexity science has maintained aspects of the detached modern scientific attitude in which questions of meaning and morals are left un- or underaddressed.

In many ways, this continued evasion is odd. Complexity asserts that our knowledge systems are rooted in our physical forms—and that those forms, in turn, are engaged in ongoing cyclings of matter with all other living forms. Oriented by this realization, through studies of complexity, science has mounted a case against itself. Accumulated evidence points to the possibility that many current personal, cultural, and planetary distresses can be traced to scientifically enabled human activities. It does not seem unreasonable to suggest that something other than an—or, at least, in addition to—explanation-seeking, possibility-oriented scientific attitude is required for an effective response. Knowledge is useful here, but one might argue that a certain wisdom is needed.

In particular, an ecological philosophy or ecosophy (from the Greek *sophia*, “wisdom”) may be needed. This is the sort of thinking that underpins deep ecology, a movement that encourages a shift in how we experience the more-than-human world. Departing from most environmentalist discourses, which continue to frame humanity’s relationship to the more-than-human in terms of management and overseeing, deep ecology begins with the assertion that life in all forms is inherently valuable. In other words, within deep ecology, the role of humanity is not understood in terms of stewardship, but of mindfulness and ethical action. A tenet of deep ecology is that humanity has the “right” to draw on planetary resources only to satisfy vital needs—which is a much more radical stance than the one taken within more popular sustainability discourses. For

many deep ecologists, there is also an explicit political agenda that includes calls to reduce human populations, to rethink the Western corporate obsessions for endless economic growth, to move toward smaller-scale modes of production, and to embrace more local governance structures. A major recommendation in the deep ecological agenda is bioregionalism, a movement toward region-appropriate lifestyles and production activities.

Attentiveness to situation is a prominent theme in ecological discourses. Ecopsychology, for example, is oriented by the assertion that widespread feelings of personal isolation and collective dysfunction are mainly rooted in people's separations from the natural world, as opposed to separations from other humans or imagined selves, as posited within much of contemporary psychological research. The main therapeutic tool of ecopsychologists is reconnection to nature. Another emergent discourse is ecofeminism, in which it is argued that prevailing worldviews are not just *anthropocentric* (human-dominant) but *androcentric* (male-dominant). Proponents note close correspondences between the beliefs and structures that contribute to the oppression of women and those that contribute to the oppression of nature. In effect, ecofeminists, along with deep ecologists, argue that anti-oppression discourses and movements should include the category of nature along with race, class, gender, and sexuality.

The issue of how humans discriminate themselves from other living forms is common across many branches of Western thought. For example, across ancient mystical and religious systems, the human tends to be distinguished from the nonhuman by virtue of a soul. In Enlightenment-era rationalist and empiricist discourses, the means of differentiation is the faculty of reason, which is often assumed (inappropriately) to be a strictly human competency. Across such twentieth-century discourses as structuralism and poststructuralism, humans are set apart by language and other capacities for symbolically mediated interaction. For complexivists, the human brain is frequently cited as the most sophisticated structure that is known, and human consciousness and social systems are often described as the highest known forms of organization.

Across most ecological movements, this apparent need to discriminate between the human and the not-human is interrupted. This point is true of deep ecology, ecopsychology, and ecofeminism. And it is particularly true of those ecological discourses that are clustered under the umbrella term of ecospirituality, some of which have pressed toward modes of description and engagement that are highly reminiscent of ancient mystical traditions and that represent a dramatic break from the sensibilities that frame most research in psychology.

Ecospiritual movements have found a perhaps surprising ally in recent neurological research. There is mounting evidence that humans are physiologically predisposed to mystical and spiritual experiences—that is, to such feelings or sensations as timelessness, boundlessness, transcendence, and oneness that have been commonly associated with spiritual events (Newberg et al., 2001). Until quite recently, the psychological explanation for mystical and religious experience was that the experience was in some sort of pathological state such as a neurosis, a psychosis, or another problem with brain function. (In fact, the American Psychiatric Association listed “strong religious belief” as a mental disorder until 1994.) The associated assumption, that the mystic or religious zealot is prone to losing touch with reality, has proven problematic on several levels. Psychology has been unable to prove the assumption that spiritual experience is the product of delusional minds. On the contrary, it appears that those who experience genuine mystical states or who live devoted religious lives tend to have much higher levels of psychological health than the general population. There is further evidence that mystical experiences are quite unlike psychotic states. The latter tend toward confused and even terrifying hallucinations; the former tend to be described with such terms as serenity, wholeness, and love (Newberg et al., 2001).

Such events, in fact, may not be all that unusual. Virtually everyone can recall an experience of being lost in a book, immersed in an activity, or caught up in a crowd. Such experiences can also be induced and enhanced through repetitive, rhythmic activity—which should perhaps not

be surprising. The explicit purpose of most rituals is to “lift” participants from their respective isolations into something greater than themselves. As it turns out, there is a neurological basis for these sorts of responses. Such activities affect parts of the brain that are associated with reason and the imagined boundaries of the self. To oversimplify, when the dichotomizing tendencies of logic and self-identification are relaxed, the sensations associated with mystical experience emerge.

It is one thing to say that something of this sort can happen, and quite another to address the questions of why it happens at all and why it is so common. Why might humans be physiologically predisposed to feelings of transcendence? Among the many answers that are possible to these questions, one response has a particular intuitive appeal: It happens because there *are* transcendent unities, of which we are always and already part. In being aware of their selves and of nature, humans are one of the means by which nature is conscious of itself. Human thoughts are not about the cosmos, they are parts of the cosmos—and so the universe changes when something as seemingly small and insignificant as a thought changes. These convictions are at the core of emergent ecospiritual movements. The defining feature of ecospirituality is an attitude of respect and entanglement with all living forms. This sort of attitude is represented in almost every ancient spiritual tradition, theistic and nontheistic alike.

The word *spiritual* has been redefined somewhat within ecospiritual movements. Classically, in modern and Western settings, spiritual is used in contradistinction to the physical and is associated with disembodiment, ideality, and denial of the worldly. This sense of spirituality also tends to be framed in contrast to a scientific attitude in which spirituality is thought to be about unquestioned faith, whereas science is seen to be concerned with unquestionable evidence. This cluster of distinctions is usually erased in ecospiritual discourses, which are structured around the recollection that matters of the spirit are, literally, matters of breathing. Derived from the Latin *spiritus*, “breath,” the spiritual is about constant physical connection to and material exchange with an animate world. (The word *psyche*, the root of psychology, has a similar origin—from the Greek *psukhe*, “breath.”)

Once again, this attitude seems to be as much about a recovery of an ancient understanding as it is about the emergence of a new one. Historians, anthropologists, and cultural commentators have reported on many indications of deep ecological sensibilities across cultures and societies. Unfortunately, when these sorts of beliefs were interpreted by Europeans to reach indigenous cultures—both evangelical Christian missionaries and rational-empiricist researchers—references to spirits and souls could only be heard in terms of ignorance and mystical delusion. However, such a belief is very much in keeping with emergent ecological understanding. It is about lateral or outward relationships as opposed to forward or upward grasping.

The underlying attitude is one of *participation*, a word used by anthropologists to describe the animistic aspects of indigenous people’s and oral cultures’ worldviews. The term has been picked up in the current phrase, “participatory epistemology”—which is used to refer to any theory that asserts that all aspects of the world, animate and inanimate, participate with humanity in the ongoing project of knowledge production. The whole is understood to unfold from and to be enfolded in the part(icipant). In a word, within participatory epistemologies, the central issue is meaning.

ENACTIVISM: AN ECO-COMPLEXIVIST DISCOURSE

Enactivism (Varela et al., 1991) begins with a redefinition of *cognition*, in terms similar to the scientific definition of complexity. Cognition is understood as ongoing processes of adaptive activity. As with complex systems, the cognizing agent can be seen as an autonomous form or as an agent that is behaviorally coupled to other agents and, hence, part of a grander form. An

implication is that cognition is not seen to occur strictly inside an agent. Cognition, rather, is used to refer to all active processes—internal and external to the cognizing agent—that are part of its ongoing adaptive actions. The processes of cognition are the processes of life.

As with all complexity and ecological discourses, enactivism rejects the assumption of a core, essential, inner self. Instead, personal identity is seen to arise in the complex mix of biological predisposition, physical affect, social circumstance, and cultural context as the agent copes with the contingencies of existence. The term *enactivism* is intended to highlight the notion that identities and knowledge are not ideal forms, but enactments—that is, embodied in the nested interactivities of dynamic forms. Life and learning are thus understood in terms of explorations of ever-evolving landscapes of possibility and of selecting (not necessarily consciously) actions that are adequate to situations.

A further aspect of enactivism, and one that is particularly relevant in discussions of human cognition, is the notion of languaging. Understood in complexity terms, language is an emergent phenomenon that exceeds the agents who language. It arises in the interactions of agents and, in turn, conditions the interactions of agents. The gerund *languaging* (versus the noun *language*) is used to point to the open-endedness of language. Like knowing–knowledge, doing–action, and being–existence, languaging–language is in no way a finished form. It is constantly arising and adapting.

A key aspect of languaging is recursivity. Humans have the capacity to language about language—an endlessly elaborative process that seems to be vital to knowledge production and to the emergence of consciousness (see Donald, 2001). Our abilities to self-reference—that is, to cleave our individual selves from one another and from our contexts—is clearly amplified by, if not rooted in, our language. In this regard, enactivism has much in common with twentieth-century poststructuralist and many postmodern discourses. The main differences have to do with attitudes toward scientific inquiry and persistent reminders that we are biological beings whose habits of interpretation, while enabled by sophisticated languaging capacities, are conditioned by the way humanity evolved in and is coupled to a physical world. Even humanity’s most abstract conceptual achievements are understood to be tethered to the ground of biologically conditioned experience.

COMPLEXITY, ECOLOGY, ENACTIVISM, AND THE PRAGMATICS OF TRANSFORMATION

Through most of the twentieth century, it was not uncommon to encounter descriptions of psychology as the “science of education.” With the pervasive assumption that psychology was the only domain devoted to the study of learning, most major faculties, colleges, and schools of education in North America came to be organized around departments of educational psychology.

Such organizational structures continue to be common, even though a host of other fields and discourses have entered the discussion on the nature of learning and learners. Indeed, whereas psychology once dominated, among educationists it now plays a minor role.

At present, the influence of psychology on discussions of learning and teaching is perhaps most prominently represented in Piagetian-based theories of child development and children’s construction of understanding. These constructivist theories are typically considered alongside social constructionist and critical theories, and they are commonly critiqued for their failure to attend to the social and cultural character of knowledge and identity.

Complexity science offers another frame for considering the complementarities and incongruities of these sorts of theories. It offers that constructivism, constructionism, and critical theories—among a host of others currently represented—might be distinguished as each being concerned with a particular body. Constructivism is focused on the individual, biological body.

Social constructionisms are concerned with epistemic bodies—that is, bodies of knowledge, social corpi, and so on. Critical theories deal in the main with the body politic. These bodies are nested, and each is dynamic and adaptive. Regardless of which one is brought into focus, similar sorts of recursive, self-maintaining processes seem to be at work. Understood in such terms, individual knowing, collective knowledge, and cultural identity are three nested, intertwining, self-similar aspects of one ever-evolving whole.

However, following a core complexivist principle, these phenomena cannot be reduced to or collapsed into one another. At each level of organization, different possibilities arise and different rules emerge. Complexivists thus avoid debates around matters of the relative worth of different discourses on learning. Instead they are more oriented by the question, On which levels (or in which domains) is a particular theory an explanation? Constructivism, for instance, does not work as an explanation on the level of cultural evolution. Similarly, critical theory and cultural studies tend to offer little to help make sense of an individual's construal of a particular concept.

This nested interpretation of cognition can be extended in both the micro and macro directions. On the subhuman level, for instance, recent complexity-oriented medical research has underscored that the body's organs are relatively autonomous and cognitive unities. The immune system, for example, is not a cause-effect mechanism, but a self-transforming agent that learns, forgets, hypothesizes, errs, recovers, recognizes, and rejects in a complex dance with other bodily subagents. The brain, similarly, is not a static form, but a vibrantly changing system that follows a nested organization: Neurons are clustered into minicolumns, minicolumns into macrocolumns, macrocolumns into cortical areas, cortical areas into hemispheres—and, at every level, agents interact with and affect other agents.

On the supra-cultural level, to understand humanity as a species, one must attend to the web of relationships in the global ecosystem. Metaphorically, humanity might be understood as one among many organs in the body of the biosphere, engaged with other organ-species in the emergence of collective possibility. Invested in every human—woven through our biological beings—is a trace of our species' history and its implicatedness in the planet.

Returning to the level of the individual, then, one's cognition is not just the product of her or his experiences. It is also a reflection of the emergence of the species. To ignore or to downplay the biological, in the complex-ecological view, is to seriously restrict any discussion of what learning is and how it might happen. This is not to say that the biological must be given priority, merely that humans are both biological and cultural beings. Each of us is, all at once, a collective of agents, a coherent unity, and a part of other emergent unities. It is for this reason that complexity science is a useful discourse for those interested in matters of knowledge, learning, and teaching. Complexity science straddles the classical institutional break of the sciences and the humanities. As such, those psychologists and educators who have embraced complexity have found it necessary to assume an inter- or transdisciplinary attitude (hence the spate of "new" areas of study, such as neuropsychology, ecopsychology, and cultural psychology).

Educationally, complexity science has also prompted attentions to levels of structural unity that lie *between* the individual and society, not just beyond them. For instance, a common, everyday conversation turns out to be a complex event. Although participants in a conversation are rarely aware of it, slowed video recordings of their interactions reveal a complex choreography of action. Speech patterns are precisely synchronized with subtle body movements that are acutely sensitive to events in the surroundings. The choreography is so tight that a conversation can properly be described as a coupling of individuals' attentional systems.

The same sort of *structural coupling*—that is, of intimate entangling of one's attentions and activities with another's—is observed in parents' actions as they assist in their children's learning of language and various fine motor skills. Exquisite choreographies of activity emerge as a parent offers subtle cues or assistance, maintaining a delicate balance between too much and

too little help. What is surprising, as highlighted in follow-up interviews with parents, is that this extraordinary process of coupling one's actions to another's can occur without conscious knowledge. When asked about prompts given and assistance offered, most parents are unable to provide rationales for their actions. In fact, parents are often at a greater loss when asked to explain how and when they learned to teach in this complex, participatory manner—an observation that has prompted the suggestion that humans are *natural* teachers. We are biologically, not just culturally, predisposed to engage with others in ways that can properly be called teaching.

Joint attention—that is, the interlocking of two or more consciousnesses—is the foundation of all deliberate efforts to teach. As Donald (2001) points out, “human cultures are powerful pedagogues because their members regulate one another’s attention, through a maze of cultural conventions.” However, it is one thing to note that humans have these capacities to engage, and quite another to assert some sort of utility for the rigidly organized and prescriptive context of the modern classroom. How might the teacher go about structurally coupling with 30 (or 300!) students at the same time around an issue that may not be a particularly engaging topic of conversation?

On the first part of this question, it turns out that we are always already structurally coupled to one another. Harris (1998) makes this point in a review and reinterpretation of a substantial psychological literature around the emergence of individual identity. To perhaps overtruncate her argument, the evidence seems to suggest that the major influences in the emergence of identity are genetics and one's peer group. Compared to the influences of friends and age-mates, parents and early family life play a minor role. Harris reasons that this difference in influence arises in the fact that the child's main task is not to become a successful adult, but to be a successful child—to fit in, to be part of the group, to not stand out. In other words, the child (and, for that matter, the adult) is oriented toward structurally coupling with others. This phenomenon is perhaps better examined on the group level, as a tendency toward social self-organization.

The classroom teacher can thus count on this tendency to be already in place. Eavesdropping on almost any lunchtime school staffroom conversation will confirm this point. Teachers commonly refer to classrooms of learners as coherent unities—that have intentions, habits, and other personality traits. The difficulty, however, is that such collectivity rarely emerges around engagements with a subject matter, but around the common and continuous project of fitting in. The question thus remains, How might a teacher concerned with a prescribed curriculum topic invoke the capacities and tendencies of learners to come together into grander cognitive unities? This is a question that is only starting to be answered. One strategy that seems to hold some promise has been to structure classroom activities in ways that ensure the presence of the conditions that are necessary for complex emergence—a matter that we develop elsewhere (Davis et al., 2000).

One of these conditions merits special mention here: *decentralized control*. In complexity terms, learning is an emergent event. That is, learning can only be defined in the process of engagement. In classroom terms, the understandings and interpretations that are generated cannot be completely prestatated but must be allowed to unfold. Control of outcomes, that is, must be decentralized. They must to some extent emerge and be sustained through shared projects, not through prescribed learning objectives, linear lesson plans, or rigid management strategies. Complexity cannot be scripted.

Applied to schooling, the condition of decentralized control should be interpreted neither as a condemnation of the teacher-centered classroom nor as an endorsement of the student-centered classroom. Rather, it represents a critique of an assumption that is common to both those structures—namely, that the site of learning is the individual. As complexity science asserts, the capacity to learn is a defining quality of all complex unities. One must thus be clear on the nature of the complex unities that are desired in the classroom. Such unities are concerned with the generation of knowledge and the development understanding—meaning that the focus should not be on teachers or learners, but on collective possibilities for interpretation.

Unfortunately, a vocabulary to frame complexivist teaching has yet to emerge. At the moment, it is much easier to talk about what such teaching is *not* rather than what it is or might be. For example, it is not prescriptive, detached, or predictable. It cannot expect the same results with different groups. It cannot assume that complex possibilities will in fact emerge. Furthermore, this manner of teaching is not a matter of orchestrating; once again, complex emergence cannot be managed into existence. However, complexivist teaching might be described as a sort of *improvising*, in the jazz music sense of engaging attentively and responsively with others in a collective project. Another term that might be used to describe teaching is *occasioning*. In its original sense, *occasioning* referred to the way that surprising possibilities can arise when things are allowed to fall together. The word is useful for foregrounding the participatory and emergent natures of learning engagements as it points to both the deliberate and the accidental qualities of teaching.

The role of the student is also reconceived by complexivists. Departing from popular discourses, complexity science does not use notions of margins, fringes, and peripheries to describe complex systems. In fact, such constructs make little sense when systems are understood as nested within systems. This alternative geometry prompts the suggestion that students are not neophytes, initiates, or novices that are to be incorporated into an established order. Rather, like teachers, they are participants—and, in fact, play profound roles in shaping the forms that are popularly seen to shape them.

Ecological discourses have a similar disdain for notions of marginalization. They also share with complexity a conviction that all forms and events are intimately intertwined. However, for ecologists, this conviction has prompted more of a concern for ethical know-how than practical know-how. Ethical action is understood here as contextually appropriate behavior that may or may not be—and usually is not—consciously mediated (Varela, 1999).

The suggestion that ethics may not be consciously mediated was actually first developed within twentieth-century structuralist and poststructuralist discourses. Ethics have been argued to be matters of collective accord, of tacit social contract. Ethical codes, that is, are seen by some critical and cultural theorists as largely arbitrary sets of rules deployed to maintain existing social orders. However, despite the departure from the commonsense conviction that ethics are ideal and universal, these interpretations maintain one usually unquestioned delimitation—namely, that ethics tend to be understood in terms of interactions of humans with other humans.

Ecological discourses ask us to consider questions of ethics within the more-than-human world, rather than limiting discussions to the space of human concern. This sort of shift is timely, given such developments as the now-apparent role of human activity in ecosystems, the prospect of pulling biological evolution into the space of the conscious and the volitional through genetic engineering, and the emergence of technologies that amplify our potential impact on the planet. These concerns are added to those already foregrounded within critical discourses, including, for instance, the decline of cultural diversity, ever-widening gaps between have and have-not nations, and persistent social inequities rooted in perceived differences among races, classes, and other means of distinguishing one human from another.

Varela (1999) explains that ethical action arises in a deep appreciation of the virtuality of one's own identity—knowledge that one's self is a fluid, always-emergent, biological-cultural form. Knowing, doing, and being are inseparable. One might thus embody a conception of the self as pregiven and eternal and, hence, not implicated in the events of the physical realm. Or one might embody a conception of self as situated and emergent and, hence, complicit with events in the physical realm. Ethical action flows out of this latter sort of enactment. Ethical know-how is neither instinctive nor based on principles that are woven into the fabric of the universe. Rather, it is a mode of ongoing coping, a responsiveness to what is appropriate here and now.

As for what this ethical action might mean for living, generally, and teaching, specifically, many ecological discourses advocate an attitude of mindful participation (Varela et al., 1991) in the

unfolding of personal and collective identities, culture, intercultural space, and the biosphere. In some important ways, the notion of mindful participation harkens back to the mystical traditions that prompted teaching to be described in the terms *educing* and *educating*—literally, of drawing out. A teaching that is informed by ecological sensibilities might be understood in similar terms, although selves would be understood as emergent possibilities rather than pregiven but unactualized potentials.

As might be expected, a consistent and broadly accepted vocabulary has not yet emerged for this sort of ecological–ethical attitude toward teaching. Some terms have been suggested that are resonant with the principles of ethical know-how: *tact*, *caring*, and *pedagogical thoughtfulness*. Significantly, these notions often point more to attitudes of teachers than to the pragmatics of teaching. To that end, one that is particularly useful for describing the teacher’s activity in the classroom is *conversing*. The word is derived from the Latin *convertio*, “living together,” and thus resonates with the notion of *oikos*, “household,” that is echoed in the contemporary prefix, *eco-*. A conversation is an emergent form, one whose outcome is never prespecified and one that is sensitive to contingencies.

Recent neurophysiological research supports the use of the term *conversing* to describe teaching. When engaged in conversations, our working memories are vastly larger than they are on our own. We are able to recall more detail, to juggle more issues, to represent more complex ideas, and to maintain better focus than when alone (Donald, 2001). Part of the reason is that conversations involve interlocking consciousnesses—a quality of interpersonal engagement that is all but ignored in the traditional, radically individuated classroom.

Extending this notion of interlocking subjectivities, ecologists might seek to elaborate the complexivist suggestion that the classroom should be recast as a collective unity. However, a problem with this suggestion is that it says very little about the role of the teacher beyond responsibilities for ensuring that the conditions necessary for complex emergence are in place. In ecological terms, the role of the teacher in the classroom collective might be understood in more explicit terms as analogous to the role of consciousness in an individual.

To elaborate, despite popular assumption, our consciousnesses do not direct our thoughts and actions. In fact, for the most part, consciousness operates more as commentator than orchestrator (Donald, 2001). However, consciousness does play an important role in orienting attentions—that is, through differential attention, in selecting among the options for action and interpretation that are available to the conscious agent. Succinctly, consciousness does not direct, but it does orient. Such is the role of the teacher in the complexity-eco-minded classroom: attending to and selecting from among those possibilities that present themselves to her or his awareness. In this sense, teaching is about *mindin*g—being mindful in, being conscious of, being the consciousness of—the collective.

TERMS FOR READERS

Complexity (science)—the study of adaptive, self-organizing systems—or, more colloquially, the study of living systems—or, more educationally, the study of learning systems.

Ecology—derived from the Greek *oikos*, “household,” ecology is the study of relationships. It is often distinguished from *environmentalism*, a term seen to imply a separation between agent and setting. Ecology assumes no such separation and understands agents to be aspects of their contexts.

Emergence—a process by which autonomous agents self-organize into a grander system that is itself a complex agent. Emergence is a bottom-up phenomenon through which transcendent unities arise without the aid of instructions or leaders.

Enactivism—a perspective on cognition that asserts (a) the possibilities for new perception are conditioned by the actions that are enabled by established perceptions, and (b) an agent’s cognitive structures (which might be thought of as the “space of the possible” for the agent, as conditioned by its biological–experiential history) emerge from repetitions and patterns in the agent’s engagements with its world. The term *enactivism* is intended to foreground the central assertion that identities and knowledge are not preexistent, but enacted.

Structural Coupling—(also referred to as coevolution, cospecification, mutual specification, consensual coordination of action) the comingling of complex agents’ ongoing histories; the intimate entangling of one’s emergent activity with another’s. (See *structure*.)

Structure—the embodied (and constantly unfolding) history of a complex agent. The structures of living systems are understood to be influenced by both biology and experience—with experience playing more significant roles in more complex systems.

Structure Determinism—used to refer to the manner in which *complex agents* respond when perturbed. The manner of response is determined by the agent’s *structure*, not by the perturbation. That is, a complex agent’s response is dependent on, but not determined by, environmental influences. The same can be said of the components that comprise a complex unity. The properties of those components depend on the system in which they are located—in contrast to the components of a noncomplex system, in which the parts do not change depending on whether they are part of that system.

REFERENCES

- American Psychological Association. (2001). *Publication Manual of the American Psychological Association* (5th ed.). Washington, DC: American Psychological Association.
- Davis, B., Sumara, D., and Luce-Kapler, R. (2000). *Engaging Minds: Learning and Teaching in a Complex World*. Mahwah, NJ: Lawrence Erlbaum.
- Donald, M. (2001). *A Mind So Rare: The Evolution of Human Consciousness*. New York: W. W. Norton.
- Harris, J. R. (1998). *The Nurture Assumption: Why Children Turn Out the Way They Do*. New York: The Free Press.
- Newberg, A., D’Aquili, E., and Rause, V. (2001). *Why God Won’t Go Away: Brain Science and the Biology of Belief*. New York: Ballantine.
- Varela, F. (1999). *Ethical Know-How: Action, Wisdom, and Cognition*. Stanford, CA: Stanford University Press.
- Varela, F., Thompson, E., and Rosch, E. (1991). *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge, MA: The MIT Press.

CHAPTER 57

Providing a Warrant for Constructivist Practice: The Contribution of Francisco Varela

JEANETTE BOPRY

This chapter will trace the chronology of the development of Varela's enactive framework beginning with his collaboration on autopoiesis theory with his mentor Humberto Maturana, the development of autonomous systems theory as a category within which to place autopoiesis as a special case, and finally enaction as a framework within which these theories work as a matter of course. I will explain important terms: autopoiesis, organization, organizational closure, structure, structural determination, structural coupling, and effective action. Finally, I will discuss the implications of the framework for theorists and practitioners concerned with teaching, learning, and cognition. Special attention will be paid to the following: the concept of information, the rejection of the representational hypothesis and the metaphor of transmission, and the related rejection of prescription.

Francisco Varela (1943–2001) considered himself both a scientist and an epistemologist. He is credited with being able to move easily between hard science and philosophy (both Western and Eastern). He was instrumental, for example, in organizing a series of semiannual meetings between cognitive scientists and the Dalai Lama. His epistemological position is the result of his reflection on the scientific work in which he engaged both with his mentor Humberto Maturana and in his own right. He is credited with both the development of autonomous systems theory and with the development of the enactive framework. The enactive framework is important because it provides an alternative to representational realism. The framework can be used to provide a warrant for constructivist practice and to ensure that such practice is epistemologically consistent. Enaction is not simply a reaction to the representational one, but the result of attempts to understand the results of scientific work that calls the representational framework into question. Enaction is of primary interest in this chapter, but it cannot be dealt with effectively without reference to autonomous systems theory or to his collaboration with Humberto Maturana on autopoiesis theory, which provides the basic concepts and terminology for the enactive framework.

AUTOPOIESIS THEORY AND AUTONOMOUS SYSTEMS THEORY

Varela became known initially for his collaboration with Humberto Maturana on autopoiesis theory. According to autopoiesis theory all living systems are self-producing: All of the component

parts and processes that comprise the living system are manufactured within the boundaries of the system itself. The cell is the prototypical example of autopoiesis as its organization is characterized by *closed* or circular processes of production. The concept of *organizational closure* was powerful enough to begin to influence practitioners in fields other than biology. Unfortunately because the form of closure Maturana and Varela described was autopoietic, it was this form of closure that people tried to import into other fields, so one that would read of communication producing communication, laws producing laws, etc. [This is an improper translation because people are important mediators in both instances: people produce communication, people produce laws.] Instead of choosing the common term *autonomy*, Maturana and Varela had coined the term *autopoiesis* specifically to distinguish living from nonliving systems. Such importations at best muddled the intended distinction; at worst they caused nonliving systems (e.g., social systems) to be treated as if they were living systems, something Maturana and Varela coined the term *autopoiesis* in order to avoid. The application of the organismic metaphor to social systems can result in people being considered mere component parts of larger living entities, the survival of which takes precedence over the survival of the people (now relegated to the status of interchangeable parts) that comprise it. This misuse of autopoiesis theory led Varela to develop the autonomous systems theory, which makes it possible to deal with the concept of organizational closure without limiting it to processes of production. Organizational closure is the criterion characteristic of all autonomous systems; autopoiesis is a special case of autonomy. Autonomous systems theory and autopoiesis theory share concepts and terminology that are relevant to the enactive framework. These require some explanation as their meanings are not intuitive. In particular, the terms *organization* and *structure*, which in everyday English are often used interchangeably, have specific and distinct meanings.

BASIC CONCEPTS UNDERLYING THE ENACTIVE FRAMEWORK

Organization and Structure

Organization is the set of relationships that must be present for something to exist as a member of any given class or category of entity. Take for example a geometric figure, the square. The organization of a square is a closed figure on a single plane composed of four equal sides connected at right angles. This definition includes both the properties of the components of the square (four equal sides) and the relationships inhering between them (closed, on a single plane, connected by right angles). The organization of the square is instantiated in all actual examples of that class of systems. All figures that have this organization will be recognized as squares.

Any actual example of an organization is a structure. Our square may be made of pencil lines, built of wood, built of plastic, etc. I can replace all the wood parts of my square with plastic parts and still have a square. If, however, I change the angle at which the sides of the figure connect, I have changed the organization of the figure and it is no longer a square. Organization and structure, therefore, are complementary concepts. Organization requires a physical structure, and any structure is an instance of some organization. Organization is the source of the identity of a system.

Organizational Closure—Autonomous Systems

Systems are divided into two major categories: closed or self-referred (autonomous), and open or other-referred (allonomous). An autonomous system is any system exhibiting a circular or closed organization. This type of organization allows no inputs or outputs. An allonomous system exhibits linear or open organization and allows inputs to and outputs from the system.

For example, the heart is an organ that is organized to process blood, the input–output process is essential to its organization.

In order to determine if a system is autonomous we must be able to observe its component parts. Organizational closure requires a system made up of a network of components that interact so that they

1. recursively recreate the interactions that brought them about in the first place, and
2. establish themselves as a unity by creating a boundary and using it as a means of separation from the background.

Autonomous systems come in a variety of forms, only a small number of these are autopoietic. The nervous system is an example of an organizationally closed system that is not a living system (it is a component of a living system). The organizational closure (circularity) of the nervous system takes the form “neuronal activity leads only to more neuronal activity.” The nervous system cannot be considered autopoietic because it does not produce the components that comprise it. Social systems can be interpreted as organizationally closed systems of coordinated behaviors that are reproduced over time by their members. Language is also considered an autonomous system because it can only be described in language. In “Autonomy and Autopoiesis,” Varela (1981) gives other examples of autonomous systems, including descriptions of events, rearrangements of elements, and computations of all kinds. Any autonomous system will tend to interact with the environment in such a manner as to preserve its identity.

A most important distinction between allonomous and autonomous systems is that informational interactions are essentially different in the two types of systems. A primary metaphor for allonomous systems is the *computer gestalt*: input, process, output. We interact with allonomous systems through instructions. Meaning is seen as contained in the correspondence between the representation and what it represents rather than in the system. A cognitive system belonging to the allonomous systems category (e.g., a computer) brings only syntactic (structural, grammatical) processing to this interaction. In the case of autonomous systems, meaning is provided by the cognitive system itself as determined by its own structural properties—through interpretation not through input. So, the cognitive system operates semantically, with meaning. In this regard information is what Varela has referred to as *in-formation*. In place of the computer gestalt, the primary metaphor for autonomous systems is the conversation.

The computer gestalt is the primary metaphor of cognitivism and information-processing theories. It is important to keep in mind that when this metaphor is applied to cognitive systems they are being treated as allonomous systems. In autopoiesis theory, all living systems are cognitive systems (cognition is the operation of living systems), but not all cognitive systems are living systems. So, to treat a living cognitive system as allonomous is to treat it as a nonliving entity, what Heinz von Foerster refers to as a *trivial machine*. While this type of interaction is possible, it demonstrates a basic disregard, even lack of respect, for the identity of the system.

Structural Determination

A system’s organization cannot change without a change to its identity. If a living system stops producing its own components it dies. But systems undergo change all the time and the distinction between organization and structure becomes critical. Structure determines the range of interactions a system may have with its environment and any changes a system can undergo. Change in a system may be triggered by the environment, but it is not caused by the environment. Changes in the structure of a unity can come from two possible sources: its *internal dynamics*

and *continuous interactions* with an environment. Both types of interaction are determined by the properties of its structure; a system can only engage in the kinds of interactions its structure makes possible. If this seems counterintuitive, consider that structural determination is very much a part of our commonsense understanding of everyday experience. When I press the accelerator in my car and nothing happens, I do not blame my foot, I understand the problem to be related to the structure of the car. The concept of structural determination provides a biological foundation for the notion that we construct reality, construct our own perceptions, and construct what we call knowledge.

For cognitive systems the combination of *organizational closure* plus *structural determination* has important implications. Organizational closure makes it impossible for information to be transmitted through, or picked up from, the environment. Structural determination makes information possible. Information is a construction, an interpretation made by a cognitive system, one that has been triggered by an interaction with the environment or some other cognitive system. This is apparent in our recognition that animals perceive the world very differently than we do and that this is related to differences in perceptual makeup. Dogs, bats, and birds all have their own ways of seeing the world. Yet, we do not say that they see the world incorrectly, just that they see the world differently. Cognitive systems do not create their perceptions out of whole cloth. The environment constrains the range of perceptions that a member of any given species may have.

Perceptions are the result of the interaction of a cognitive system with an environment. The environment perturbs the nervous system (triggers a response) but does not provide the response (determine the reaction). The cognitive system responds, not to the environment but to the deformation the environment has triggered in the system itself. In other words, my description of a sunset is not a description of an external phenomenon as much as it is a description of my own visual field. That you and I have similar responses to the same sunset is a testament to similarities in our physical and cultural makeup: We describe the deformation to our cognitive systems triggered by the sunset in much the same way. But, given organizational closure and structural determination, how is it that we are able to talk about the sunset at all? The answer to that question lies in *structural coupling*.

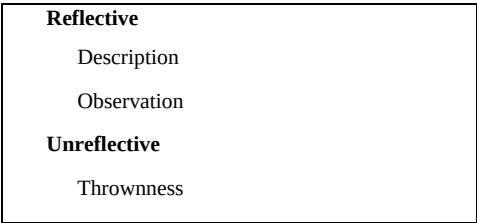
Structural Coupling

When a system interacts with the environment it undergoes structural change, and so does the environment. Just as is the case with the system, any change in the environment is dependent upon its structural properties. When a unity is in continuous interaction with an environment, so that there is a mutual triggering of structural change over time that is stable in nature, the unity and the environment are said to be structurally coupled. This process is more commonly referred to as adaptation. The process is recursive in that the changes in A triggered by B will trigger changes in B that will trigger changes in A, etc. Two unities may also become structurally coupled. When this happens they act as environment for each other. If two unities remain structurally coupled over time their ontogenies (life histories) intertwine. Cells that are structurally coupled may form metacellular entities; organisms that are structurally coupled may form social groupings. There is no plan, no design, being followed that determines the results of structural coupling. This is a historical process, a process of drift. As long as the structural changes mutually selected in each other result in the conservation of the organization of the unities, the unities will carry on in co-ontogenic drift.

Social Phenomena

When two autopoietic entities are structurally coupled in such a way that their life histories intertwine, a new phenomenal domain arises: a social domain. This form of structural coupling

Figure 57.1
Levels of Experience



is close to universal, but takes different forms in different species. What is common to all social phenomena is that they become the medium in which the autopoiesis of participating organisms occurs. All social phenomena require the coordination of behavior, which is provided through the mechanism of structural coupling. All behavioral patterns that are learned and that are stable through generations are cultural behaviors.

Language. Communication is a form of coordinated behavior. Communicative behavior that is learned, as opposed to instinctive, is linguistic. Many animal species generate linguistic domains (use signs). In their coordination of linguistic behaviors, human beings generate language (recognize that they use signs and communicate about the signs themselves). Language is the glue that holds *human* social interaction together. Its development signals the emergence of a phenomenal domain that is unique to humans and which coevolves with language: the observer.

The Observer. The term *observer* as used by Varela approximates Heidegger’s term *Dasein*. The observer is the human “way of being in the world.” The observer is able to observe and communicate about its own linguistic states. It is within the domains of language and the observer rather than in the cognitive domain of the nervous system that representations come into play; they are a construction that facilitates communication between observers. Language is the glue that holds human social interaction together.

Social interaction depends upon structural coupling. Structural coupling makes it possible for the living system to enter a social domain, and eventually to develop the domains of the observer and language that make the consensual specification of a reality possible. The notion of structural coupling replaces the notion of the transmission of information. This is important in understanding experience.

Levels of Experience

The emergence of new phenomenal domains suggest different levels of experience (Figure 57.1). These levels of experience are each organizationally closed domains that do not intersect, so that what happens in one domain is unknown to the others except through structural coupling. So, while we can observe ourselves or others engaged in some common unreflective activity, the observation is an interpretation of that activity and is not isomorphic to it. We can describe our observations in language, but again this description is not an exact representation of the observation but an interpretation of it. Through structural coupling these domains perturb each other and interpret the ways the other perturbs them. Higher levels of experience depend upon, but do not intersect with, lower levels. The level of observation depends upon unreflective activity, but within it such activity acts as a perturbation or a trigger for interpretation. Descriptions are attempts to put observations into language, and again they are not equivalent to the observation. It is fundamental to the enactive position that everything that is said is said by someone. Actor cannot be divorced from action, observer from observation, describer from description.

ENACTION

Rejecting the Representational Hypothesis

The enactive framework has not come about as the result of philosophical musing alone. Maturana and Varela engaged in scientific work in neurophysiology and, more recently, for Varela at least, immunology. The enactive framework came about in part as a necessary component of understanding the results of their own research; dealing with the shortcomings cognitive scientists have just begun to acknowledge with cognitivism. The need for a new framework as an alternative to representational realism became apparent to Maturana in the 1960s when his work on color vision led him to realize that activity in the retina could be more easily correlated with the experience of the perceiver than with the physical stimuli present in the environment. If the representational hypothesis were correct then the color of an object, say an orange, should appear differently under fluorescent (blue) light than it does in the sunlight (full spectrum). However, our experience of the color orange is the same in both environments. In order to account for the problem posed by color vision Maturana came to the conclusion that perception cannot be considered as the grasping of an external reality, but rather as the specification of one. The representational hypothesis works only if there is a pre-given world to represent; if perception specifies the world, the representational hypothesis must be rejected. When Varela joined Maturana both recognized how their work posed a direct challenge to the representational hypothesis, but it was left to Varela to formally codify an alternative. The enactive framework is the result.

Cognitive science developed within the representational realist framework has a number of acknowledged drawbacks. Serial processing is one of these; another is the notion of memory as an entity stored in specific locations in the brain. These are important problems, but Varela points to the inability of cognitive science in a representational framework to account for a large percentage of cognition, what we refer to as *common sense*.

The Enactive Framework

If we do not interact with the world through representation, what mechanism do we use? The main thrust of the enactive framework is that the primary way we interact with the world is through action. As I move about I interact with the world: I *bump* into things. In bumping into things my perceptual systems become deformed. I interpret this deformation and project it back onto the *outside* as environment.

This position has currency in recent developments in artificial intelligence. The roving robots sent to Mars to collect samples and the small autonomous vacuum sweeping system currently being marketed in the United States are examples. The enactive position is nonfoundational: it does not assume a preexisting world (realist position) or a preexisting mind (idealist position).

Constructing a Reality

The nervous system is a closed system of neuronal activity (neuronal activity leads only to more neuronal activity). It cannot be instructed by the environment: information cannot be input to or output from it. The living system structurally coupled to a nervous system does not pick up information from the environment; instead, it interprets its interactions with the environment. These interpretations may be triggered by the environment, but they are determined by the structure of the living system. In this way, I may say that what I see is not the world outside, but my own visual field. Thus, the nervous system is incapable of making a distinction between perception and hallucination. While one might think that the closure of the nervous system means

that the specification of a reality is an individualistic and solipsistic matter; in fact, this cannot be the case. It is, ironically, the very fact that the operation of the nervous system is solipsistic that makes this impossible. Since an individual alone cannot make this distinction, a social consensus is required. The determination of a reality, then, depends upon social interaction, an understanding that what is perceived by oneself is also perceived by others. We share a reality because we have cospecified it through the coordination of our actions with the actions of others. This can lead to the specification of many different realities because it is an activity that can be engaged by a small group as easily as a large group. So one may speak of *multi-verses* in place of a *uni-verse*.

By focusing on interaction rather than representation, Varela has avoided the mind–body, physical–mental dualism. Existence and interpretation are the same thing. Those things that we label information, knowledge, and semantic content are constructions, structurally determined products of structural coupling. They have no independent existence. So, we may say that reality is both socially determined and dependent upon the interpretation of individuals. It is the creation of the process of inquiry rather than discovered through inquiry.

Effective action

Effective action is simply successful ways of being-in-the-world. More precisely, it is the history of structural coupling that brings forth a world in such a manner as permits the continued integrity of the systems involved. Effective action is metaphorically a conversation; maintaining the continued integrity of the system requires keeping that conversation going. Survival is proof of effective action. Within this framework, information, knowledge, and semantic content are all constructions of the cognitive system and products of structural coupling. They are effective to the extent that they permit the continued integrity of the system. What we call knowledge is effective action within a given domain. What is called *content* in the representational framework becomes part of the environment through which we must wend our way.

Communication

Seen from a representational perspective, communication is deterministic. The responsibility for understanding lies with the sender. The process is easy if the sender is competent at transmitting semantic content. Within the enactive framework, on the other hand, communication requires effort and patience. It is a reciprocal process of interpretation and reflexive understanding. I must interpret what my partner is saying, I must interpret my partner's understanding of what I am saying, and I must interpret my partner's understanding of my understanding of what he is saying, etc. The process is like the experience of looking in a three-way mirror, where the images go on into infinity. The involved parties will assume they share an understanding until such time as their *conversation* breaks down, then, and only then, they will engage in a problem-solving process to get the conversation back on track if they consider the effort worthwhile. Communication within this framework requires mutual respect—it is impossible unless both parties are willing to make a space for the other in their lives.

GENERAL IMPLICATIONS

Abandon the Transmission Model with Its Container Metaphor

The most obvious implication is that we must abandon the transmission model of communication. This is troublesome because the English language conspires against us. We talk of sending information, or putting information into messages that can be sent. We put knowledge into books

and other vehicles of conveyance. Meaning is referred to as contained in words or sentences. We admonish our students not to read too much into test items, etc.

One of the implications of the transmission model is that the sender is responsible for the understanding of the receiver. If he crafts his message correctly it will not be misunderstood. If we extend this to instruction we can see how it is that teachers are considered to be responsible for learning in their students. If instruction is the transmission of knowledge (and/or information) then the teacher (as sender) is the responsible party. This is something that has not escaped the notice of students who often describe *learning* as something that someone does to them rather than as something for which they are responsible.

An implication of the container metaphor is that information and knowledge can be contained in words, books, tools, and other devices. Within the enactive framework knowledge is effective action within a domain. It cannot be contained. It is better to think of such material as indices of the intelligent activity of their creators. Anything that might be considered input, like presentational material, has only the potential to function as a perturbation, a trigger for neuronal activity, that results in a change of state determined by the structure of any individual that interacts with such material.

The transmission model can function only in a representational environment, where the world outside is pre-given, where information and even knowledge are pre-given. In an environment where interaction brings forth both the knower and the world to be known, we cannot speak of transmission, we must speak of structural coupling, of bringing forth through interaction.

Information Is a Construction

Many constructivists, generally those who refer to themselves as moderate constructivists, consider knowledge a construction, while considering information an entity with independent existence. To take the position that knowledge (or meaning) is constructed from information that is picked up or transferred from the environment is to consider the cognitive system simultaneously allonomous and autonomous. From an enactive standpoint, this is illogical. Information is what Varela has referred to as *in-forma-tion*: an interpretation, a construction. Information cannot be picked up from the environment; rather it emerges as regularities within our cognitive activity. We interpret these regularities as facts.

Intelligence Is an Ability to Join or Create Shared Worlds of Meaning

Within the representational framework intelligence is equated with problem solving. Within the enactive framework, intelligence is measured by the ability to join and the ability to create shared worlds of understanding. Sharing in this context does not denote isomorphic or identical understanding; rather it means that a conversation can be conducted on a given topic without breakdown. As we carry on the conversation we may *assume* we have the same understanding and we may *behave* as if there is one. The longer we can carry on this conversation, the greater our confidence may become in this isomorphism. Such interaction allows us to coordinate behavior with others. We generally become aware that understanding is not isomorphic only when the conversation breaks down. To stand Bateson's definition of distinction on its head, a successful conversation is one in which the differences make no difference.

Becoming a member of any preexisting community and taking on the values and commitments of its members is the prototypical example of joining a shared world of understanding. Examples include our family, local community, schools, professions, etc. Creating new worlds of understanding may seem more remote, the activity of scientists, explorers, artists, and even politicians who push the frontiers of knowledge. I suggest, however, that this activity is not really so remote. It seems to be a natural part of the adolescent journey into adulthood. Hip-hop culture

seems a good example of this form of creation. Each generation of American youth seems to have generated some new understanding that has had an impact on the culture at large.

PEDAGOGICAL IMPLICATIONS

The enactive framework, dealing as it does explicitly with issues of cognition, has implications for educators, in terms of both how we understand learners and learning and how we approach the process of design for learning.

Implications of Organizational Closure and Structural Determination

Learning is very much under the control of, and the responsibility of, the learner. The educator orients or points learners in desired directions. The symbol systems we use (e.g., language) are not conveyers of meaning; they are orienting devices. They effectively constrain, but do not determine, the possible interpretations that can be made by another of a given situation. In pedagogical interaction attention needs to be placed on learner understandings. Educators may also ask learners to reflect upon their own learning, to experience it as a learner-owned construction.

Implications of Structural Coupling

The foundation of the relationship between educators and learners is structural coupling. The excellent educator is one who is well adapted to his or her charges, and the students, in turn, are well adapted to their educator. The most obvious implication is that learners need to be provided opportunities for structural coupling that are consistent with learning goals. The converse is also true: the environment must scaffold the teacher's understanding of the learner's experience. As a history of structural coupling involves not just changes in the living system, but in the environment as well, learners should be provided an environment rich enough to afford reorganization by the learner (learners as designers) in pursuit of his or her learning goals.

Implications Effective Action

In addition to pointing learners in particular directions, educators also act as mediators between learners and the worlds of meaning to which they have oriented their charges. Worlds of meaning are metaphorically conversations among the members that comprise these worlds. Educators scaffold the ability of learners to enter into conversation with members of these worlds, to engage in effective action within the domains these worlds encompass. This suggests that learners have access to various communities of practice and other ongoing worlds of shared understanding. It is important to remember that the classroom is an environment in which learners can create their own shared worlds of understanding and their own communities of practice. While this activity is already present in the classroom, the educator may wish to make it visible so that learners may experience it reflexively. Contributing to the development of this shared world once it is visible requires that the environment be rich enough to afford problem setting as well as problem solving.

DESIGN IMPLICATIONS

Problems with Prescription

When I prescribe I create a number of problems from the enactive perspective. First of all, we know that instruction (transmission of information or knowledge) is not possible. So, prescription is a matter of so constraining the possibilities available to learners that their responses will fall

into a narrow and predictable range. We effectively eliminate the possibility for a diverse range of responses, and for unusual or creative responses. Furthermore, when I expect students to limit what they learn to what I already know (or is provided as part of my design), I am treating them as an extension of my own cognition. This is an essentially oppressive activity. For learners, following another's prescription puts that person at the center of their cognitive activity, they follow that person's trajectory, not their own. You allow yourself to be used as a trivial machine. Every person needs to feel at the center of their own cognition. Finally, when I predetermine what my student may learn and further limit it to what is already known, I deny my charges the opportunity to make a valuable contribution to a community of importance to them. If I pretend that my prescriptions are the correct, or best, way of engaging a domain of knowledge I discourage learners from taking multiple perspectives on a given way of knowing. Those behaviors that we say we cherish most in learners: responsibility, creativity, and a critical stance are possible only when learners find themselves at the center of their own cognition.

Proscription as an Alternative

Proscription has a different logic than prescription. Prescription puts us in a place where what is not allowed is forbidden, proscription a place where what is not forbidden is allowed. One can argue, for example, that the viability of the U.S. constitution depends on its proscriptive logic. What is not specifically proscribed by law is permissible, and rights not specifically granted to the federal government belong to states or to individuals. In addition, the making of certain kinds of laws is expressly forbidden. If we consider what makes two cultures distinct, it is obvious that they offer their members different life experiences. We cannot know what we do not experience. We are enculturated through the proscription of certain experiences. While no culture can prescribe that all its members have a given set of experiences, cultures can establish taboos or experiences that are not allowed, or, even more effectively, cultures can simply ignore the possibility of certain experiences. Issues related to values are central to a proscriptive logic.

While design by telling people what not to do seem unpalatable, it is less constraining than prescription which tells people what to do. When I prescribe a series of steps for someone else to follow, I am proscribing an unknown set of alternatives. There is no mechanism for questioning what I have proscribed. When I set constraints by proscribing certain steps, I am providing guidance, but not determining how a goal may be reached. By naming what is proscribed, I am making the proscribed visible and open to question. What would otherwise be invisible may be critically analyzed. Proscription does not define a correct route to attainment of some goal, making the discovery of new alternatives possible, so learners in such an environment are constantly challenged to be creative.

Proscription can be seen as a humanistic alternative to prescription, because it determines what will not happen rather than what will happen, thereby allowing for diversity in practice. Proscription also seems to be a component of the process of creativity: Creative artists take account of the constraints of a given situation, often turning those constraints to their advantage. Within the enactive framework the concept of creativity is brought into the foreground: context and common sense are the essence of creative cognition. Common sense is defined as an individual's bodily and social history and this context provides the constraints imposed in a given situation. What matters is to maintain a history of effective action even while the obstacles or constraints that one encounters change.

Learners as Designers

It seems impractical to expect prescription to totally disappear. Novice members of communities of shared understanding will continue to rely upon the instructions of more expert members

as part of the price of admittance to the community. There are alternatives to remedying the most onerous problems with it, however. In the example I just provided, the choice to accept a subordinate position is likely to be taken on willingly and novices may have some flexibility in the selection of experts they work with. That submission is willing does not ensure that the relationship is not oppressive. One can, however, encourage learners to create prescriptions for themselves with the understanding that such prescriptions will undergo constant revision as the learner's expertise improves.

REFERENCES

- Maturana, H. R., and Varela, F. J. (1980). *Autopoiesis and Cognition*. London: D. Reidel.
- Varela, F. J. (1992). Whence perceptual meaning? A cartography of current ideas. In F. J. Varela & J. Dupuy (Eds.), *Understanding Origins* (pp. 235–271). Dordrecht: Kluwer.
- . (1981). Autonomy and autopoiesis. In G. Roth & H. Schwegler (Eds.), *Self-Organizing Systems* (pp. 14–23). Frankfurt: Campus Verlag.
- Varela, F. J., Thompson, E., and Rosch, E. (1991). *The Embodied Mind*. Cambridge, MA: The MIT Press.

CHAPTER 58

Action Research and Educational Psychology

DEBORAH S. BROWN

Throughout the twentieth century, educators advocated the notion of teachers conducting research on their own practice or engaging in what has become known as action research. The fact that the popularity of action research has waxed and waned over the last hundred years or so does not make it any less important. In fact, the paradigm shift evidenced in the action research movement is indicative of the overall epistemological shift in the field of educational psychology often described as postmodern and constructivist in nature.

AN OVERVIEW OF THE HISTORY OF ACTION RESEARCH

Before exploring this paradigm shift in greater detail, the historical context for teachers conducting action research in the twenty-first century will be overviewed. The first mention of action research in the teacher education literature dates back to 1908, when it was advocated as a means of improving the quality of teachers and teaching. However, with the advent of group intelligence testing, calls for the experimental study of classroom problems became more commonplace; by the 1920s and 1930s university-level educators were encouraged to employ the scientific method to study classroom problems. The major alternative voice in this period was that of John Dewey, who in 1929 argued that teachers should study pedagogical problems through inquiry. Echoed in Dewey's writing was the sentiment that logically, teachers were the most appropriate persons to validate the results of scientific studies.

Despite the influence of Dewey and progressivism, it was not until the 1940s, as World War II came to a close and our nation focused once again on domestic social problems, that the popularity of action research reemerged, led by such figures as Kurt Lewin. Stephen Corey of Columbia University is credited with bringing the term into the domain of educators with his claim that action research would lead to teachers making better instructional decisions. However, by the late 1950s university educators questioned its legitimacy and action research again fell out of vogue. It was replaced by university-driven research framed by the process-product paradigm, which emphasized the quantitative study of classroom events.

In the late 1970s action research once again became popular as university researchers were criticized for turning teachers off to educational research that was rife with technical language;

furthermore, it was argued that researchers had created a disconnect with teachers because “teachers were studied down” by a research community that often appeared to teachers as elitist and too far removed from everyday practice. Hence, it became popular to argue for collaborative educational research between university researchers and teachers with teacher parity as a prime goal. A qualitative research paradigm that viewed the teacher as the focus of research, instead of classroom events, was now in favor.

Enjoying a resurgence in popularity, in the 1980s action research was promoted as a means of empowerment and professionalism for teachers; by the early 1990s, at this time Donald Schon’s notion of teacher as reflective practitioner depicted teacher research as both a collegial and public examination of problems related to practice. According to this view, action research served to combine the processes of curriculum development, teaching, evaluation, research, and professional development. As such, the division between the roles of teacher and that of researcher became intricately intertwined. This reflective practitioner perspective clashed with the traditional teacher craft culture, which viewed teacher research as a threat to teacher privacy and authority and argued that the role of teacher should take priority over that of researcher.

In contrast to Schon’s version of practical action research, emancipatory or critical action research was advocated during the same time frame by authors such as Stephen Kemmis. In critical action research, teacher research must be critically grounded in that it must consider the sociocultural, historical, and political contexts of schools in an effort to identify those aspects of the dominant social order that pose barriers to the work of teachers. Seen in this light, action research entailed teachers’ arranging themselves into research communities, fostering both teacher autonomy and group decision making. Most recently, in this vein, action research has been proposed as a means of school renewal and change focused around on-site collaborative decisions.

PARADIGM SHIFTS AND CONCEPTUAL FRAMEWORKS

Throughout the twentieth century the field of educational psychology in general was characterized by a similar series of paradigm shifts. For most of the twentieth century the field was dominated by positivistic, experimental, and process–product studies of teaching conducted mainly by university-based researchers who saw themselves as research experts. It was not until the 1970s and 1980s that ethnographic, naturalistic, and qualitative studies of phenomena besides observable behavior were accepted into mainstream educational psychology; even then in some segments of the field these methods were presumed to be inferior to those of a quantitative nature.

The paradigm shift that began in the 1970s sprung from new research in cognitive psychology on topics such as the information processing model and situated cognition. Research on teacher cognition represented the continuation of this focus among researchers interested in studying teaching. In the 1970s and 1980s places such as the Institute for Research on Teaching at Michigan State University led the way in conducting groundbreaking studies of multiple facets of teacher cognition, including teacher decision making, teacher planning, as well as research on teachers’ knowledge and beliefs. This laid the foundation for uniting the teacher-as-decision-maker focus with the teacher empowerment movement of the 1980s. The latter movement contended that in order for teachers to truly be empowered there needed to be on-site research at the local school level that occurred hand in glove with on-site decision making led largely by classroom teachers.

The 1980s also heralded the parallel popularity of multiculturalism and the notion of teacher-as-change agent; the latter view held that teachers had the responsibility to challenge the status quo and thereby work to remedy social injustice and equity issues in schools. At the same time, Lev Vygotsky’s social constructivist perspective was becoming popular in educational psychology circles. Like Lewin, Vygotsky had argued that psychological and educational phenomena should be studied as occurring within a larger historical, ever-changing, sociocultural context. This view

certainly complemented both the political nature of the teacher empowerment movement as well as the emerging interdisciplinary focus of qualitative research as represented by such new fields as educational anthropology.

Another relatively new approach to educational problems—offered by Dr. Mel Levine—also represented the merging of another discipline with that of educational psychology. Levine’s phenomenological approach advocated that educators develop neurodevelopmental profiles of students instead of using labels. The profiles would in essence consist of a balance sheet of individual strengths and weaknesses along with a description of the “goodness of fit” between these and the tasks a child is asked to do. Levine believed teachers are in the best position to observe, describe, and respond to differences in learning; he viewed teachers’ engagement in action research as a prerequisite task to effective teaching and learning.

The merging of these paradigm shifts in educational psychology along with the rising popularity of action research has resulted in some interesting new directions in the 1980s, 1990s, and beyond. Lee Shulman and others called for practical craft knowledge (or the knowledge of teaching acquired as a result of examining one’s own practice) to be considered along with traditional research on teaching as comprising the knowledge base of educational psychology. Shulman and others have argued that both teachers and university researchers have a legitimate place. The university researcher can help to fit action research findings into a larger theoretical framework whereas the classroom-teacher-as-action-researcher tests if findings from the larger research literature are effective in practice. Much of the next section will contain illustrations of this latter point.

DEFINING THE NATURE AND TYPES OF ACTION RESEARCH

It is most important to remember that action research represents a systematic tradition through which teachers are able to communicate to their colleagues insights about some aspect of the teaching–learning process. One form of action research is conceptual in nature and consists of the analysis of ideas and generation of theories; teacher essays on classroom life, on the philosophy of schooling, or on the nature of research itself may fit this category. A second form of action research is empirical in nature and focused on implementing and studying an innovation. The first step in this type of action research is that teachers identify the problem to be studied. This conceptualization stage entails delineating the specific research question(s) to be answered. Next, the teacher-researcher selects research methods to be employed in the data collection process. In the implementation phase the teacher carries out a change in their own teaching behavior and measures the results. Often teachers study changes in student achievement, attitude, and/or behavior. Finally, in the interpretation phase, teachers analyze the results of the action research; it is at this point that they judge the effectiveness of the teaching–learning process under study and determine actions to be taken as a result.

There are several different approaches to doing action research that focus on the study of an innovation. Action research may involve an individual teacher or a small collaborative group of teachers, or it may be schoolwide in nature and involve a host of school professionals. Action research exists on a continuum with regard to the extent to which its goal is to achieve equity for students, revitalize the school organization as a collective problem-solving unit, and improve collegiality among teachers and school staff members. One common element across the different types of action research is the notion of disciplined inquiry designed to answer a practical question.

In terms of action research conducted by individual teachers, several illustrations follow. For example, one teacher may be interested in documenting her students’ perceptions of a cooperative learning model she is piloting. A second teacher may want to discern the effectiveness of teaching language skills by using daily reading and writing workshops instead of using a basal reader. A

third teacher may investigate if the use of a brain-based teaching approach in math is comparable to a traditional teaching approach.

Teachers may also pair together or work in small groups to conduct an action research project. For example, a high school English teacher and a kindergarten teacher who pair their students in a reading and tutoring program may team together to study the results. Or a cross-disciplinary grade-level team of four may embark on a research project to document the effectiveness of student journal writing across the curriculum. In a third context, a teacher may share portions of a videotaped lesson in which he is trying out an innovative teaching method with several colleagues, asking them to record and discuss their reactions to it.

In some settings it may be more appropriate to conduct schoolwide action research. For instance, this may be done in order to assess the perceptions of administrators, counselors, teachers, and students with regard to a new middle school advisor–advisee program. Or a study may be done to determine the effectiveness of a new schoolwide discipline plan. Alternatively, an entire school district may become involved in action research, as has been the case in the Madison Metropolitan School District in Wisconsin under the leadership of Ken Zeichner; teachers in this district became involved in action research studies on topics such as race and gender equity as well as assessment.

Another type of action research involves coresearching with students. For instance, a teacher may ask his special needs students to talk and write about their perceptions of what it is like to be included in a regular education classroom. Another teacher, struggling with how to make reading more enjoyable for her students, may decide to ask her students for their solutions. In a high school concerned about the dropout rate, students may be selected to interview their classmates about both what they find interesting and what boring in school. The students tape the conversations and also participate in analyzing the data.

In addition to these different types of action research, numerous action research projects have been conducted by pre-service teachers, student teachers, as well as cooperating teachers. For instance, pre-service teachers in a social studies methods course may develop and administer surveys designed to ascertain the nature of both the social studies curriculum and social studies instruction in a local school district. Or pre-service teachers may each be asked to interview five elementary students after asking the question “What is writing?” The pre-service teachers may be encouraged to take notes as well as tape-record the interviews where possible. Transcripts of the interviews could then be produced and analyzed for reoccurring themes.

Secondary student teachers may design and administer a survey to determine their students’ learning style preferences as well as to track whether certain sections of students had a majority learning style preference. A middle school student teacher may want to study how helpful concept maps are in terms of her students’ comprehension of scientific concepts. An elementary student teacher may be interested in assessing the impact of sharing student portfolios in parent–teacher conferences with regard to parental understanding of student strengths and weaknesses.

Cooperating teachers may have myriad action research interests. These may include completing observational checklists designed to assess the quality of teaching and documenting how the results change over the student teaching assignment. Or, it may be that a group of cooperating teachers are interviewed to glean their perceptions about areas they believe their student teachers lack adequate preparation in; the results of such a project may be shared with university supervisors at a local college campus.

PARADIGM SHIFTS IN EDUCATIONAL RESEARCH AND ACTION RESEARCH

Even though the paradigm shift evidenced in the growing acceptance of qualitative methods by the 1980s paralleled the resurgence of action research methods, action research can be conducted by using either qualitative or quantitative methods. In fact, many authors contend that the most

effective action research incorporates both qualitative and quantitative methods. When selecting a method it is critical that teachers determine why it would be of value and if it addresses their research question(s). The following section delineates the array of qualitative methods available to those who do action research.

Qualitative Action Research Methods

There are numerous qualitative methods available to the teacher-researcher. Qualitative research is much more concerned with the description of the context in which natural events take place than is quantitative research. Some qualitative methods involve observational techniques using research logs or journals to record anecdotal notes and personal recollections. Other observational techniques include observational checklists and rating scales, tape recordings, videotapes, as well as interview notes and field notes.

Nonobservational qualitative techniques include attitude scales, questionnaires, individual and focus group interviews, and demonstrations of student performance. Another nonobservational data source entails the analysis of archival data such as records of attendance, dropout rates, suspension rates, discipline referrals, grade distributions, and the number and percentage of students labeled in the various special education categories. In addition, archival data may include documents such as school board reports, curriculum guides, district and state tests, accreditation reports, or needs assessments. In terms of credibility, triangulation, or using at least three different types of data, is more credible than using only one data source from the qualitative perspective.

Quantitative Action Research Methods

Quantitative methods may include reporting quantitative data using descriptive statistics such as the mean, median, mode, range, and standard deviation. A variety of pretest/posttest comparison group designs could be used. Or teacher-researchers could use within-subject designs in which the individual student is the point for comparison such as time series design in which baseline data are collected describing the target behavior prior to the use of the intervention. Next, the teacher introduces the intervention and collects data describing the behavior of the student. The teacher then compares baseline data with data collected during the intervention phase. Repeated and frequent measures are collected in both the baseline and intervention phases. If comparisons of these data show dramatic differences, then the researcher concludes that the intervention caused the behavior differences.

Resolution of Research Paradigm Clashes

It is argued here that both qualitative and quantitative research methods may be appropriate for use in the conduct of action research. One reason for this view is that many educational researchers contend that the use of the two categories of methods described above is not a sequential process, but rather a parallel process. That is to say, techniques from both methods may be useful in answering research questions. For instance, in an action research study designed to assess the effectiveness of cooperative learning, a pretest/posttest group design may be used in which a teacher computes typical gain scores on the postassessment measure as compared to the preassessment measure after cooperative learning is used. To determine why cooperative learning was either effective or ineffective, collecting additional qualitative data may be of value, such as assessing student and teacher perceptions about cooperative learning by using attitude surveys. Observations of classroom teaching may further serve to answer action research questions. In this case, deciding on the method to use was not an either/or choice.

A second rationale for considering both methods involves the realities of the workplace in which teachers live; certainly the quantitative analysis of test scores is a way of life for most modern-day educators. However, the addition of qualitative data enables the teacher-researcher to depict the context in which the quantitative data were collected and provide a lens through which to understand the limitations of solely relying on test score data. With the current focus on test scores, it may be that both sets of data are needed to convince others of the social inequities present in schools.

Thirdly, educators in the twenty-first century will likely be involved in both conducting and sharing the results of case study action research; in compiling case research relevant to one's own students and setting, both quantitative and qualitative data may be necessary. The sharing of case research with school professionals who work in other contexts is similar to the sharing of cases among both law and medical professionals.

Some have held that a focus on research methodology often belies a more serious disagreement in terms of educational epistemology. For this reason, two markedly different perspectives on the philosophy pertaining to how an educator knows what he or she claims to know will be reviewed in the next section.

PARADIGM SHIFTS IN EDUCATIONAL EPISTEMOLOGY AND ACTION RESEARCH

The larger question remains as to how the two different educational epistemological views will be reconciled when it comes to conducting action research. Before speaking to this, the nature of the differences in these two views will be examined.

Positivism

Positivists contend that knowledge exists outside of the self and can be objectively observed and measured. In the field of educational psychology, the influence of positivism is best represented in the behavioristic paradigm that became so influential in the 1940s through the early 1970s. For the behaviorist, learning is defined solely in terms of changes in students' observable behaviors assessed by using quantitative methods. It is assumed that in studying the student, no value judgments will be made. Positivism contends that all knowledge is determined by the teacher, who defines appropriate and inappropriate behavior; controlling student behavior is seen as the central act of teaching. Behavioristic classrooms are often described as teacher-centered.

Positivism is predicated on the notion that a teacher's job is to teach finite skills that build into a competency as evidenced in the cognitive domain of Bloom's taxonomy of objectives. Positivistic teachers use authoritarian discipline methods such as assertive discipline; in this approach, teachers control student behavior by employing consequences such as positive and negative reinforcement. The teacher takes responsibility for conveying the curriculum to students; the curriculum is influenced heavily by external forces such as administrators, textbook manufacturers, and state and local requirements. Tests used to assess student progress often report success or failure in terms of percentages and based on comparisons made with other students. Conforming to instructions, rules, performance standards, and expectations is emphasized in a behavioristic classroom.

Constructivism

In contrast, constructivists believe that knowledge is subjectively determined and highly personal, arising out of experiences that are unique to the individual. In the field of educational

psychology the influence of constructivism is evidenced in the humanistic, cognitive, and social constructivist paradigms. The humanistic paradigm was introduced as early as the 1960s, while cognitivism dominated in the late 1970s through early 1990s; through the 1990s and into the twenty-first century, social constructivism has superseded cognitivism in terms of influence. For a constructivist teacher, both knowledge and learning goals are constructed by the student; hence constructivism entails a student-centered approach to learning. The teacher's job is to facilitate personal learning by creating a community of learners of which each student is an important member.

Constructivism is based on the notion that students must put knowledge together based on experiences and expand that knowledge through interaction with others and personal reflection. Thus, constructivist teachers place a premium on the use of cooperative learning and teaching students metacognitive study strategies. In a constructivist classroom students are presented with relevant problematic situations in which they can experiment in a search for their own answers. A constructivist teacher is likely to have students determine their own behavioral standards by having them participate in making classroom rules and resolve discipline problems through the use of class meetings and open and reflective dialogue and problem solving. The constructivist teacher maintains his or her right to determine specific instructional goals and challenges students to set their own personal goals for learning. Assessment tools focus on individual growth as seen in portfolio assessment rather than on student placement within the class population. Self-evaluation and peer evaluation are stressed.

RESOLUTION OF EPISTEMOLOGICAL PARADIGM CLASHES

Clearly the notion of teachers doing action research on first glance smacks more of constructivism than positivism. In fact, in Great Britain the emergence of action research was viewed as an alternative paradigm to that of positivism, which was rejected at the time because it was viewed as an external means of controlling teachers. Secondly, the conceptual framework from which action research originated was constructivist in nature. Dewey envisioned the teacher as one who constructed a complex understanding of teaching and learning by engaging in teacher research instead of solely accepting what authorities tell them works. Thirdly, in action research teachers continue to learn and grow by reflecting on and self-evaluating their own practice, often with the involvement of students and colleagues as coresearchers. The action-researcher determines his or her own research questions and research design on the basis of local needs. These reoccurring themes are constructivist in nature.

Yet it would be a mistake to completely discount the influence of positivism on action research. A critical part of doing some forms of empirical action research consists of being able to narrow the parameters of the study to focus on a set of manageable questions that lend themselves to some manageable form of interpretation and assessment. And sometimes, albeit not in every case, this process entails operationalizing concepts and measures. This process does not necessarily preclude the teacher-researcher's examination of his or her own assumptions, the assumptions of other researchers, multiple frames of reference, and whose interests are served by the action research. This process of operationalization also need not preclude the collection of qualitative data, which may be useful in depicting the sociopolitical and cultural context in which the action research study is conducted.

Another possible slice of positivism that may be helpful to teacher-researchers is the use and/or modification of assessment measures adapted from so-called authorities in the field; some of the most appropriate designs in action research may have been developed in the context of the quantitative perspective. Some of these quantitative designs may produce results consistent

with postmodern goals such as illuminating social justice and equity issues. Would teacher-researchers be unable to consider the results of such research valid because they were based on quantitative-data-gathering procedures? Such questions should convey the absurdity of defining action research as an exclusively constructivist process.

Certainly, pieces of the positivistic tradition have something of value to contribute to action research. Perhaps a more difficult issue to resolve is the notion advanced by some that teacher-researchers must uniformly adopt a critically grounded postmodern perspective. While it is of great value for teachers to view their own action research from multiple perspectives and continually question their own assumptions and those of others, should the goal of all action research be of a postmodern nature, designed to resist the dominant culture perspective and illuminate social justice and equity issues? Does it follow that in failing to challenge the status quo in every action research endeavor, one automatically endorses it? Perhaps a more realistic goal is that those who conduct action research consistently and thoroughly document the sociopolitical and cultural context in which the action research takes place.

Is it possible to construe action research as a socially constructed act and yet permit the major player in that act, the classroom teacher, the freedom to define its goals and design as appropriate to the local setting? If the goal of action research is to empower teachers to engage in continuous inquiry about their teaching so that they can reflect upon and improve their own work and situations, is it appropriate for those outside of schools to define action research in exclusively political terms that classroom teachers may or may not concur with? Perhaps our field would do well to minimize the role that external factors such as the standards movement, university requirements, and mandates from central office project coordinators play in the development and conceptualization of action research. It could also be argued that until larger issues are remedied, such as changing the face of the teaching force to incorporate more diversity, action research will not in and of itself be a process that can effectively address social justice and equity issues in schooling.

The study of epistemology also may shed light on how to resolve epistemological paradigm clashes. In a new model that describes the development of epistemological understanding, Kuhn, Cheney, and Weinstock (2000) contend that mature epistemological understanding is the coordination of objective and subjective ways of knowing. According to these authors, initially the objective way of knowing dominates to the exclusion of the subjective. Then, in a dramatic shift, the subjective way of knowing supercedes that of the objective, with the latter being excluded. Finally, in mature epistemological understanding, the two ways of knowing are coordinate; this entails arriving at a balance between the objective and subjective in which one does not overpower the other. It is striking as to how much this new conceptualization of intellectual development parallels the history of thought relative to action research. In the first part of the last century, educational research was framed from almost an exclusively objective view, which in turn served to frame how action research was viewed. In the last several decades of the last century, educational researchers became more accepting of the notion of subjective types of research. That being the case, as we begin the twenty-first century, many authors who write about action research now take almost an exclusively subjective view of research.

Might it be the case that as we progress through the twenty-first century, a mature conceptualization of action research will emerge with the achievement of a balance between the objective and subjective ways of knowing? Perhaps the resolution then of epistemological paradigm clashes ultimately resides in the development of mature epistemological understanding, which unfolds developmentally and over time at both the individual and collective levels. Indeed the field of educational psychology, and cognitive psychology in particular, offers us a most valuable lens through which to understand how action research may evolve and unfold during the twenty-first century.

ETHICAL ISSUES AND PROFESSIONAL RESPONSIBILITY

As action research has become more commonplace in schools, more attention has shifted in recent years to a host of ethical issues. The following section will overview ethical issues surrounding the conduct of action research, the ownership of action research data, support for teachers to engage in action research, and the potential politicizing of action research.

Ethical Issues about Action Research Process and Data

One concern often mentioned by critics of action research is the notion of teachers “doing research” on their students. Unlike large-scale studies, typically action research does not involve the random assignment of students to treatment conditions, which may disadvantage students who receive less effective treatments. It is also important to remember that in action research the performance of students is studied during their regular participation in the education process. Thus, no student is denied opportunities based on this type of research. In fact, since the treatment would likely be taking place anyway, it could be argued that it would be unethical to not evaluate its effectiveness. And once the treatment is demonstrated to be effective, it can be used with other students who did not initially receive it.

A second ethical concern pertains to issues involving confidentiality. The argument as to whether school-based data are the private domain of the educator or part of the public domain belies the discussion of this issue. Those who espouse the former view contend it is vital that data be reported only in an aggregated format and that when teachers write about their schools and students they use pseudonyms to protect their identities. Alternatively, those who see school-based data as public argue that decontextualized, impersonal, and aggregated data limit the ability to arrive at sound judgments about practice in particular contexts. Those who contend that school-based data are part of the public domain also propose some ethical safeguards including the presentation of alternative descriptions, interpretations, and explanations of events.

A third and related issue to that of confidentiality is that of ownership of the data. As stated above, some contend all school-based data belong to the public. Alternatively, others view ownership largely as a function of the level of the action research study. In individual teacher action research, it is the teacher and students who are the owners. As the research team expands—to perhaps several teachers or a team of teachers—then all of the teachers involved and their students own the data. In schoolwide action research, it can be argued that the entire school staff owns the data. With the growing popularity of action research, more and more districts have policies about the aforementioned issues.

This is also the case with regard to another central ethical concern as to how the action research data should be shared. The sharing of data on an informal basis within the school is often encouraged because an issue one teacher faces is most likely encountered by other teachers in the same school. This sharing could occur within teacher study groups as teams of teachers meet together to design, collect, analyze, and report their data or through teacher professional development activities such as in-services in which teachers report their data to either the school or perhaps before the entire district. In addition, teachers can share the results of action research in the form of scrapbooks, self-evaluative journals, lesson plans, curriculum designs or models, or through videos and exhibitions.

The sharing of action research data on a more formal basis could occur in an array of formats. Teachers may write narratives in which they report their research using a story telling format. Or, written reports may be compiled for the school district. It may be that an action research study is written up as a project or even thesis as part of a university requirement. Other written vehicles for sharing action research may be in the form of a paper presented at a professional conference or an

article written for a professional journal. Middle school science teachers who participated in the Science FEAT program in Florida and Georgia, along with university collaborators, published a monograph containing action research papers. Increasingly, action research reports are available on a variety of Web sites as well.

Ethical Issues in Terms of Providing Adequate Support to Do Action Research

Toward the end of the twentieth century, it became popular to argue that action research belonged at the centerpiece of professional development activities. It would seem that in this context, school district administrators would be in the best of positions to garner the supports needed for teachers to do action research.

One of the most important supports that could be provided for teachers who wish to do action research is time. The argument for extending necessary time should be buttressed by the presupposition that teacher research cannot be easily separated from the rest of the teaching process as it serves to combine curriculum development, teaching, evaluation, research, and professional development. Time could be allocated as part of the in-service program, part of faculty or departmental meeting times, paid release time, after school meetings, or summer workshops. It is critical that a large block of time be provided in order to sufficiently study the complex process of teaching.

In addition, administrators could play a pivotal role in making resources available for teacher research by encouraging teachers to apply for mini-grants and sponsoring grant writing seminars. Administrators must also promote a climate of collegial inquiry and collaboration within a school building. Affirming the sharing of action research results and providing venues for publishing the results of action research would be two powerful ways in which to do this. A peer support structure that permits teachers the freedom to take risks in a safe climate also needs to be fostered by the school administration. In essence, the notion of teacher-as-reflective-practitioner needs to replace that of the traditional teacher craft culture; in the former the collegial and public examination of school problems is viewed as a natural and necessary part of the teaching process. In this new culture, novice teachers could be provided with mentor teachers who serve as models of reflective inquiry, both sharing the results of their own action research and helping novices to design and implement action research that addresses the novice teacher's needs. Teacher study teams could serve to match teachers with common research interests.

The Potential Politicizing of Action Research

Although administrative support for action research is imperative, some have argued recently that teachers must be aware of the possibility that local administrators may usurp teachers' places in the design and purpose of action research. For example, a central office administrator may be looking for a way to legitimize a new language arts program or a superintendent may be consumed with raising assessment scores connected to the standards movement. In such circumstances as these and because of the hierarchical political structure of schools and districts, it is likely that nonteachers in positions of power may seize the opportunity to co-opt the action research process and resulting data. Teachers, especially those who are untenured, will no doubt be at least somewhat compelled to comply with administrator wishes. Particularly in cases where administrator and teacher goals conflict, this scenario poses quite the conundrum for classroom teachers. If such issues become a systemic part of how schools and districts function, perhaps teacher unions may need to play a role in their resolution.

Another larger-scale aspect of this issue potentially may occur relative to the standards movement at both the state and national levels. If the self-interests of local administrators lead them

to attempt to co-opt teacher research, certainly the self-interests of politicians could lead them to meander in the same direction. This is a particularly troublesome scenario in that in the early years of the twenty-first century, some would argue that politicians have already usurped the role of educators in making decisions of significant consequence to student learning and welfare. In addition, this is disturbing if one agrees that instead of measuring knowledge, standardized assessments connected with the standards movement measure a student's familiarity with the culture of testing as well as their familiarity with the culture of an institution still largely controlled by those from dominant cultural groups. Perhaps the postmodern perspective makes its best case around such issues as these. How these issues are resolved will, in part, depend on how larger political debates unfold.

FUTURE DIRECTIONS OF ACTION RESEARCH IN THE CONTEXT OF EDUCATIONAL PSYCHOLOGY

In the initial years of the twenty-first century, increasingly attention has shifted to the question as to how we can translate practitioner knowledge, based on teachers' action research, into professional knowledge that can be easily understood and publicly disseminated. An analogy has been drawn to the profession of medicine where physicians rely on case literature or reports from other physicians who have tried and refined new ways of treating illnesses as well as case law in which lawyers follow the interpretations of laws as they progress through the court system.

One method proposed for establishing this professional knowledge base is to have teacher-researchers generate and test both hypotheses and local theories about the ways in which daily lessons impact student learning. With the daily lesson as the unit of analysis, it is argued that examples of teaching can be stored and disseminated through the use of video technologies. Hiebert et al. (2002) have recently contended that this approach may be of help in providing concrete illustrations of practices studied in teacher research to other practitioners; in fact, this may be a useful adjunct to written descriptions of practice that are often too vague in nature for another teacher who wishes to replicate these in their own teaching. By having the daily lesson stored in this way other teachers could ponder how the results of action research could be readily connected to specific content in their own curriculum.

Another advantage of this proposal is that practices studied in action research could be continually evaluated by other teachers who would implement and test them in many different types of local contexts. With repeated observations conducted over multiple trials, knowledge is said to become more trustworthy as teachers modify practices to fit their local contexts. At the local level, professional development could be provided for teachers through participation in action research; one way this could be organized is through teachers' membership in lesson study groups. In these groups teachers design a lesson and have one member of the group implement it while the other members observe what works and does not work as a means of revising the lesson. After additional teachers in the group try out the revised lesson on their students, the lesson continues to undergo refinement. At the end of the process, documentation of the lessons could be disseminated to other professionals. This approach, in fact, represents a combination of an emphasis on repeated observations rooted in positivism and an emphasis on teacher inquiry and collaboration rooted in Dewey's work and constructivism.

In the twenty-first century the substance and organization of teacher research needs to be linked to the voluminous research base in educational psychology. Research on topics including race and gender equity, brain-based teaching, as well as social constructivist practices could provide a starting point for the substance of such teacher research. The emerging practitioner knowledge base then needs to be integrated into the extant literature, which is currently organized into several different types of knowledge: pedagogical knowledge, pedagogical content knowledge,

and knowledge about students. Hiebert et al. (2002) propose that as these knowledge bases are fused according to the type of problem the knowledge is meant to address, then teacher research can play a vital role in the professional development of teachers. This should occur throughout teachers' professional life spans, beginning with pre-service teachers' observations and subsequent reflections about the practices they observe. Hopefully, this will provide the foundation for action research to become part of the routine dialogue between cooperating teachers and student teachers as they contemplate effective practice. Likewise, teacher research should also undergird the mentorship of novice as well as veteran teachers.

REFERENCES

- Corey, S. (1949). Curriculum development through action research. *Educational Leadership*, 7(3), 147–153.
- Dewey, J. (1933). *How We Think: A Restatement of the Relation of Reflective Thinking to Educative Process*. Chicago: Henry Regnery.
- Hiebert, J., Gallimore, R., and Stigler, J. (2002, July). A knowledge base for the profession of teaching: What would one look like and how would we get one? *Educational Researcher*, 31(5), 3–15.
- Kemmis, S. (1993). Action research and social movement: A challenge for policy research. *Educational Policy Archives*, 1(1). Retrieved August 15, 2006, from <http://epaa.asu.edu/epaa.v1n1.html>.
- Kuhn, D., Cheney, R., and Weinstock, M. (2000). The development of epistemological understanding. *Cognitive Development*, 15, 309–328.
- Lewin, K. (1946). Action research and minority problems. In *Resolving Social Conflicts: Selected Papers on Group Dynamics* (compiled in 1948). New York: Harper and Row.
- Schon, D. A. (1987). *Educating the Reflective Practitioner*. San Francisco: Jossey Bass.
- Shulman, L. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4–14.
- Zeichner, K., and Caro-Bruce, C. (1998). *Classroom Action Research: The Nature and Impact of an Action Research Professional Development Program in One Urban School District*. Final Report to the Spencer Foundation.

CHAPTER 59

Beyond the “Qualitative/Quantitative” Dichotomy: Pragmatics, Genre Studies and Other Linguistic Methodologies in Education Research

SUSAN GEROFISKY

Studies in educational psychology most often analyze complex situations in education by collecting the results of tests and questionnaires, analyzing these results statistically and drawing conclusions from statistical findings. Occasionally, educational psychologists use qualitative, ethnographic studies to obtain a “thicker” description of a situation where a complex web of relationships affects results.

In this chapter, I describe a “third way” of doing research in educational psychology, and suggest that there may well be multiple methodologies yet to be explored that will give useful and interesting results in this field.

The research methodology I describe here is based in linguistics, the philosophy of language, and an interdisciplinary formulation of genre theory. Since many of the situations studied in educational psychology involve linguistic artifacts (interview results, written output, conversations, classroom discourse, etc.), ignoring the insights available through linguistics, and particularly linguistic pragmatics, may mean that valuable opportunities for rigorous analysis and deeper understanding are often missed.

In many faculties of education in North America, graduate students are required to take two methodology courses: quantitative methods and qualitative methods. Often these are the only two research methodology courses offered, and the implied message to new researchers is that one’s research techniques must fall into one or the other of these two camps.

Quantitative methods courses deal with ways of collecting data in the form of numbers or quantities, and teach students how to use statistical methods to analyze, represent, and interpret these numerical data. The rigorous methods of mathematical statistics are imported into the field of educational research, and are applied in much the same way as they are in other research fields ranging from biology and metallurgy to sociology, psychology, and other social sciences. Quantitative methods necessarily deal only in those data that can be made numerical; if it can be counted, it “counts,” and if not, it doesn’t. The mathematical rigor of quantitative research gives it the cachet of a “hard science” in some circles—testable, reproducible, evidence-based, reliable, rational, and, by extension, unassailable. It is available only to those who are initiated through a background education in statistics, and it favors an unemotional, detached attitude. A great deal

of educational psychology research has traditionally used quantitative, statistical methods and the language of experimental science.

For some researchers, frustrations have arisen with quantitative methods in education on several accounts. For one, even those who have made a commitment to using statistical methods may often find results that they, as informed observers, find “significant” (i.e., important, telling, useful, helpful, noteworthy) but that do not achieve the rigorous status of “statistical significance.” The conclusions of many statistically based papers in educational research contain results deemed “significant to us,” and researchers’ informed intuitions may well be correct in spotting important data trends, even if they are not technically “statistical trends.”

Even among those who feel in tune with quantitative methods, there is a worry that a great many readers of academic journals skip over the actual data and data analysis that forms the bulk of quantitative-based papers, reading only the abstract, the introduction, and the brief concluding remarks. This may happen because of readers’ time constraints, a lack of training in statistical methods, or a lack of interest in the important but “plodding” details. Many readers want to “cut to the chase,” but this may mean that studies are often accepted wholesale, without rigorous examination by most readers, inadvertently promoting an *anti-scientific* attitude of mind.

Other frustrations with quantitative methods arise because of the fact that not everything important can be counted, and much of what is necessarily left out of quantitative studies forms an important part of human life and educational interaction. Stories, emotions, hunches, artistic and linguistic expressions, the “flavor” or mood of an incident, contextual and biographical features in which interactions are embedded—all these important features and more are difficult to include in statistical studies. For many education researchers, the uncountable elements may be the very essence of the educational phenomenon they want to study, yet these are disallowed by the methods of quantitative research. Besides, such features are often relegated to the status of “soft” data—subjective, nonverifiable, irreproducible, nonrational.

To address the exclusion of the noncountable from quantitative studies, education has borrowed and adopted qualitative methodologies from other social sciences and humanities over the past twenty years or so. Particularly prevalent are methods adopted from anthropology, especially ethnomethodology and participant-observer research. Related methods of journaling and autobiographical writing are related to literary studies as well as anthropology.

Ethnomethodology and participant-observer research developed from the methods of anthropologists who in earlier, colonial times, would aim to live with an “exotic” foreign people or tribe as a solo researcher for a matter of months or years, finding bilingual informants to help bridge gaps in culture and understanding, and gradually learning the mores, kinship patterns, power structures, and religion of the group. By being accepted into the group, and yet functioning at least partially as an outside observer at all times, the anthropologist could retain some degree of objectivity and still have “insider” insights. By taking copious field notes, accompanied by drawings, diagrams, photos, artifacts, recorded speech and stories, etc., the researcher could bring a degree of rigor and an evidence base to what was often necessarily a subjective and solitary study. Triangulation, in the form of corroborating research by others, or at least several sources of evidence to support a particular conclusion, could lend a higher degree of reliability to the study.

In recent years, anthropologists have turned much of their research focus away from the study of remote “exotic” tribes (of which there are few remaining anyway) and turned toward the subcultures and cultural phenomena of their own societies. In this way, a modern anthropologist might study women mountain climbers, skateboarding youth, or the cultural status of meat as a symbol. By “making strange” the unexamined phenomena of one’s own culture, the anthropologist may act as an ethnographer, a participant-observer, in a context close to home.

In a similar way, qualitative researchers in education have begun to turn an anthropologist’s eye, ear, and field notebook to the phenomena of teaching, learning, and schooling. Researchers in a qualitative study may spend long periods of time observing and participating in a classroom or other learning situation, acknowledging their own “insider/outsider” status and the fact that subjective and objective points of view are inextricably interwoven in such a study. Field notes and reports, including multiple observations, transcribed recordings, photos, artifacts, student work and so on to provide triangulation, may often run into many hundreds of pages. Biographical, contextual, and autobiographical material may take a prominent role in such studies. Autobiographies of teachers, students, and administrators have recently been given the status of the ultimate “participant-observer” report, in which the event studied and participated in is one’s own life and career.

Like the quantitative reports, these papers run the risk of being little read simply because they are so long. Many time-pressed or impatient readers will jump from the abstract and introduction to the concluding pages, missing the evidence that gives validity and substance to the study. Ethnographic researchers face the problem that they are necessarily creating the theoretical framework for their study in the course of conducting the study, and because of this, it is difficult to know in advance which evidence should be given the most weight, or even whether one detail *should* be stressed at the expense of another. Worries about the role of the researcher, and the ways in which the participant-observer’s very presence changes the phenomenon, are often part of the dilemma of qualitative research methods. Many qualitative researchers in education are beset by overwhelming anxieties about their own unconscious prejudices, race/class/gender identities, power relationships to those studied, and guilt related to present and historical positions of privilege. Quite a number of qualitative studies are fraught with researchers’ sense of culpability in perpetuating colonializing relationships to some degree, and even with the researcher’s desire to “disappear” as a presence at the research scene.

Both quantitative and qualitative methods have produced illuminating studies in education and educational psychology over many years, and both approaches have validity in different realms. Nonetheless, I want to argue that it is too simplistic to divide the world of educational research along the rather crude “quality vs. quantity” fault line. In truth, there is a *multiplicity* of research methods available in education, and it is misleading to direct new scholars to a choice of only two approaches.

My own work has used interdisciplinary research methods based on genre theory and linguistic pragmatics for research in education. I would like to present these methods as a new approach (among the many others possible) that could open up educational research to ways of thinking and analysis, and potentially enrich the scope of research in our field.

Linguistics, the study of language, has many branches that focus on the analysis of language on different levels; for example, *phonetics* studies the sounds of language, *phonemics* the distribution rules of those sounds, *syntax* studies word order and sentence composition, *semantics* looks at fields of word meanings, and so on. The branch of linguistics that I have found most useful as a methodological tool in education is *pragmatics*.

Pragmatics studies “language in use.” In other words, pragmatics makes the connection between actual utterances (either spoken or written) and their lived context. This distinguishes pragmatics from many other branches of linguistics like, for example, syntax, which theorizes about the structure of idealized sentences, without regard for their speaker or audience, the context in which they might arise, or even whether or not they might actually be uttered in any particular context.

Educational studies largely deal with actual learning and teaching situations, replete with complex interactions and numerous real-life contingencies and lived contexts. While more abstract theoretical linguistic concepts may prove useful in educational studies, I think that the ideas of linguistic pragmatics are generally a closer fit to the aims of educational research.

Pragmatics provides rigorous analytical tools for the analysis of various aspects of language in context. Subcategories of pragmatics include

- addressivity
- reference
- deixis
- implicature
- relevance
- speech act theory
- presupposition
- schema theory
- metaphor
- politeness
- discourse analysis and conversational structure.

Many of these subcategories are directly related to the concerns of educational researchers studying the linguistic artifacts of teaching and learning: lectures, classroom discussions and verbal interactions, student writing, textbooks and curriculum materials, and so on. I will give a brief description of each of these subcategories; further elaboration can be found in the reference sources given at the end of this chapter. I will also describe ways that pragmatics along with genre theory can provide a dynamic methodology for educational studies, different from both “quantitative” and “qualitative” models.

The issue of *addressivity* was first raised by the Russian literary theorist and linguist M. M. Bakhtin. Addressivity interrogates the relationship between speaker (or writer) and audience, and asks how this relationship is reflected in the language of the utterance. Interestingly, the audience may be actual (as in a teacher speaking directly to a class), hypothetical (a radio announcer broadcasting to a real but unseen audience), or entirely imagined (a person writing a piece to be sealed in a time capsule). Nonetheless, utterances are always addressed *to* an audience, and the nature of that audience affects the language of the utterance.

Reference looks at the objects, persons, places, times, and so on referred to by words and phrases in an utterance. Some very interesting work has been done, for example, in looking at the referents for common pronouns like *we* and *you* in an educational context, since any particular use of *we* might include or exclude the audience, and *you* has a wide range of referents, ranging from the generic (similar to the generic use of *one* as a pronoun), to the second person singular or plural, which may include or exclude various members of the audience.

Reference goes beyond pronouns to look at the referents for nouns, verbs, time words, etc. The concepts of reference and *deixis* are closely related. Deixis, or indexicality, studies the way words “point” to things. For example, time deixis looks at verb tense, time adverbials, and other time words to establish a model of the concept of time in the utterance in relationship to a “deictic centre,” the *coding time*, or time when the utterance is supposed to have taken place. Deixis can also deal with persons, places, and objects “pointed to,” and even to words that point to the nature of the speaker, the audience, or the utterance itself in a self-reflexive mode (in a metapragmatic or metaconversational move).

Implicature looks at what is implied by an utterance in context, apart from the literal meaning of the words used. Since implicature takes into account social and power relationships between speaker and audience, it is a particularly useful kind of analysis in educational research. Implicature is based on the notion of cooperative principles in conversation, without which nonliteral

meanings would be impossible to fathom. Philosopher of language H. P. Grice’s four basic maxims of conversational cooperation establish a foundation for further studies in implicature, which include the concepts of *relevance*, conversational logic, and the “flouting of Gricean maxims” (i.e., uncooperative conversation, as in a testimony in a court of law which may be *literally* true while at the same time using conversational conventions to imply untrue extended meanings).

Speech act theory, based largely on the work of philosophers of language J. L. Austin and John Searle, looks at the kind of language used when we “do things with words,” and contrasts this to the kind of language that can be assigned a “truth value” (i.e., a statement that can be labelled either true or false). Examples of speech acts involve situations where the utterance itself constitutes an action in the world—for example, “I second that motion,” or “I sentence you to three years in prison.” Speech acts have *force*, which Austin analyzes as *locutionary*, *illocutionary*, or *perlocutionary*, depending on the joint intentions of the speaker and the audience. Intentionality plays an important role in the analysis of speech acts, an idea that lends itself readily to the study of educational interactions, as the intentions of the parties involved (teachers, students, administrators, parents, legislators, etc.) and (mis)interpretations of mutual intentions often vary widely, and may be analyzed in the language produced.

Presupposition and its broader cultural analysis, *schema theory*, relate the interpretation of utterances to the audience’s background knowledge, cultural predilections, foundational myths, and “commonsense” structurings of the world within a particular culture or subculture. Presupposition and schema theory relate strongly to studies of learners’ construction of new knowledge, and to misinterpretations of teachers’ intentions based on students’ and teachers’ differing presupposed schema or background knowledge. The study of presupposition is useful in dealing with cross-cultural differences of interpretation based on varying culturally established worldviews.

Metaphor, along with category theory (from anthropology), deals with the nonliteral use of language and the ways in which individuals and cultures give imagery and organization to experiences and ideas. Within a particular individual’s speech, the use of metaphor, irony, and categories gives an insight into conscious and unconscious analogies in that person’s understanding. Across a culture, extended metaphors influence individuals’ unconscious, “commonsense” structuring of their culturally mediated world. In educational studies, metaphor is both a productive means of bringing analogies into play in introducing new concepts, and at the same time a limitation to new thought through the imposition of old categories and images.

Discourse structure and the related area of *politeness* look at discourse in terms of the social relationships involved (power relationships, kinship, social distance or intimacy, respect markers) and analyze structural features that either reinforce or disrupt these relationships. Phenomena such as turn-taking, the use of personal pronouns, active and passive voice, pauses, reasoning strategies, and face-saving strategies can be analyzed to reveal shifting relationships of power and deference in an interaction. Discourse analysis has been used in many studies of conversational interactions in education to analyze, for example, the effectiveness of group work within a community of learners or to understand power relationships in the classroom.

In addition to the analytical tools provided by linguistic pragmatics, I am particularly interested in using the broader category of *genre analysis* as part of a language-based methodology in education. Genre analysis has its origins in a number of different disciplines, including linguistic pragmatics and, equally important, film studies, literary theory, anthropology, and folklore studies.

Genre theory looks at the “types,” or stereotyped forms, of discourse within a particular culture. These “types” or *genres* can be analyzed for the constellation of features that characterize them, for the relationships among utterances of the same genre, for the process of generation of new genres, the lingering effects of earlier generic utterances, the breaking of generic conventions, and the effects of generic structuring within a culture. For example, film studies may look at the evolving genre of “the horror film”; folklorists might study “hitchhiker tales” in modern urban

folklore. Some of my own studies in mathematics education have looked at mathematical word problems and at first-year university calculus lectures as genres. Education establishes many spoken and written genres as varied as “the programmed reading primer,” “the spelling test,” “the public speaking contest,” “the lab report,” and “illicit notes passed in class.” The nature of these genres, both linguistic and contextual, the multiple intentions involved, and the way genres structure our expectations and perceptions, offer a kind of structured study that is neither strictly quantitative (i.e., statistical) nor qualitative (i.e., narrative), but allows for both intellectual rigor and intuitive creativity in seeing connections, implications, and potential alternatives.

Peter Grundy, in his book *Doing Pragmatics* (cited in the references below), gives a partial list of investigable topics in applied pragmatics, all of which have possible applications within education research. His list includes

- conversational strategies
- studies of power, distance, and politeness
- the construction of audience by a speaker
- coauthorship of conversations by speakers
- the acquisition of pragmatics by children and by second-language learners
- intercultural pragmatics
- the relationship between context and the way talk is organized
- ethnomethodological accounts of language use
- metapragmatic and metasequential phenomena
- “folk views” of talk—investigating people’s beliefs about the pragmatic uses of language
- the analysis of misunderstandings, and how people work to “repair” the situation when talk goes wrong
- the identification of genres and study of the structure of a particular genre.

I would like to add to this list one further extension of pragmatic/genre studies that has been particularly useful to me in researching types of talk and writing in education. As well as identifying and analyzing the structure of a particular educational genre, I am interested in finding analogies among different genres within a culture, whether educational or not, to find resonances and metaphorical connections across generic categories. For example, I have found structural analogies among “the initial calculus lecture,” the “hard-sell sales pitch,” and “infant-directed speech,” a connection which implies that the audience for a calculus lecture hears and interprets the resonance of these other genres (unconsciously) embedded in the lecturer’s utterance patterns. Similarly, the genre of “mathematical word problem” carries generic echoes of riddles, parables and ancient social puzzles. By looking at the contemporary genres of education “as if” they were framed within structurally related cultural forms, we may find insight into culturally bound constraints, but also openings and opportunities for reframing generic forms in education.

Opening up the field of educational psychology to a variety of relevant methodologies drawn from interdisciplinary sources (including, but not restricted to those described here) offers educational psychologists the chance to broaden the scope of the field, to consider a wider range of phenomena and to find fresh insights into complex situations.

A researcher’s choice of methods in data collection and analysis necessarily narrows the available subject matter and analytical perspectives. This is not a bad thing in itself, since a particular study must be delimited in order to be manageable. However, any field of study that restricts its methods too narrowly may eventually exclude interesting, important phenomena and perspectives. Allowing new research methodologies to be developed in the field can provide an opening to allow exciting new insights and even new subjects of research to enliven and revitalize

the field of educational psychology. These and other new methodologies will help educational psychology to grow in its scope and explanatory power.

FURTHER READING

- Davis, S. (Ed.). (1991). *Pragmatics: A Reader*. Oxford: Oxford University Press.
Grundy, P. (2000). *Doing Pragmatics*. London: Arnold.
Levinson, S. C. (1987). *Pragmatics*. Cambridge: Cambridge University Press.
Swales, J. M. (1990). *Genre Analysis*. Cambridge: Cambridge University Press.

CHAPTER 60

Knowledge in a Reconceptualized Educational Environment

RAYMOND A. HORN JR.

In the current climate of No Child Left Behind (NCLB), public knowledge of the educational process has been limited by the sound byte simplicity of the political rhetoric concerning education. Specifically, substantial discussion about issues concerning knowledge, such as what constitutes valid knowledge and how knowledge is produced or acquired, is left to the experts and the others who the experts invite into the conversations. The result of these expert-driven discussions is the determination of educational policy about knowledge, and the subsequent mandated curriculum that is based on this sanctioned knowledge. Seldom are administrators, teachers, students, and parents brought into this formative conversation. The proposition that conversation about knowledge is best left to experts who have little contact with the schools, but are closely aligned to economic, political, and cultural special interests, has created a situation where public participation by all educational stakeholders is limited to discussions about how the teaching and assessment of externally mandated knowledge can be facilitated through the actions of administrators, teachers, students, and parents. The result of this lack of public participation in the conversation that forms epistemological policy is the tacit assumption by the public that there simply are no issues concerning knowledge that need to be discussed, except high-profile and politically charged value issues such as evolution, intelligent design, and creationism. This conversational situation facilitates public acceptance of the positivist assertion that there is empirically objective and valid knowledge that simply needs to be transmitted to or discovered by teachers and students. Another outcome is that the public is not aware of the constructivist nature of knowledge, and of the very different values and consequences that are attached to the different ways that knowledge is produced.

The lack of public conversation about knowledge is indicative of the positivist and conservative control of education. This strategy of control is significant for a number of reasons. First, this colonization of knowledge allows curriculum to be viewed only from a technical rational aspect of education that masks the politically significant values and outcomes attached to different views of curriculum. In this context, standardized curriculum, which is inherently value-laden and has significant consequences for those who must learn this curriculum, is posed as representing a consensus about which meanings and interpretations of reality are true and valid. Second, this imposed and misleading consensus about curriculum aligns with specific instruction, assessment,

and class management strategies that synergetically promote one ideological, economic, political, and cultural position about the nature of education and, subsequently, society. Consequently, this promotion of one worldview facilitates the attempted domination of society by this worldview.

A reconceptualized view of education challenges this attempt to gain power through the manipulation of the educational process. The most fundamental aspect of this challenge is to engage the issues of what constitutes valid knowledge, how knowledge is produced and acquired, and the consequences of the possible answers to these issues. Reconceptualists recognize the fundamental truth that knowledge, like all aspects of education, is political. This chapter will explore how a reconceptualized view of teaching and learning would influence these issues about knowledge in the educational environment. The result of a reconceptualized view of knowledge would not be the silencing of stakeholder voices, but instead would be a rich and inclusive conversation that would further result in a view of knowledge that would promote an educational system devoted to the promotion of social justice, an ethic of caring, and participatory democracy.

WHAT CONSTITUTES VALID KNOWLEDGE?

Unlike an empirically based technical rational educational system that promotes only selected empirically generated knowledge, which supports the promotion of a conservative dominant culture, a reconceptualized view of knowledge is diverse, egalitarian, and critical in its intent. A reconceptualized perspective values all forms of knowledge. This inclusiveness is essential if the complexity of education is to be fully engaged. A reconceptual view maintains that no one form of knowledge can provide a full and accurate understanding of a natural or social phenomenon. Knowledge produced by individuals who represent different philosophies, ideologies, methodologies, and sociocultural contexts contributes to a broader and deeper understanding of a complex phenomenon.

Besides the formal knowledge empirically generated by the scientific method, knowledge that is indigenous to individuals who are not part of the culture of Western science is also valued by a reconceptualized view of education. Often, these indigenous cultures have been subjugated by positivist-oriented cultures that consequently determined the indigenous knowledge to be inferior to their formal empirical knowledge. In this case, the domination of one worldview and one knowledge production process sharply limits the potential to engage complexity.

In relation to knowledge and its representation in school curriculum, this process of domination and subjugation can be seen in current educational policy and practice. Any standards and accountability system that is driven by standardized testing and imposed on individual schools by a political body is an example of the determination by that controlling group of what constitutes correct and valid curricular knowledge. In situations like this, phenomenological complexity cannot be fully engaged because teachers and students are now restricted to specific information and inquiry processes. For instance, if there is a specific answer as to whether Woodrow Wilson was a conservative or liberal President of the United States, students' investigation into this complex historical situation will be simplistically restricted to only the information that can lead to the predetermined correct answer. Lost in this potentially rich and critical inquiry into history will be all of the information that contradicts such a simplistic answer. In this case, the potentially diverse student answers that represent a high and critical level of engagement of the historical evidence will be subjugated to the predetermined view of those in control of the curriculum.

Besides the formal knowledge presented through textbooks, video presentations, and teacher lectures, all learners bring personal knowledge to the learning situation. This personal knowledge, whether accurate or inaccurate, mediates and informs the learning process. Because of this, a reconceptualized view of education allows personal knowledge to become part of the conversation and critiquing process that occurs in a classroom that seeks authentic, relevant, and complex

understandings. How students have seen and experienced life presents an opportunity for pedagogical connections to be made that enhance student learning through authentic and relevant connections between their lives and curricular knowledge. However, to be truly authentic and relevant, the students' use of their personal knowledge must have the potential to conclude in answers that may deviate from a simplistic predetermined answer.

In addition, educators have practical knowledge gained through their experience. In educational situations dominated by a technical rational perspective, this experiential knowledge is viewed as a confounding variable and subsequently displaced by scripted, teacher-proof lessons that are generalized to all schools. What is denied is the contextual uniqueness of all classrooms and schools, and what is lost is the contextually unique understanding of their own place that individual school administrators and teachers can bring to their practice. The result of this loss of experiential knowledge is the implementation of a decontextualized process of administration and teaching that is neither authentic nor relevant and that subsequently disallows any recognition or engagement of the broader and deeper complexity of the learning process and environment.

Another difference between the technical rational and reconceptualized views of valid knowledge lies in the valuation of formal and informal knowledge. As previously explained, technical rational systems value the formal knowledge derived from empirical scientific investigations. In addition, educational knowledge is restricted to the knowledge that directly applies to each traditional discipline as determined by the gatekeepers of that discipline. Of course, within each discipline there is contentious debate over what constitutes valid knowledge. Currently in science, a debate rages over the teaching of evolution, intelligent design, and creationism. The social sciences have experienced similar debates over representations of historical, economic, and political events. The resolution of these debates dictates the content of standardized curriculum and assessments, as well as the content of textbooks. However, a reconceptualized view expands the idea of knowledge to include all of the other knowledge that is part of all educational experiences. This knowledge is represented by the objects of research found in the field of cultural studies. In this field, knowledge produced by and represented in popular culture, mass media, business-promoted educational programs, and any other aspect of human activity is considered valid knowledge that must be critically engaged. As the hidden curriculum, this nonformal knowledge not only permeates all schools and pedagogical contexts, but also actively mediates and informs all teaching and learning.

So, what constitutes valid knowledge? Is it only empirically derived formal knowledge, or is indigenous, personal, and practical knowledge also valid? A reconceptualized view of learning answers this question in this way. The validity of all knowledge is situational and contextual. What this means is that whether knowledge is correct or incorrect depends on how the context in which the knowledge is situated is defined. For instance, 5 plus 5 equals 10 if the context is that of a base 10 system. However, if the contextual base is different, then 10 may not be the correct answer. Is nuclear power beneficial to humankind? This question will have different answers depending on how broad the conversation is allowed to be. As the context is broadened and the complexity of the conversation increases, the answer to the question will change. Even in seemingly irrefutable laws of physics, correct answers depend on whether the question is posed within a macro or micro context. In the end, the validity of an answer is closely aligned to the level of complexity that is allowed in the answering process.

A reconceptualized view of teaching and learning pragmatically recognizes this situational aspect of knowledge. In some situations where the context is tightly and narrowly defined, there are correct answers. However, in more loosely bound contexts that require higher-order thinking, the correctness of answers is not so easily ensured. This is so because higher-order thinking requires an expansion of the context and an embracing and welcoming of epistemological complexity that in turn problematizes simplistic solutions. In a reconceptual view, what really increases the

complexity is the requirement of critical knowledge and a critical critique of knowledge. Based on the assumption that no knowledge is value-free because it always exists within a human context that brings values into the reading of the meaning of the knowledge, reconceptual education requires a continuous analysis of how all knowledge is situated in relation to a concern for social justice, caring, and democratic participation. Whether formal, indigenous, personal, or practical, all knowledge must be critically critiqued. This critical component adds another dimension to the issue of validity. Is knowledge valid if it is unjust, uncaring, or undemocratic? The answer to this question automatically requires an expansion of the boundaries in which the knowledge is situated. This expansion removes the knowledge from a contextually limited reductionist view, and repositions it within the greater complexity of human activity.

A RECONCEPTUALIZED PERSPECTIVE ON KNOWLEDGE PRODUCTION AND ACQUISITION

As discussed, empirical scientific method can provide a technical understanding of a natural phenomenon, but not provide an understanding of the social, cultural, economic, political, and historical contexts that implicitly affect its socially constructed meaning and use. Likewise in relation to social phenomena, neither quantitative, qualitative, nor any other isolated use of analysis, synthesis, or evaluation methodologies can by itself uncover the diverse contexts, origins, and patterns that contribute to the complexity of the phenomenon. Therefore, the acquisition of knowledge through a diversity of research methodologies is a necessary condition of a reconceptual view that strives to engage the full complexity of a phenomenon. In addition, in a reconceptual engagement of complexity, all of the knowledge that is produced and the processes used in knowledge production must be subjected to a rigorous critical interrogation. This interrogation is an essential activity that continues the engagement of complexity through the ongoing expansion of etymological knowledge, context, pattern detection, and other analysis, synthesis, and evaluation processes.

A fundamental reconceptualist understanding of knowledge production is that all production is a socially constructivist process. Grounded in the work of individuals such as Piaget, Vygotsky, Bruner, and Dewey, this means that individuals and individuals in interaction with their social environment actively participate in the construction of knowledge or meaning. Moving beyond the individual constructivism of Piaget to the Vygotskian understanding that knowledge is constructed within social interactions and a cultural context, a reconceptual view recognizes the role played by the individual as well as the individual's social environment in the knowledge production process. This constructivist analysis of learning is in contrast to the positivist assertion that knowledge exists outside of the learner—that the known and the knower are separate. This assertion is challenged by constructivists, who maintain that because the learner is an active participant in the learning process and the construction of knowledge, the known and the knower are inseparable.

Reconceptual education is also critically constructivist. Critical constructivism is a synthesis of critical theory and social constructivism in that the knowledge that is socially constructed must be critically interrogated in order for the individual to become aware of the consequences of the knowledge in relation to social justice, an ethic of caring, and participatory democracy. Critical constructivism requires critical thinking. However, in this case, critical thinking is not the narrowly applied use of higher-order thinking skills found in the reductionist thinking of technical rational education, but the critical interrogation of the constructed knowledge and the processes used in this construction. In the critical constructivist process, all aspects of the construction of knowledge are critically interrogated, including the individual's involvement, the aspects of the social environment involved in the construction process, the processes used in the construction, and the consequences of the constructed knowledge or meaning. When involved in critical

constructivist activity, individuals utilize diverse and multiple methodologies to uncover the deep and hidden critical ramifications of the knowledge that they constructed. Among these methods is a critical reflection not only on the knowledge that was produced and the processes employed in the construction, but also on their own participation in the construction and the subsequent consequences of their actions in relation to this constructed knowledge. The critical constructivist process results in knowledge about knowledge, knowledge about self, and knowledge about one's critical interaction with others. Critical constructivists also understand that knowledge production is connected to the actions that one takes. For instance, the idea of praxis involves a sequence of action, critical reflection, and subsequent action based on this reflection. Critical constructivism adds the imperative of an awareness of how power is manifested in a situation and how power is potentially rearranged through our actions. Critical constructivists continuously reflect on how power arrangements affect a concern for social justice, an ethic of caring, and participatory democracy.

Finally, an important characteristic of reconceptualized teaching and learning is a continuous emphasis on research by all educational stakeholders. In a reconceptualized environment, teachers are researchers. They research their subject matter, their pedagogy, and their students. As researchers, they understand the necessity to effectively and situationally employ diverse research methods. As teacher researchers in a reconceptualized environment, they understand that in addition to technical effectiveness they need to employ a pedagogy that is just, caring, and democratic. Understanding the critical value of research, they promote the knowledge, skill, and opportunity for their students to become student researchers. Through research that is based on critical awareness, they and their students expand the complexity of teaching and learning. In this critical constructivist context, research takes on an emancipatory goal—the liberation of both teacher and student through greater critical understanding of the knowledge that they construct and the actions that they take.

THE POLITICS OF KNOWLEDGE

Starting from the assumption that all human activity is political, the process of knowledge production is the key to political control and the emancipation from oppression. Knowledge production in both technical rational and reconceptualized educational systems is politicized. In the former, a rigorous control over the validity of knowledge and the production process creates an opportunity to exercise societal control through the education of children. If this control is aligned with other efforts of control through economic, political, cultural, and social interests, a powerful agenda can be constructed to implement a specific view of the organization and functioning of society. Likewise, a reconceptual view of education can attempt to accomplish the same. However, the significant difference between the two lies in the role of the individual.

In technical rational perspectives, individuals are seen as resources or entities that if properly prepared will consciously or unconsciously support the agenda of the dominant group. Control of knowledge production (i.e., curriculum, instruction, and assessment) creates the potential for compliance with the canon of the dominant group. On the other hand, reconceptualized teaching and learning facilitates the development of critically aware and literate individuals who through the critical knowledge, skills, and dispositions acquired in a reconceptualized educational environment experience a greater degree of intellectual freedom from the control of special interests. In addition, this intellectual freedom creates the potential for action that can be emancipatory and critical.

The different political agendas of technical rational and reconceptualized views of education can be seen in the assimilation versus diversity issue in public education. Proponents of assimilation see the purpose of education as the construction of a homogenized society that is grounded in

one perspective that aligns with their ideological position. In this case, correct or valid knowledge is that which promotes the economic, cultural, social, and political perspectives that allow a reproduction of their ideological position. Knowledge production is viewed as an activity that must be closely controlled so that only certain knowledge or representations of knowledge become the norm. The aspects of educational psychology that are identified as relevant foundations for educational theory and practice are those that will produce the desired outcome.

In contrast, proponents of diversity see the purpose of education as the construction of critically aware individuals who have the disposition and capacity to think independently and take action that is based on a concern for social justice, caring, and participatory democracy. The inherent consequence of this educational purpose is a pluralistic society that values difference and diversity, and acts to promote empowerment and emancipation from oppression. In this case, correct or valid knowledge is viewed as an ongoing construction that must be continuously scrutinized in relation to its critical consequences. Knowledge is not viewed as value-neutral but value-laden, not external to the knower but inseparable from the knower. Knowledge production is viewed as a political activity that must be constantly and critically interrogated to determine the economic, cultural, social, and political perspectives and their consequences. The aspects of educational psychology that are identified as relevant foundations for educational theory and practice are those that contribute to the construction of a just, caring, and democratic citizenry and society.

CHAPTER 61

Critical Epistemology: An Alternative Lens on Education and Intelligence

ANNE BROWNSTEIN

WHAT IS THE PROBLEM?

I can't do anything with these kids. They're unwilling to learn.

Why do we have to learn this?

I don't know how many are going to pass despite all the drilling they have.

Why can't we study something that matters?

While working as an assistant principal in a New York City public high school, I was at a loss for how to respond to what appeared to be the *dispossession* between teachers and students and the teaching/learning experience revealed by questions such as the above directed to me when I visited classrooms. Unfortunately, I regularly observed evidence of this dispossession in student behavior: students continuously talking off-topic or taking pictures of one another on the sly with their cell phones during instruction, wandering out of class, or slowly strolling halls with bathroom passes. Teacher behavior likewise attested to their dispossession from teaching/learning experience judging from the daily flow of calls to security to escort particularly noncompliant students to the dean's office and low teacher attendance at school. By perplexing contrast, however, during lunch periods and before and after school, what I observed was quite different: students and teachers pleasantly greeting one another, laughing, and talking together about daily events or shared interests. I couldn't make sense of it all. What was happening in the classroom to turn teachers and students into adversaries both of one another and the teaching/learning experience, and what could I do to help fix the problem? Moreover, what *was* the problem?

We educators are not alone in our profound concern about what does (or does not) go on in the schools. It should be obvious to anyone living in this country that there is a widely held perception that the United States' educational system is in crisis. One has only to turn to the media to discover that it is commonly believed both in popular and political circles that the problems facing education can be attributed to one, some, or all of the following "causes": teachers don't know what they're doing; kids don't respect their teachers; educational standards are too low; and we need to return to "the basics." While for a long time I agreed with the above assertions, I now no longer believe they are "causes" of the problem, but symptomatic of problems arising

from much more complex issues of what and how we conceive of truth, knowledge, intelligence, and ultimately the purpose of education.

Fundamental to understanding the causes of the failure of our educational system is to uncover the traditional assumptions underlying the thinking of critics and even supporters of education in this country, as well as our own. This requires that we look closely at our conceptions of how the human brain works, how learning takes place, what we consider worth learning, and how we assess intelligence. In short, we must reexamine our most deeply held beliefs about the kind of human beings we are teaching our children to be and the role of schools in achieving that goal.

In pursuing the above line of inquiry we discover inevitably that so much of what we consider “true” about how the brain thinks and learns is derived from the dominant mechanistic tradition of educational psychology. This tradition, which reduces the brain to the simplistic metaphor of a computer that uploads and downloads information on command if the right sequence of buttons are pressed, has resulted in producing a vast population of teachers and students dispossessed from the teaching/learning experience by imprisoning the conception of what humanity is and the role of education in its development. If we earnestly are committed to providing all children with a meaningful, joyous, and empowering education, we need to redefine the problem by acknowledging fundamental misconceptions born of the tradition of mechanistic educational psychology that are embedded in the current dominant educational structure. Educational “failure” is not to be found in the teachers and students: It’s within the dominant traditional tightly bound notions of the brain, knowledge, truth, and intelligence that have subsumed and misguided even the most well-intended educational efforts.

The study of critical epistemology has enabled me to begin to understand what I had regarded as teacher and student dispossession from the teaching/learning experience. Rather than assume that the teachers and/or students are somehow to blame, I now interpret their disengaged behavior as an act of resistance to the ultimately dehumanizing and professionally deskilling effect of a state-imposed standards-driven curriculum and assessment régime, one that demands that teachers instruct “the facts” with little or no room for creativity, and worse, with little or no opportunity to evaluate and question the value of what is taught. Although I am loath to admit it, I was formerly likely to attribute the disturbing phenomena I observed to a fundamental lack of teaching ability and/or the insurmountable and debilitating effect of socioeconomic issues of the students’ backgrounds. Perhaps in some cases my analysis may have been accurate. Even so, I am convinced that the behaviors I observed can be better understood in terms of the far-reaching and powerful legacy of the effects that traditional mechanistic educational psychology have on virtually every aspect of how we “do” education, from teacher training and curriculum design to the physical appearance of classrooms, buildings, and how teacher and student behaviors are regulated. To begin to address the “problem” in education today, we must uncover the underlying ideological and epistemological paradigms inscribed in teaching and learning that have served not only to create a sense of dispossession between teachers and students and the teaching/learning experience, but also understand how these have served to reinforce dominant power structures and class/cultural inequalities in this society. For some, and most likely for those who firmly believe in the absolute merit of traditional mechanistic educational psychology and the structures it has produced, this may be a very unsettling process.

My objective in writing here is to trace the historical derivation of the dominant ideological and epistemological frameworks underlying traditional (positivistic, Western, white, male) education, and postmodern responses to these frameworks. If successful, I hope that students of traditional mechanistic educational psychology and others will gain insight into understanding why so much of what takes place in most educational settings is experienced as frustration, apathy, and despair. Moreover, I hope to respond to those critics who are only too willing, as I had been, to blame

teachers and students for the failure of teachers to instruct and students to learn anything truly exhilarating or useful in school.

HOW DO WE QUESTION THE TRUTH?

So, what is *critical epistemology*? As I am using this compound term, critical epistemology is a theoretical and philosophical framework that allows us to examine not only how knowledge and truth (“the facts”) are produced, but also to apprehend issues of power embedded in what is presented as “fact.” Critical epistemology is a framework that allows us to consider questions such as the following: What is truth? If there are many versions of the truth, whose version do we accept, and why do we choose to accept one version over others? Can information be neutral, and if not, how can we recognize when it is not? Who “wins” or “loses” as a result of a particular version of the truth?

Some readers of the above, particularly students of traditional mechanistic educational psychology, may be scratching their heads wondering how considering such questions may be at all relevant to gaining insight into what is blighting contemporary education in the United States. Some perhaps may feel annoyed or outraged by the endeavor to question what “truth” is, particularly within a critical theoretical framework that demands that we scrutinize all knowledge within the temporal, political, cultural, gendered contexts in which it is produced and disseminated. However, if we hope to begin to address what broadly has become regarded as the “failure” of teachers to teach and students to learn in our current educational system, we must begin to examine the questions raised by a critical epistemological perspective.

To start, consider the following: Seldom are those of us who have dwelled as students or teachers for any length of time in educational settings ever asked to consider where our conceptions of knowledge or intelligence come from, nor have we been presented with opportunities to reflect on the possibility that there are oblique sociopolitical agendas embedded in the “truths” disseminated both inside and outside of the school experience. More often, as teachers we come to understand that in order to be successful in our careers we must comport ourselves as “neutral” deliverers of information and to regard our students as “receptacles” for whatever we teach. Worse, in most traditional school settings students quickly learn that passive, unquestioning behavior is much more likely to be rewarded than behavior that actively challenges the status quo. However, stepping back and peering in through the lens provided by critical epistemology, we might begin to wonder not only how the teaching/learning experience came to be this way for so many of us, but also whose agenda the pretense of a neutral and passive educational structure serves.

Essential to the critical epistemological approach is the assertion that all knowledge is *constructed*, that is, produced by human beings interacting within particular social and physical environments during specific time periods. As such, the process by which we come to understand and accept some things as “fact” and others not is by definition the product of human beings perceiving and trying to make sense of the world within the historical, political, cultural, gendered, ideological web of reality in which they live. Following this reasoning, as will be discussed later, even those phenomena that can be “proven” by “scientific method” is a reflection not only of the multiple complex contexts within which the “method” is constructed and used to establish “fact,” but also a reflection of the personal web of reality in which the individual researcher is situated. Similar to the study of phenomenology (the study of phenomena as they are constructed by human consciousness), critical epistemology requires us to consider the “phenomenon” of knowledge construction and dissemination not only in terms of the larger context of the multilayered, intersecting social, political, ideological, temporal web of reality in which these phenomena take place, but also to reflect on our individual position to this complex web.

In the spirit of the above and by way of example, I will pause a moment to situate myself in relationship to the topic at hand. Raised in an intellectually and economically privileged university community, I entered the field of education as a form of social action. Jewish, female, and liberal, as a teacher I was particularly committed to providing a classroom environment for the highly diverse populations I taught and tried to engage every student's interest and imagination by experimenting with new ways to teach the proscribed curriculum. Believing that classroom tone was enhanced or inhibited by the physical arrangement of space, I was particularly interested in creating a spatially "equitable" environment. This belief was translated into a physical arrangement of seating that required students to face one another and me in a circular group so that we could all participate in egalitarian discussion. At the outset of my career, while I would have agreed with Kincheloe that every dimension and every form of educational practice are politically contested spaces, not once did I pause to examine the epistemological and ideological beliefs underlying my instruction to try to discern potential invisible forces operating in the name of democracy and justice but ultimately serving to reinforce the oppressive nature of what I taught. Therefore, like many teachers who arrange their classrooms to facilitate face-to-face discussion among students to foster egalitarian interaction, in the end I still taught the fundamentally monological state-authored curriculum that was firmly grounded in assumptions about the human brain derived from traditional mechanistic educational psychology, a curriculum that only recently I have come to recognize as representing a far-from-neutral or democratic worldview. Besides this, I attempted to present politically "neutral" instruction even though how I taught my classes was founded in my own firm belief that students needed to cultivate work-oriented skills and a culturally "sanctioned" knowledge base to participate competitively in a market economy. Had I been cognizant of it at the time, I would have realized I was promoting not only some form of neoconservative or neoliberal capitalist agenda, but also a very limited perspective of what "valuable" knowledge is. Regretfully, only now am I aware of my role in reinforcing the ideology of the dominant culture via the state-approved curriculum and my neoconservative/neoliberal capitalist orientation, both of which I presented as value-free and "true." Eager to please me and/or concerned for their grades, seldom did any students challenge the ideologies embedded in the curriculum and my instruction. I regarded the few who did as radical recalcitrants, and although I tried to persuade these students to compromise, all chose to fail my class rather than "buy into" what I was "selling." Similarly, I have seen many caring, well-intentioned teachers employ instructional strategies that were democratic in physical structure only and that were ultimately undermined by the same fundamentally unquestioned/unquestionable monological standards-driven curriculum and the teacher's veiled or unconscious ideological beliefs. I now understand that "noncompliant" students (usually nonwhite, non-Western, and poor) invariably fail under an education system that requires teachers to unquestioningly inculcate "facts" born of the ideology of the dominant class. Unequipped to have meaningful conversations with our students about the issues of power that are embedded in the curriculum and where our conceptions of knowledge and intelligence come from, we instructors would be a lot more honest if we arranged our rooms in a way that reflected the monological nature of what we taught and expected our students to accept ideologically. At least we would not confuse ourselves or delude the vast majority of our students with the notion, as Kincheloe has argued, that if the method of information delivery is democratic, then so is the epistemology and ideology underlying it.

IS SCIENCE NEUTRAL?

If we were to assign blame to a single cause of the current crisis in education, it would be the assumption that Western science—that is, the framework and methods by which we perceive and measure all phenomena—allows us to produce objective, neutral, true, and hence universal data

about all there is to know in the world. In education, this assumption is embodied in particular by the tradition of mechanistic educational psychology, the consequences of which can be found not only in the narrow way we construct curriculum (i.e., the selection of “facts” and skills that are taught), but also how we determine what intelligence is (i.e., the “neutral” testing standards to assess aptitude). While I am not asserting that we should completely discard Western science (and by extension, all educational psychology) as a means of learning more about human beings and the world, it is important that we understand it as *one* approach, and one that is embedded in a complex historical, cultural, and ultimately political context.

Western science, the traditional system of knowledge production in the United States, has dominated our thinking for so long that it may be hard to see it merely as a single approach among many. Known also as positivistic epistemology, Western science was born in Europe during the Modern Period and is characterized by the significant epistemological changes that occurred during the Scientific Revolution of the sixteenth and seventeenth centuries when scientific thought (reason) was elevated to the pinnacle of how human beings can and should explore/explain all phenomena. Thanks to Descartes, who asserted that the world can be best understood by being “broken down” and applying scientific method/reason to understanding each of its constituent parts, knowledge came to be regarded as “something out there waiting to be discovered.” By reducing every phenomenon to a “part” or “thing-in-itself,” free of relationships to other phenomenon and devoid of any social, historical, and cultural context, modernist thinkers firmly posited that there was no relationship between the *knower* and the *known*. This view led to the conception of the world as a mechanical system divided into two realms: the internal world of sensation and an objective world composed of natural phenomena, a conception that led to a litany of other false dichotomies. Contributing to the notion that knowledge is context-free and independent of the human beings who “discover” it, Newton extended Descartes’ theories by describing time and space as absolutes. Later, Bacon contributed to the reinforcement of the exalted status of scientific thought by establishing the supremacy of reason over imagination. In short, modernist thinkers deified rationality by asserting that scientific method—“rational” because of its attention to applying scientific procedures (methodology) to measure all phenomena—could produce data that was human-bias- and context-free. Following this line of thinking, modernist thinkers were firmly convinced that certainty is possible, and when enough scientific research is produced, human beings will finally have understood reality well enough to forgo further research.

Constructed and promulgated by members of the dominant Western, white, male society, modernist epistemology represents a distinctly limited and limiting perspective, one in which scientific method is used to the exclusion of all other approaches in establishing what constitutes the “truth” or “facts.” This Cartesian–Newtonian–Baconian epistemology, known from the nineteenth century onwards as positivism, subsumed not only the thinking and scholarly activities of the culturally, economically, politically, militarily dominant Western nations in which it was born and cultivated, but also was disseminated and inculcated via the pedagogical practice and learning institutions of these countries and those countries/cultures conquered and colonized by them. Through this process, a single, hegemonic view of the world emerged, one in which scientifically discovered “facts” were established and affirmed of comprising a “universal, one true reality.” The belief in the supremacy of “objective” science necessarily inhered the impossibility of the value or “validity” of any other culture’s knowledges and knowledge-producing system. The primary objective of the education system of the dominant (and typically colonizing) culture not only was used as a means of reinforcing the dominant, Western, white, male, positivistic epistemology of a “universal one true reality,” but also was used as a means of silencing and in many cases obliterating all subjugated (non-Western, nonwhite, female, indigenous) knowledges and epistemologies. Establishing “the facts” became the responsibility of scientifically trained academicians. As a result, teachers became responsible merely for delivering the “facts” and

not for producing them: In turn, students became responsible for “receiving the facts” and not interpreting/questioning or otherwise making sense of them. Ultimately dispossessed of whatever other knowledges they may have had before entering the education system as well as the ability to produce knowledge through the teaching/learning experience, it seems inevitable that both teachers and students should come to feel and behave adversely to what they are expected to “do” together in the classroom.

Unfortunately, how education is traditionally conceived was not the only domain affected by Western science. Approaching human thinking as an “object” that can be dismantled and understood in terms of its component “parts,” traditional mechanistic educational psychologists and cognitive scientists have endeavored to define intelligence by applying positivistic methods to the human mind, the primary objective being to “quantify” intelligence, which they narrowly defined as performing certain “thinking” tasks on demand. One devastating consequence of this approach was the utter dismissal and denigration of human emotion, physical sensation, intuition, and spontaneous improvisation, without which it is nearly impossible to imagine being able to “think” or lead a healthy, interesting, and successful life. Another terrible outcome of this positivistic approach was that it also led to the development of “objective” measurements such as the Binet–Stanford IQ test, the Standardized Achievement Test, and a variety of other assessments designed to “quantify” human learning. These tests are predicated on the assumption that if schools, teachers and students are doing their jobs, one can measure what students know on the basis of how they perform in the decontextualized setting of an examination room. On closer analysis, however, Bourdieu among others has suggested that these tests reveal more about the values and cultural assumptions of those who construct the tests and the students’ familiarity with cultural norms (including the curricular “facts”) of the dominant class than they do about the critical and creative qualities of how students process and apply what they know. In short, in their efforts to analyze the human mind in terms of very narrow mathematical and psychometric measurements that essentially reduce intelligence to quantifying how many “facts” one knows during a decontextualized test, traditional mechanistic educational psychologists and cognitive scientists fail to recognize, as Varela (1992) has pointed out, the value and importance of the nuances, subtleties, and ambiguities by which some of the most spontaneous creative and abstract thinking is characterized and enacted throughout lived experience. Assessed in this manner, it is no wonder that many students feel misunderstood and ultimately insulted by traditional instruction and evaluation.

The simplistic curriculum design and intelligence assessment standards provided by educational “experts”—those followers of traditional mechanistic educational psychology and cognitive science—ultimately have served to undermine education in this country. It is inevitable that teachers and students, excluded from research and knowledge-producing activities in the daily teaching/learning experience and constrained by highly limited definitions of what intelligence is, feel dispossessed from what they are expected to “do” while in the classroom. So long as teachers are regarded as unskilled taskmasters responsible for inculcating a static set of state-sanctioned scientifically produced “facts,” the sheer boredom and disempowerment that accompanies this approach will continue to result in professional dissatisfaction and burnout. Likewise, so long as students are expected to be unquestioning recipients and parrots of such an education, there will continue to be “winners” (compliant students) and “losers” (noncompliant ones) in the educational process. Within the current traditional positivistic, Western, white, male framework that underlies education in this country, it is now clear to me that the primary objective of schooling is to reinforce the dominant culture/class structure while ensuring the continued subjugation of marginalized (nonpositivistic, non-Western, nonwhite, nonmale) voices that would challenge its authority. As such, much of our educational system facilitated a dominant belief in traditional mechanist educational psychology, has become a bleak, spirit-breaking institution destined to

exacerbate and expand the unjust distribution of knowledge and power between the dominant and subjugated classes that comprise U.S. society. Is this really the kind of society we hope to foster through our educational system and, if so, how can a democracy survive when we educate our children this way?

ARE THERE ALTERNATIVES?

The vast majority of educators I have come to know in New York City are committed to critical pedagogy, that is, to engaging in teaching and providing learning experiences that foster social justice and equality. New York City educators are hardly alone in their commitment: Those interested in critical pedagogy everywhere understand that in order to remedy an unjust educational system there must be a significant paradigm shift in terms of the ideological orientation of schools. To create a just society, schools must welcome and cultivate the rich experiences and knowledges students bring to the learning environment. Schools must educate students to evaluate ideas critically, a process that not only requires understanding the complexity of the contexts in which knowledge is produced, but also that allows for ambiguity and the possibility of multiple interpretations of the truth. How knowledge is produced and disseminated both inside and outside of the schools must be understood in terms of its relationship to societal power structures. Moreover, individuals need to understand how to put ideas into action. The myth of teacher and curriculum ideological “neutrality” can no longer be accepted. In short, we must search far beyond traditional mechanistic educational psychology to resolve complex educational issues as it completely ignores these essential sociopolitical issues.

Under the current framework, teachers are expected to be merely neutral information deliverers. Those interested in critical pedagogy understand that no human activity is ever bias- or context-free. In fact, the concept of the ideology-free teacher can be seen as a conflation/extension of the idea that all knowledge is “neutral,” a notion that derives from modernist thinkers. Ultimately, for critical pedagogues the objective of education is to teach students how to resist the harmful effects of dominant power and empower the marginalized and exploited, activities that must include everything from engaging such individuals in a rigorous pursuit of empowering education to a more equitable distribution of wealth. As challenging as this may seem, it is perhaps the only means by which one can hope to ease the failure and suffering that characterize both the teachers’ and students’ experiences in schools that will carry over later into society as widespread suffering of the disempowered social classes and as a potential force in undermining our democratic system of government.

The current unjust, limited, and limiting epistemology and ideology found in the U.S. educational system cannot be expected to exist forever without resistance. As Giroux and many others have asserted, human beings have agency, the ability to actively resist the oppressive forces designed to control and limit their behavior. As a result of mid-twentieth-century social and cultural movements (i.e., feminist, African, and Native American), the evident failure of education to serve large diverse populations of students, and the spread of works by critical theorists of the Frankfurt school, new perspectives have developed in resistance to the oppressive force of the “culture of positivism” on education. Often labeled as “postdiscourses” because they question the modernist, scientific, Western approach to knowledge production and distribution, two significant theoretical orientations have emerged: critical theory and complexity theory. Critical theorists are principally concerned with power and its just distribution. Complexity theorists are principally concerned with the interplay/relationship of multiple forces (i.e., gendered, social, temporal, cultural, etc.) that comprise and have an effect on all phenomena, and understand that no phenomenon can be understood in isolation or “unto itself”: every phenomenon must be regarded as a part of a totality of multiple aspects/influences/forces, all of which have an effect on one another and

in relationship to one another. The theoretical approaches of these two postdiscourses (which also include poststructural, postcolonial, and postformalist ones) have significant implications for education. Taken together, however, those interested in *critical complex pedagogy* understand not only the relationship between power and how knowledge is produced and distributed, but also the multilogical, human-constructed, and therefore ambiguous nature of the truth. In sum, critical complex pedagogy seriously challenges reductionistic epistemologies and the oppressive ideologies inscribed in them.

Refuting traditional mechanistic educational psychology and the supremacy of the positivistic Cartesian–Newtonian–Baconian epistemology—that is, the exclusive use of scientific and mathematical methods to measure and quantify the world and its phenomena as a means to “discovering” and “understanding it”—is fundamental to bringing about the necessary paradigm shift to address the oppressive dominant Western ideologies embedded in curriculum and instruction that have led to the above-described dispossession of teachers and students in the teaching/learning experience. Providing hope, several theorists have emerged to offer epistemological and ideological alternatives. These alternatives provide the means of transforming schools from dehumanizing and disempowering institutions to ones in which both teachers and students can reclaim and reaffirm the “validity” of the knowledges of their own sociocultural backgrounds, as well as engage in acts of producing and understanding knowledges in terms of their complexity.

Phenomenology, the study of phenomena in the world as they are constructed by our consciousness, provides a means of reuniting the “knower” to the “known” by asserting the significance of the world’s phenomena as they are constructed by human consciousness. Unconcerned primarily with the nomological or factual aspects of some state of affairs, the phenomenological epistemological approach requires that we inquire about the nature of phenomenon as meaningfully *experienced*. In reestablishing that there is a relationship between human beings and the world in which we live, and focusing on lived experience as a means of discerning meaning, phenomenologists such as Van Manen (1990) ultimately attempt to understand what it means to be human. The significance of phenomenology to pedagogy is that it reintroduces the intimate relationship of human beings to other human beings, the environment, and all of world’s phenomena, thereby providing a means for students and teachers to draw on their own lived experiences and to share these to create meaning via the teaching/learning experience. In short, phenomenology empowers teachers and students to become researchers of their own lived experience, a process through which they produce knowledge for themselves instead of merely delivering or receiving scientifically produced “facts” as knowledge.

By definition, phenomenology requires that we eschew the positivistic notion of the universal “certainty of knowledge.” Hermeneutics, the branch of philosophy concerned with human understanding and the interpretation of texts (i.e., written, spoken, works of art, events, etc.) is particularly useful in this pursuit. For phenomenological hermeneutists, one must accept that all knowledge is interpretation. As Madison (1988) has suggested, the “truth” is a human construction, an interpretation that comes down to and is no more than saying it is generally accepted by a community of interpreters. In this framework, scientific knowledge is viewed not as a passive copying of reality but rather as a single means of constructing reality. In significant contrast to positivistic epistemology, phenomenological hermeneutists present scientific methodology as *one* way in which reality is creatively interpreted, granting no more “validity” than any other mode of interpretation or access to absolute reality and truth.

The notion of reality as a contextually dependent human construction born of interpretation and not of empirical, scientific method raises many important and potentially upsetting epistemological questions such as, How can we know anything for certain? How do we know what the truth is? Is all truth relativistic (i.e., relative to the limited nature of the mind, conditions of knowing, individuals and groups of “knowers”)? Must we accept all interpretation as the truth?

Following Madison, dethroning positivistic epistemological approaches in favor of hermeneutic (interpretive) ones does not mean that we reject all standards for evaluating what is “true.” In answer to these questions, phenomenological hermeneutists such as Madison assert that it is not to science but to *rhetoric* or *the theory of persuasive argumentation* that interpretation should look for its theoretical and methodological grounding. What is pedagogically significant about this epistemological approach is that it allows teachers and students to respect the epistemologies of a diversity of cultures, genders, races, and religions that comprise a typical classroom by dialogically examining and understanding the nature of “truth” in terms of multilogical (i.e., non-Western, female, etc.) perspectives. In short, phenomenological hermeneutics welcomes a broad range of knowledges and interpretative systems for understanding the world, including those that may have completely different conceptions of time, space, history, and social values.

While integrating phenomenological and hermeneutic epistemologies into pedagogical practice are essential in making the shift from the positivistic paradigm to that of complexity in education, critically complex pedagogues also understand how important it is that teachers and students understand how schools have been used as mechanisms for reproducing the ideology of dominant power structures, a process that by necessity oppresses subjugated/“indigenous” cultures and their knowledges. Moreover, critically complex pedagogy is not only concerned with these issues, but also with how education can become a transformative force in improving the human condition. Giroux’s *Pedagogy and the Power of Hope* and Kincheloe and Semali’s *What Is Indigenous Knowledge?* (1999) specifically address these issues, but before discussing these it is important first to define a few terms.

There is no definitive set of characteristics (essences) that characterize who is and isn’t “indigenous.” Contrary to essentialist assertions, there is no “natural” category of indigenous persons. It is important to understand this concept, as indigeneity manifests itself within diverse and often hybridized ranges; and there is, of course, great differences among individuals who theoretically belong to this same group. *Indigenous*, as defined by the World Council of Indigenous Peoples in Kincheloe and Semali, describes such individuals who occupied lands prior to populations who now share or claim such territories and possess distinct language and culture. By extension, *indigenous knowledge* refers to knowledges produced in a specific social context and employed by lay people in their everyday lives. In returning to the question of who “qualifies” as indigenous, it should be clear that there is a great deal of cultural/historical/racial/ethnic/linguistic diversity among how indigenous peoples identify themselves or are identified by others. Suffice to say that given the above definitions, in terms of this country one can make an argument that indigenous peoples comprise the majority of those attending urban public schools.

Critical complex theorists interested in pedagogy such as Kincheloe, Semali, and Giroux address schools as institutions that oppress subjugated/indigenous cultures and knowledges through ideologies that are tacitly expressed through curriculum and instructional practices. For Kincheloe and Semali, oppressive forces that shape us have formed the identities of both the powerful and the exploited. By seeking out the ideological forces that construct student perceptions of school and the impact such perceptions have on their school experiences, they offer a means of analyzing the process by which this happens to understand why students succeed or fail in school. The authors assert the superiority of indigenous knowledges over dominant positivistic epistemological paradigm—one that asserts the “certainty of knowledge”: Following complexity theory, Kincheloe and Semali demonstrate that many indigenous epistemologies are not uncomfortable with a lack of certainty about the social world and world of nature, because they have no need to solve all mysteries about the world they operate *with* and *in*. Indeed, indigenous knowledges as they are presented by these authors provide clear examples of the epistemology of complexity when applied to classroom teaching/learning, epistemologies that value phenomenological lived experience and hermeneutic, interpretative ways of knowing over the traditional positivistic

approach. This is not to say that they suggest that schools completely dispose of scientific (positivistic) ways of knowing. By contrast, they assert that *transformative scientists* understand that any science is a social construction, produced in a particular culture and specific historical era, an understanding shared by phenomenological hermeneutists, complexity theorists, as well as other scholars and proponents of indigenous knowledges. In sum, inclusion of indigenous knowledges in education serves two essential purposes: (a) providing a means of understanding the world from a variety of different epistemological orientations and (b) promoting a more democratic ideology by reinforcing the notion that understanding the world via the knowledge systems of indigenous (subjugated) peoples have value for everyone.

Giroux's *Pedagogy and the Politics of Hope* (1997) offers a response to the reductionistic notion that schools are necessarily and hopelessly subordinate to political, economic, and social power structures by demonstrating both the oppressive and potentially emancipatory forces of the process of schooling. Giroux asserts that we all participate in ideology on conscious, subconscious, and material levels, but that we are not necessarily imprisoned in it: human beings have "agency"—the ability to resist and transform the ideologies that oppress us. To begin to address social injustices and transform society, Giroux believes that critical educators need to (a) become aware of the extent to which ideologies exert a force over our belief systems and behaviors and (b) enable students to become critically aware of these forces. Giroux (in keeping with the post-discourses of other theorists), views positivism as antithetical to developing students to participate in a critical democracy (society as a struggle for just distribution of knowledge and power) since the mode of reasoning embedded in the culture of positivism cannot reflect on meaning, value, or anything that cannot be verified in the empirical tradition. To counter this tradition, Giroux argues that teachers need to regard themselves as transformative intellectuals who help students acquire critical knowledge about basic societal structures such as the economy, the state, the workplace, and mass culture. To do this, teachers and students need to become aware that ideology operates at the level of lived experience signified in material practices produced within certain historical, existential, and class traditions. In sum, it can be said that for Giroux, to be liberated from the oppressive ideologies of society (reproduced and reinforced in schooling, institutions, mass media, and culture), students and teachers must become producers of their own knowledge, drawing on epistemologies such as phenomenology, hermeneutics, and complexity theory in their efforts to become critical not only of themselves but also of the society at large.

WHAT NEXT?

Without question, the current system of education is in crisis in this country. Conservative "solutions" to the problem, steeped as they are in the "scientific data" of traditional mechanist educational psychology, have taken the form of reactionary measures such as those embodied by the No Child Left Behind legislation. Similar to other educational efforts predicated on dominant Western, white, male, epistemology and ideology, these measures are certain to broaden even further the chasm between the dominant elite minority and vast marginalized majority that comprise this country. Rather than try to return to a mythical Golden Age of education that never existed except in our imagination, we must honestly examine the purpose of teaching and learning and our goals in educating the young. Gaining a greater understanding of the oblique agendas embedded in how we go about schooling via familiarity with the study of critical epistemology is an integral first step in this process. We must optimistically redefine what the primary objective of education should be, beginning with the question of what kind of society we hope to create. Mindful of the seriously debilitating limitations of mechanistic educational psychology that traditionally has been the basis for how we construct intelligence and knowledge, we must

boldly seek alternative perspectives and approaches that attempt to understand the complexity and richness of all of human experience.

Understanding critical epistemology allows us to see that teaching and learning are *not* “neutral” activities—more than anything else, this is one area that traditional mechanistic educational psychology has overlooked. Ultimately, we must ask ourselves what kind of human being we hope to inspire and nurture through education: Are we interested in educating all of our children to become members of a critical citizenry capable of sustaining democracy, or subservient members of the labor force and consumer society? At its best, education can provide the joys of discovery, intellectual empowerment, and freedom. Above all, providing students with an educational experience that achieve these should be the starting point for all educational reforms we undertake in the future.

SUGGESTED READING

- Bourdieu, P., and Passeron, J.-C. (1990). *Reproduction in Education* (2nd ed.). New York: Sage.
- George, J. (1999). Indigenous knowledge as a component of the school curriculum. In L. Semali and J. Kincheloe (Eds.), *What Is Indigenous Knowledge?* (pp. 79–94). New York: Falmer Press.
- Giroux, H. (1997). *Pedagogy and the Politics of Hope*. Boulder: Westview Press.
- Kincheloe, J. (2004). *Critical Pedagogy Primer*. New York: Peter Lang.
- Kincheloe, J. (2001). *Getting Beyond the Facts*. New York: Peter Lang.
- Kincheloe, J. (1999). Trouble ahead, trouble behind: Grounding the post-formal critique of educational psychology. In S. Steinberg, J. Kincheloe, and P. Hinchey (Eds.), *The Post-formal Reader: Cognition and Education* (pp. 4–54). New York: Falmer Press.
- Madison, G. B. (1988). *The Hermeneutics of Postmodernity: Figures and Themes*. Bloomington: Indiana University Press.
- Semali, L., and Kincheloe, J. (Eds.). (1999). *What Is Indigenous Knowledge?* New York: Falmer Press.
- Van Manen, M. (1990). *Researching Lived Experience*. Albany: SUNY Press.
- Varela, F. (1992). *Ethical Know-How*. Stanford: Stanford University Press.

CHAPTER 62

Dialogism: The Dialogic Turn in the Social Sciences

ADRIANA AUBERT AND MARTA SOLER

The concept of dialogism implies a focus on dialogue and communication in the explanation of society, social relations, and personal development. Dialogism is not a new concept but recovers a tradition of looking at the social dimension of the self, from the perspective of cognition and action. In *The Pedagogy of the Heart*, for instance, Freire argues that dialogism is *inherent of human nature, and a requirement for democracy*, and in this statement he is telling us two important ideas. On the one hand, human beings are social—since the day of birth they seek for interactions—and they use dialogue to make meanings, to acquire knowledge and skills, and to perform actions. On the other hand, to live together in society on the basis of equal rights, humans need to talk to each other and come to agreements. Agreements come from dialogue, not from imposition. We can find contributions to the dialogic perspective from different disciplines and scientific traditions that try to explain human beings and society (i.e., how we are, behave, learn, interact, and understand our world and others). The social sciences, in fact, were born in the eighteenth century, when people wanted to know themselves in order to be able to govern themselves, giving way to enlightenment and what we know as Modernity. That is why some intellectuals argue that the modern current of thought had a dialogic origin that claimed people's agency, but was lost through the bureaucratization of democratic institutions. The loss of meaning in society that Weber already denounced can be overcome by recovering that dialogic origin, and this is what many contemporary social scientists, across disciplines, have done and are doing today.

Furthermore, some explain that there is a dialogic turn in the social sciences and in the society, which coincide both with the latest changes in society and the latest move in the social, cognitive, educational theory and in the way we do research in these fields. While the linguistic turn implied a move from the philosophy of conscience to the philosophy of language—that is, a shift from focusing on a subject's consciousness to focusing on the role of language to explain human action and thought—the dialogic turn implies a move toward intersubjectivity.

In the twenty-first century, our world is increasingly dialogic: interactions among different people are key for personal and collective projects and for a peaceful coexistence in a society that belongs to everybody. Recent social changes such as the technological revolution and globalization (i.e., economic, social, and cultural globalization) are expanding the feeling of risk and uncertainty

in the lives of many people, while at the same time we face a broader plurality of options to choose our own lives and construct our own biographies. This new social environment provokes, on the one hand, individualization, as a person's role in society is not defined only by his or her gender, status, or cultural tradition. However, individualization does not equate to individualism or alienation, rather to a growth in communication, as people usually decide with those with whom they live, work, and have relationships.

The dialogization of our environment is provoking a dialogic turn in the social sciences and research. Flecha et al. (2003) explain this phenomenon in their analysis of contemporary sociological theory, and also argue that the dialogic turn can be seen in a wide range of disciplines: philosophy, psychology, education, sociology, linguistics, anthropology, women studies, etc. Particularly, in the field of educational psychology we find a recovering of dialogic perspectives both in developmental psychology and language acquisition, as well as new proposals of dialogic learning and action in educational practice. Researchers from different disciplines are proposing transformative solutions to social problems that are grounded in communication and mutual recognition, taking into account the dialogic potential of current society. Therefore, we can see that diverse authors have included the dialogic nature of language and human condition in their theories (Bakhtin, Mead, Vygostky), and others have also used intersubjectivity to be able to explain society, and stressed dialogue as the needed requirement for different people to live together in society (Habermas, Freire, Beck).

Furthermore, when moving to the field of education, we see that due to the mentioned social changes, learning has also changed. In the information society, learning is less related to what happens within a classroom and increasingly associated with the coordination of the diverse learning events that take place in the different spaces in which children interact with others: in the classroom, in the school, in the home, in the street. Therefore, improving learning implies taking into account all these spaces of interaction and development, achieving continuity between school and life.

The dialogic approach to learning is framed by the social interactions among people mediated through language. It assumes that there are different forms of knowledge that people bring to the learning process, recognizing their capacity to further their knowledge and achieve the knowledge and skills needed to fully participate in current society. Dialogic learning thus implies intersubjectivity: diverse people exchanging ideas, acquiring and producing knowledge, and creating new meanings that transform both the language and the content of their lives. From this dialogic perspective, the learning process is not only understood as an individual and internal process, but also inextricably linked to the multiple interactions that take place in diverse social and cultural environments. This process can be defined through seven principles—egalitarian dialogue, cultural intelligence, transformation, instrumental dimension, creation of meaning, solidarity, and equality of differences—that also lay the ground for democratic and egalitarian education, orienting school practice toward excellent outcomes for everyone, regardless of their age, culture, socioeconomic status, or previous schooling.

In fact, it is precisely because society is becoming dialogic that the concept of learning is also turning dialogic and recovering the interactionist tradition that existed previously (although not often recognized as such) within the field of educational psychology. A clear example is the work of Vygostky, Luria, and their Russian contemporaries. Their work was not broadly known within the international scientific community until some American scholars like Michael Cole, Sylvia Scribner, and Barbara Rogoff, among others, recovered them in the seventies and further developed a socio-cultural-historical approach in the analysis of different contexts. Now, this approach is still present and their focus on agents' interactions stressed. For instance, Scribner's studies on practical thought in workplace environments are today a reference in adult education theory and practice. Rogoff's studies about learning in nonschool contexts (like rural Guatemala) through

guided participation sheds light today on communities as learning spaces and the relevance of family participation. Cultural psychology, as Cole argues, has a past and a present, and his own work today, from cultural-historical activity theory, proposes forms of intervention with excluded children or low achievers, based on interactivity. Another example is the work of George H. Mead on symbolic interactionism. His theory on the development of the self in society through both nonverbal and symbolic communication has been an important contribution to Habermas's theory of communicative action, and it is recovering relevance again today in social psychology, media, and linguistic studies.

The current dialogic turn of society and the need for new learning approaches is thus emphasizing a dialogic perspective in many relevant contributions to the field of educational and social psychology.

DIALOGIC TURN IN SOCIETY AND IN THE SOCIAL SCIENCES

Dialogue is increasingly permeating and influencing all social spheres today, from the world of work, to the economy, to the definition of new lifestyles. If industrial society was the framework for the development of traditional modernity—a perspective based on instrumental rationality, science, and the creation of rights and norms—the current information society offers the opportunity to live in a dialogic modernity, which includes a rationality grounded in dialogue and consensus among all subjects rather than the imposition of a few (i.e., experts or hegemonic cultures).

Dialogue in Our Lives

The old patterns and norms that used to guide our lives in the industrial society lost their legitimacy in current society. Increasingly, we need dialogue and communication to make decisions about our lives and our future. Traditional models in the context of the family, education, politics, labor, etc., are increasingly being questioned. Dialogue and communication are the elements that are being used in the orientation of our actions and our lives. For instance, while the father used to take decisions in the family, it is now becoming usual for parents and children to have to agree on issues such as what TV channel to watch, negotiating curfews, or the distribution of chores at home.

Furthermore, society is opening up to new cultural exchanges, values, and social norms. If we look at the private domain, there are many new possibilities. For instance, people can choose whether to marry in a particular traditional religious ceremony or to create a ceremony that merges rituals and meanings from two different religions. They can also decide not to have any ceremony at all, or may be to go later on to the justice of the peace and legalize their emotional bond before having a child. There are also single-parent families and families who live apart together. Authors like Ulrich Beck and Elisabeth Beck-Gernsheim or Anthony Giddens have discussed how these “new” types of relationships and families emerge, how they coexist in the same communities with “traditional” types, and how they are becoming socially accepted, notwithstanding a number of personal and social conflicts that often arise.

In the field of school education, teachers must also negotiate and reach consensus with their students about the activities and knowledge to work on. In the same way the authority shifts in the homes, when teachers try to impose their criteria using their position, they often find students who do not respect this authority and conflicts arise. Often, the solution has been the opposite pole, becoming a *laissez-faire* teacher focusing on “motivating” activities to engage these students. The increase of dialogue, however, does not imply watering down the curriculum, and families and students do ask for quality and even dare to challenge educators with their own knowledge.

Furthermore, people also ask for and seek out more dialogue, negotiation, and agreements with the so-called experts or professionals in diverse social contexts, such as health, politics, labor, or education. There are no experts with the whole truth, as everybody can contribute to knowledge and can contribute arguments from different experiences and resources. Some authors like Ulrich Beck have described this phenomenon of questioning the professionals—or not attributing them the whole truth—the *de-monopolization of expert knowledge*. Now, if I have a health problem, I will go to the doctor, but I also will hook on the Internet for information about this problem and the possible medical treatments that exist in the world. The same happens in education. Teachers do not have the whole truth and, moreover, information is public, free, and easy to get on the Web. Students can access it and challenge the teacher or raise questions. They can also work as a team, and reach out to more and richer information after reflecting on it. A new way of teaching is needed in which students are not recipients of knowledge but creators of knowledge through peer work and teacher guidance. This reflects the idea of dialogic inquiry in the classrooms, drawing from the work of Gordon Wells. The de-monopolization of expert knowledge demonstrates the dialogization of our lives in society.

Dialogue in the Institutions

Many institutions that were initially born to serve the citizens have become highly bureaucratized and provide little or no opportunity for people to interact. Schools are a clear example of this. However, people today are claiming their agency; they ask for open dialogue and to have their voices represented in decision-making spaces. A clear example is the World Social Forum, and the way people are getting organized through social movements worldwide to have a say in global politics to make “another world possible.” Citizens also claim for more transparency in national and local politics and they go to the streets again. In the field of education, for instance, families and neighbors want to participate in deciding the school they want for their children and what sort of education must be guaranteed within it.

Education is thus moving away from unilateral actions of “experts” and increasingly becoming defined through consensus and dialogue between a whole educational community. Active participation of family members and communities in general is one of the priorities for many schools today. Many are also promoting dialogic approaches to learning in order to overcome dropout, failure, and exclusion. Along these lines, concepts like learning communities, communities of practice, or school–community partnerships are increasingly present in this field.

The more systems decide how people should live and relate to each other, without including them in the decision-making process, the more these people lose freedom and meaning in their lives. Habermas conceptualized the process of bureaucratization of systems as the *systemic colonization of lifeworld*. Habermas describes society as a dual relationship between the lifeworld and the systems, which influence each other. The *lifeworld* is the context of relationships and communication among people, such as the above-mentioned daily interactions and negotiations. The systems are the institutions and social structures, like the government, the family, or the school system. Systems emerge from the lifeworld, as people create structure and normative rules to live together. Other authors like Giddens or Freire also provide this double conceptualization of society that includes subject (or agency) and structure.

Social movements (agency) are recovering the communicative grammar of the colonized lifeworld through increased dialogue. Political and governmental institutions must then respond to people’s demands for transparency and radicalization of democracy. Elster contends that there is a revival of the idea of deliberative democracy, or what he describes as the process of “collective decision making with the participation of all who will be affected by the decision . . . by means

of arguments offered *by* and *to* participants who are committed to the values of rationality and impartiality.” Furthermore, current research policies are acquiring new orientations to bring research closer to the real needs of society. Ultimately, social projects and popular proposals are oriented toward including citizen’s voices and extending citizen participation. These are some more examples of the dialogic turn in society.

Dialogue in Social Theory

The changes taking place in our daily lives, systems and institutions are expressions of the dialogic tendency of society. This is at the same time influencing how researchers and academics analyze society, conduct research, and how they produce theories that help to explain society and human relations. Habermas, for instance, affirms this link when he contends that the communicative perspective is not a mere theoretical or intellectual invention, but that it arises from real social phenomenon. Diverse authors have reflected on the nature of communication and dialogue in our society, as well as in our developmental processes as organisms, persons, souls, subjects, or people in the world. This look at intersubjective communication is at the basis of diverse disciplines. At the same time, authors committed to the overcoming of social inequalities analyze the strong connection between dialogic processes and social change, and write about it in order to support the transformative proposals that are emerging from social movements and agents.

Critical intellectuals who analyze the current changes in society argue that this dialogic tendency has inspired democratic revolutions throughout history. For instance, Habermas compares the dialogic spirit of information society with the bourgeois–socialist liberation movements and the American civil rights movement. Castells compares it with the revolutionary spirit of the sixties. He states that “the emphasis on interactivity, on networking, and the relentless pursuit of new technological breakthroughs . . . was clearly in discontinuity with the somewhat cautious tradition of the corporate world. The information technology revolution half-consciously diffused through the material culture of our society the libertarian spirit that flourished in the 1960s movements.” In his early work (*Pedagogy of the Oppressed*), Freire discusses the existence of both dialogic and antidialogic actions in our society. Later, in the late nineties, he states that “one of the most important tasks for progressive intellectuals is to demystify postmodern discourses with respect to the inexorability of this situation [reproduction of power].” He considered postmodern discourses led to immobilization. Rather than just denouncing power structures he proposed announcing transformative actions—led by agents in dialogue—that contribute to social change. Authors like Habermas and Freire have been accused of being utopian idealists. However, they respond by reiterating that their dialogic project is not a theoretical invention but a reflection of the dialogic practices that people have already developed in their everyday lives. Although they never worked together, neither met, they coincide in their proposals of dialogic action to further democratic relations. Both propose a theory that explains how dialogic actions take place and what sorts of action promote understanding, cultural creation, and liberation, and opposing that, what actions negate the possibility for dialogue and promote distortion communication and the reproduction of power.

Moreover, this dialogic turn is shown in the fact that intellectuals are including dialogue with social actors when they conduct research and produce scientific knowledge about society. There is no methodological relevant gap between the interpretations of researchers and that of the social actors. They are not just informants, but they interpret their own realities from their own worldviews. It is in this sense that theory and scientific research are being reoriented and becoming more. As a consequence of the dialogic turn, researchers and intellectuals also see the need to work from an interdisciplinary approach, to provide answers that consider social phenomena as

a whole, and to work with social agents to be able to understand reality closely and create better proposals of action.

DIALOGISM IN PSYCHOLOGY AND LANGUAGE

In the information society, learning depends more on the coordination of the interactions that take place in the different contexts in which children learn, than on what happens solely within a classroom or a formal education setting. As pointed out, there are many contributions from the field of psychology that have precisely stressed the dialogic nature of learning and the relevance of social interaction, in the process of both learning and becoming a person in society. They place intersubjectivity as a key point in their theories, although it is often expressed in different terminology. In this section, we will introduce the dialogic perspective in the socio-cultural-historical and symbolic interactionist traditions. Besides, on the other hand, the assumption of universal capacity for language is a prior requirement to understand the strength of dialogue and interaction in cognitive development.

Universal Faculty

All people are born with the faculty to learn, and develop skills and knowledge in diverse social and cultural contexts of activity. Habermas defends that people are capable of language and action. Therefore, people have the capacity to communicate, express ideas, thoughts, provide arguments, reach agreements, and coordinate actions, regardless of their social, linguistic, or cultural condition. In the dialogue, it is not so important whether we speak the same code, but the validity claims we hold and our intention to reach understanding. Drawing from speech acts theory (Austin, Searle), we contend that every time we say something we are doing something, and therefore, people's words, utterances, and communicative intentions are strongly linked to actions.

Noam Chomsky, whose work is in the field of linguistics, stands out especially for his theoretical conception of linguistic competencies. This conception, in contrast to the structuralist perspective of language, is defined as generative. It starts from the premise that all human beings are capable of generating new language (expressions, responses, etc). He departs from generative linguistics and the assumption that there is a universal grammar. According to Chomsky, all people have an innate language faculty (that he later defines as "I-language") but different productions or outputs, which will ultimately depend on their social interactions. People therefore develop different productions depending on the contexts in which they interact, that is, different language and language codes. Assuming universality and innate common grammar, we come to the conclusion that everyone possesses the capability to communicate and develop new language codes and knowledge through interactions.

Symbolic Interactionism

Meaning is not part of what we see or the emotions we feel; there is a social dimension to it. Meaning creation can be modified and changed in the interpretive process that a person develops through social interaction. George H. Mead, the main representative from symbolic interactionism (a school in social psychology that grew in Chicago), analyzes the relationship between the self and the social. He suggested that the person can only be understood as a member of a society, and his or her thoughts and soul are a result of a process of social development, mediated by language.

Each individual acquires cultural roles and patterns through interactions and is situated within a concrete sociohistorical context. Mead argues that the *self* is made up of interrelationships between *I* (reactions of the organism in response to other's actions) and *me* (the attitudes taken on by the I). The self is determined by the images others attribute to me. The self-image is then the result of a dialogue between what we are and what the people with whom we interact think about us. Therefore, the interactions that educators generate in the school environment have a great influence on the process of dismantling social biases internalized by the children, as well as on the transformational process of the excluding patterns and roles that were developed earlier in life. Social interactions have a direct influence on how children experience education and the very school.

If I am convinced that I will not do well in the exam, I will probably perform badly, but if the professor tells me so, I will probably collapse. When a teacher interacts with a child who thinks that she or he cannot learn like the rest, the child will internalize the teachers' attitude and will construct a "me" that includes low expectations about her or his own learning capacity and an image of failure. Teachers' expectations are transmitted through language, gestures, and symbols in school interactions (dialogues). They are crucial for the development of children's selves.

Interactions in Diverse Sociocultural Environments

All people have the capacity to learn and they do so in very different contexts. Drawing from this idea, Vygotsky developed the concept of practical thinking, to refer to what children learn by doing. Practical intelligence must be taken into account in order to explain learning and development both inside and outside the school settings. In fact, the concept of practical intelligence, as mentioned, was later recovered by psychologists, who questioned the reductionism of intelligence to academic intelligence, and the many skills people develop through their daily life experiences (see the work of Scribner, Gardner, Stenberg, etc.). Vygotsky considers that practical intelligence and speech are complementary functions, and he also links action to communication: often we talk about our actions, and both speech and action is connected to our thought. He argues that language and action spring from the same complex psychological function. Children begin by getting a grasp of their environment—on which they will build their intellect—through language. Thus, linguistic interaction is what forms the person (although authors like Mead include nonlinguistic interactions in the same process).

Vygotsky's sociocultural theory provides a contribution to the dialogic approach to learning. He argues that all higher-order psychological mental functions are social relations that have been internalized. He proposes a double function: a first stage of learning that is interpsychological (dialogue mediated by language), and a second stage in which this is internalized and becomes an intrapsychological process. Therefore, knowledge is first created from intersubjectivity and later brought into an individual, internal plane. When children need to solve a problem (as part of a school activity) and they do not know how to do it, they often ask the teacher, and they also ask their peers. When they had to solve the problem in a group, they often generate more knowledge and go deeper in learning and understanding. Those who are educators can think of many examples from school practice in which children constantly interact among themselves to solve the task. Authors like Gordon Wells have developed this perspective in the classroom with the concept of *dialogic inquiry*. Classroom dialogues among peers and with adults are verbal reasoning that will become intrapsychological functions, that is, thought.

Vygotsky saw in education a tool for transformation of his society; he believed in changing the psychological processes through the transformation of the context. He states that "learning which is oriented toward developmental levels that have been already reached is ineffective," and continues, arguing that "an essential feature of learning is that it creates the zone of proximal

development; that is, learning awakens a variety of internal developmental processes that are able to operate when [the person] is interacting with people in his environment and in cooperation with his peers.” Vygotsky describes the Zone of Proximal Development as the differential between the actual learning and the potential learning to be attained with the help of other people. The dialogic nature of learning is also stressed in this concept. There are educational implications: if all learners can develop their potential with the support of teachers, relatives, and peers, by transforming the context—that is, school organization, family participation, community projects and volunteering in the school, family literacy, etc.—there will be an improvement of the learning process, creating challenging and rich learning environments that overcome discontinuities between schools and communities enhance children’s development. The consolidation of evidence about dialogism in the theories of human development and psychology, and the recovery of these ideas in the field of education, is promoting the dialogic turn in educational institutions we mentioned before, a perspective that counts on communities and dialogue to improve school achievement.

Language, Literacy, and Dialogicity

A key reference in the discussion of dialogism in the field of literacy theory and linguistics is Mikhail Bakhtin. The perspective of Bakhtin on dialogicity is complex, as after his most important work *Problems in the Poetry of Dostoevski*, he dedicated the rest of his life to reflect about dialogism and polyphony (multiple voices) in the reading of the novel and the literary texts. While his reflections are complex in general, Bakhtin’s term of *dialogicity* derives from the simple act of dialogue, the linguistic exchange of “give–take” between two people, brought to the reading of a text. Bakhtin departs from a fundamental problem in the philosophy of language: language holds some ambiguity because people produce speech from different worldviews (language philosophers have also discussed this problem, like Wittgenstein addressing language games or Austin reflecting on the consequences of “infelicity” in speech acts). While poststructuralist authors would explain this ambiguity as the inability of words to represent precise meanings or a demonstration of the subjectivity of language, Bakhtin argues that this ambiguity demonstrates that we need to create meanings dialogically with others.

Bakhtin challenged the monologic way of interpreting text and understanding truth in the rationalist philosophy of modernity. Instead, he proposed to unite the utopian perspective of modernity with the utopian socialism and claimed for the dialogic experience of human beings making meaning with other people of text and realities. In his analyses he reflects on the dialogic nature of a novel, and on the dialogic process that lies behind any single written or spoken utterance. In one of his latest essays on speech genres he stated that “the utterance is a link in the chain of speech communication and cannot be broken off from the preceding links that determine it.” According to this, any interpretation is the result of previous dialogues in which the participant has been interacting with others throughout his or her life.

Some scholars have used Bakhtin’s dialogics to explain the concept of *intertextuality* (each text is the result of the interaction of many texts). This concept, however, is closer to deconstructionist perspectives than to dialogic proposals. Through deconstruction, Derrida defends the death of the author, that is, any text can be deconstructed and read differently in different contexts and by different people. Furthermore, images, actions, realities, etc. are text. Opposed to this approach, Bakhtin proposes dialogic interpretation of the novel as interactions among subjects that we internalize, rather than interactions among texts. In fact, he conceives human life as a dialogic process in which we find meaning only through our interactions with others. In general, dialogic relations are more than a mere exchange of words: they are universal phenomena present in all manifestations and discourses of human life that have meaning.

TERMS FOR READERS

Dialogic modernity—Is a current of thought that trusts in the capacity of all people to act in order to transform social reality. It is an intellectual project of radicalization of democracy by extending the egalitarian dialogue to diverse groups and people. Traditional modernity had a project of democracy but decided by a few and imposed to the rest. Hegemonic positions and the attached process of bureaucratization of democratic institutions led to a reaction against modernity: the postmodern thought. Postmodernism, however, not only countered hegemony, but also the democratic project. Dialogic modernity gives back the center to social agents by promoting egalitarian dialogue. This is today at the basis of most relevant contemporary theories in the social sciences.

Dialogic turn—A “turn” implies a shift in the way of analyzing society and social relations within the different disciplines in the social sciences. The dialogic turn therefore defines the inclusion of dialogue in these analyses. Intellectuals talk about a “linguistic turn” in philosophy that implied the inclusion of language use (pragmatics), overcoming theories focused on subject’s conscience. The “dialogic turn” overcomes constructivism by focusing on subject’s interactions. Furthermore, dialogue has a greater role in current society and there is a shift in how people create meaning and make decisions in many spheres of life.

Information society—Since the beginning of the seventies, there has been a technological revolution that has transformed the basis of economy and forms of production, organization of labor, cultural creation, social relations, and society in general. In the current society, the key for success is increasingly the capacity to select and process relevant information. In informational economy the raw material for productivity and growth is creation of knowledge through information processing. There was a first phase of information society in which access to information and the Net was crucial to avoid social exclusion (described as “social Darwinism”). At the beginning of the twenty-first century, the push from NGOs and excluded countries (but also from informational capitalism), leads to a move toward creating an information society for all.

Intersubjectivity—Is the interaction among subjects that are capable of language and action. In their everyday practices, people use communicative ways of reasoning (interactions) to structure their lifeworld on the basis of understanding others and agreement. They negotiate meanings with other people through these interactions. Intersubjectivity is not the addition of individual subjectivities, but a reflective process that produces new meanings. A person’s thoughts and conscience come from the social interaction with other people; it is not individual. The concept of intersubjectivity stresses agency, and the power of social agents in communication to change social reality.

SUGGESTED READING

- Bakhtin, M. M. (1981). *The Dialogic Imagination. Four Essays*. Austin, TX: University of Texas Press.
- Flecha, R., Gomez, J., and Puigvert, L. (2003). *Contemporary Sociological Theory*. New York: Peter Lang.
- Habermas, J. (1984). *The Theory of Communicative Action. Reason and the Rationalization of Society*. Boston, MA: Beacon Press.
- Mead, G. H. (1962). *Mind, Self, & Society, from the Standpoint of a Social Behaviorist*. Chicago, IL: Chicago University Press.

CHAPTER 63

Experiential Learning

TARA FENWICK

Experiential learning is arguably one of the most important contemporary areas of scholarship in educational psychology. *Informal learning*, *prior learning*, and *practice-based learning* are terms used in different contexts to refer to experiential learning. The tradition of experiential learning in educational psychology has emphasized examination of actual *learning processes* going on in experience, which has influenced important changes in educational practices. The focus on *experience* has foregrounded difficulties and multiple dimensions to consider in theorizing the very nature of human experience and knowledge production that unfold in different sociopolitical contexts. Despite the debates around defining experiential learning, most would agree that experiential learning recognizes and celebrates knowledge generated outside institutions. If learning can be defined as change or transformation, in the sense of expanding human possibilities and action, experiential learning is expansion that challenges the hegemonic logic of expert knowledge. Experiential learning refuses disciplinary knowledge claims of universal validity, and resists knowledge authority based solely on scientific evidence. This is why the concept of experiential learning remains significant in educational research and practice, despite conceptual problems in the experiential learning discourse that will be discussed further on.

In the field of educational psychology, descriptions of experiential learning have tended to be inherently positive, and the experiential learning movement has successfully championed learners' personal knowledge and lived experience. Experiential activity or dialogue emphasizing participants' experience is by now common in formal education programs. Over twenty major associations internationally are devoted to experiential education. Informal (experiential) learning is increasingly the focus of analysis in workplace learning and community-based education. Since the writing of progressive educators such as John Dewey and Eduard Lindeman and throughout the twentieth century, experiential learning in practice was intended to be radical, to challenge prevailing orthodoxy that worthwhile knowledge is canonical and that legitimate education is planned and monitored by professionals.

CONCEPTUAL AND PRACTICAL PROBLEMS IN THE EXPERIENTIAL LEARNING TRADITION

As critics have contended, the educational tradition of experiential learning has developed its own unfortunate orthodoxies. These may stem at least partly from the division of body and mind in the experiential learning discourse. With the educational emphasis on learning through *reflection* on experience, the body in some respects is removed from the central process of learning, along with the body's embeddedness in its social, material, and cultural activities. Learning is thus harvested from bodies in action. Further educational procedures associated with experiential learning measure, commodify, and credential experience according to normalizing categories. The purpose of experience is often determined by its relevancy to either existing knowledge disciplines or to the workplace. Even those who challenge this colonization of experience and call for emancipation have been accused of appropriating experiential learning. That is, their critical pedagogy approaches—educating individuals' life experience through critical consciousness-raising—have been criticized as distrusting “raw” experience and treating individuals as blind dupes of their socialization. Recent analysts focus instead on how educators can position themselves within the complex webs of experiential learning, particularly when they are committed to political purposes of widening participation, equality of opportunity and freedom from exploitation.

The following section outlines four contested issues of theory and practice that have arisen around the experiential learning tradition in educational psychology: the separation of mind from body, the emphasis on reflection, managerial practices, and exclusionary aspects of experiential learning as it is treated in education. Following this section, three contemporary approaches to understanding experiential learning are presented, all based on embodied understandings of learning that view the individual as participants enmeshed in subsystems and suprasystems of biology, culture, and action. These three include a coemergent perspective offered by complexity science: a psychoanalytic perspective focusing on dynamics of desire, and a social action perspective emanating from social movement theory. Together, these contemporary, interdisciplinary orientations offer important directions toward reconceptualizing experiential learning in educational psychology.

SEPARATION OF MIND FROM BODY IN THE EXPERIENTIAL LEARNING TRADITION

Feminists have long disparaged the Cartesian separation of mind and body in a Western epistemological tradition that privileges mental detachment: the observation and calculation of the world from a disembodied, rational subject. This split is visible in experiential learning theories and programs. David Kolb popularized the assumption that experience is “concrete” and split from reflection as though doing and thinking are separate states. He depicted experiential learning as a cycle beginning with a concrete experience, followed by the individual's reflective observation, then abstract conceptualization on this experience to create learning, culminating in active experimentation to apply the learning to a new concrete experience. Since Kolb published *Experiential Learning* in 1984, 378 journal articles and 140 doctoral theses report studies that applied this model uncritically to study people's experiences. What becomes emphasized are the supposed conceptual lessons gained from experience, quickly stripped of location and embeddedness in the material and social conditions that produced the knowledge. What is excised from these lessons is the body, with its desires, messiness, actions, culture, and politics. In the movement to rationalize experiential learning, argue some, the body is not so much transcended as rendered invisible.

This split sustains other dualisms such as the binary of formal/informal learning, which some contend is problematic in the way it centres schooling and implies that nonschooled learning is less significant. The term *experiential learning* is similarly problematic, for no manner of learning can be defensibly classified as other, as *not* experiential, unless experience is confined narrowly to sensual or kinesthetic activity. Person is often split from environment in conceptualizations of learning, with context or place portrayed as an inert container in which people perform their actions. Even situated cognition, which first attempted to challenge acquisition models of institutional learning by theorizing learning as participation fully entwined in the actions, objects, and relations of a community of practice has been depoliticized in its contemporary uses. The community of practice and environment of learning are often treated as resources from which the learning subject excavates useful experiences (i.e., for organizational productivity), and “participation” as unproblematic engagement of people in activity. The primary dualisms of body and mind, and subject and object, underpinning such conceptions of learning are also at the root of rational logic. Thus experience comes to be viewed as a commodity, and people as fragmented learning minds.

EDUCATION’S EMPHASIS ON REFLECTION-ON-EXPERIENCE

A second theoretical problem arising from this body–mind dualism is the continuing emphasis on mentalist reflection in experiential learning, evident in the popularity of pedagogical approaches such as “reflective practice” and reflective dialogue as an obligatory learning activity in experiential education. In such renderings, reflection is treated as the conduit from event to knowledge, transforming “raw” experience into worthwhile learning. Critics such as Elana Michelson (1996) argue that emphasis on reflection centers learning in an individual rational knowledge-making mind. This individual mind is implied to rise above ongoing action, interactions, and sensation to fix both experience and a singular self that possess the experience.

Reflection orders, clarifies, manages and disciplines experience—which internalizes relations of ruling. Perhaps this is precisely why individuals find refuge in reflective periods, to creating meaning and pattern in chaotic fragments of experiences, through narratives, snapshots, justifications, or causal patterning. People try to manage the uncertainty and undecidability of their experiences by imposing reflective structures on them.

But basing experiential learning theory on this personal predilection of meaning making produces a somewhat myopic conception of learning. Individual mental representations of events become prominent, static, and separated from the interdependent commotion of people together in action with objects and language. Experience is cast as a fixed thing, separated from knowledge-making processes, yet reflection itself is experienced, and experience as event cannot be separated from our imaginative interpretation and reinterpretation of the event. We might ask where are we standing when we “reflect”? Experience itself is knowledge-driven and cannot be known outside socially available meanings. What is imagined to be “experience” is rooted in social discourses that influence how problems are perceived and named, which experiences become visible, how they are interpreted, and what knowledge they are considered to yield. Those interested in how language, audience, purpose, and identity make the reflective act itself a performance of remembered experience, rather than a realist representation of it. Thus the “meaning” of lived experience is undecidable, because it is constantly being produced anew.

These insights show the limitations of viewing learning as a matter of deriving prescriptions for future actions from “authentic” memories of a “concrete” experience. First, these memories depend upon those truths that can be acknowledged within particular cultural values and politics. Second, many slippages between the named and the invisible occur in meaning-making, and further disjunctions occur between the so-called learner and those other readers of experience

who allot themselves the authority to do so under the title of educator. Third, concrete experiences do not exist separate from other life experiences, from identity, or from ongoing social networks of interaction.

EDUCATION'S MANAGEMENT OF EXPERIENTIAL LEARNING

A third issue that continues to trouble critics is the management of experiential learning that has arisen in education, employing disciplinary mechanisms of language, measurement, and knowledge legitimation. Many have argued critically that the Assessment of Prior Experiential Learning (APEL; also known as Prior Learning Assessment or Recognition of Prior Learning) creates a disjuncture between private experience and public discourse, which produces a fundamental paradox when the private journey of discovery and learning is brought under public scrutiny and adjudication. The assessment process compels individuals to construct a self to fit the APEL dimensions, and celebrates individualistic achievement: "learners are what they have done." People's experience becomes divided into preset categories of visible/invisible, which regulates how people see themselves and their knowledge.

Assessment processes employed in experiential learning reveal the contested terrain that is engaged when educators insert themselves, and their pedagogical categories and ideologies, into complex nets and structures of experience. Valuing experience may be a well-intentioned gesture to diminish the power of institutionalized knowledge, but ultimately renders local knowledge into institutional vocabulary. Worse, the exercise may be directed by an impulse to recognize then proceed to liberate people from illusions that their own experiences are believed to have produced. When experiential learning is judged and managed, both "experience" and human subjectivity are translated into calculable resources serving what are ultimately utilitarian notions of knowledge. This calculation of experience has become a central occupation in the workplace of the so-called knowledge economy. In the new work order, working *is* learning. Experiential learning in particular has become the new form of labor—learning new identities, knowledges, texts, and textual practices. Workers' knowledge that is rooted in the objects and activities of material labor, a history of social interactions, shifting subjectivity, spontaneous invention, and transgression is appropriated and recast in rational, stable terms.

EXCLUSIONARY ASPECTS OF EDUCATION'S APPROACH TO EXPERIENTIAL LEARNING

Ultimately the educational disembodiment of experiential learning, with its emphases on rational reflection, management, and measurement of experience, creates exclusions. People, psyches, knowledges, and cultures are excluded through normative approaches to experiential learning that determine which sorts of experiences are educative, developmental, knowledge-producing, and worth enhancing. Some have argued that in the categories typically used to study or accredit experiential learning, the strong influence of capitalist production is immediately apparent. Work experience is prominent, usually characterized as paid employment. Long-term unemployment, nonsalaried or contingent work, and low-income routinized jobs do not usually produce the rich sorts of experiential work learning that excites researchers of informal learning. Experiences depend partly on inhabited environments and bodily capacity. Those who have been socially, physically, economically, or politically excluded from particular experiences may be judged as lacking social capital, remedied through expanding their access to "rich" experiences and networks. But this approach colonizes their own knowledge, reifies the normalizing categories of the middle class, whose values control the dominant cultural meanings, and perpetuates an

acquisitive conception of experience as *capital* to be obtained and parlayed into credit, income, or profit.

Excluded are realms of experiential learning that do not correspond to knowledge categories most recognized in education, such as disciplinary knowledge driving curriculum areas, technical vocational knowledge, communicative knowledge (understanding people and society), or moral-emancipatory knowledge (discerning systemic injustice, inequities, and one's implication in these). Sexuality, desire and fantasy, for example, tend to be ignored in educational discourses of experiential learning. Nonconscious and intuitive knowledge, knowledge of micro-negotiations within systems that struggles in bodies and discourses, and knowledge without voice or subject that lives in collective action also tend to be bracketed out of these discourses.

CONTEMPORARY APPROACHES TO UNDERSTANDING EXPERIENTIAL LEARNING

Given these four problems in educational theory of experiential learning of mind-body separation, emphasis on reflection, managerial disciplines, and exclusion, why not simply jettison the experiential learning discourse? The short answer is that its democratic intents are important in an institutionalized world where the cult of credentialing challenges any knowledge generated outside market usefulness. Experience focuses on the messy problems and tedious practices of everyday life which continue to run counter to the logic, language, and disciplines of science and the academy, particularly those privileging the rational and, increasingly, the linguistic and discursive. Experience exceeds language and rationality, because it emphasizes the crucial locatedness of bodies in material reality that cannot be dismissed as a solely linguistic construction, as certain forms of postmodern thought would try to do. Indeed, this signifier of *experiential* learning is useful to challenge assumptions about the nature of reality and of experience. When reexamined in terms of its textures and movements, attention to experience has the potential to unlock a liberal humanist preoccupation with individual minds, knowledge canons, and rational reflection, and shift the focus to embodied, collective knowledge emerging in moments and webs of everyday action.

The embodiment of experiential learning is an ancient concept: indigenous ways of knowing, for example, have maintained that spirit, mind, and body are not separated in experience, that learning is more focused on being than doing, and that experiential knowledge is produced within the collective, not the individual, mind. For example, a Canadian researcher named Julia Cruishank shows how the life stories and knowledge development of the Yukon First Nations people are completely entangled with the glaciers around which they live. The glaciers are not inert environment, but alive and moving, rumbling and responding to small human actions; the lines between human and nonhuman, and social history and natural history, are fluid. Writers on Africentric knowledge, so named to distinguish it from eurocentric perspectives that fragment and rationalize experience, have also shown how learning is embodied and rooted in collective historic experiences of oppression, pain, and love which are inseparable from the emotional, the spiritual, and the natural. The difference here from mentalist or reflection-dependent understandings of experiential learning is accepting the moment of experiential learning as occurring *within* action, within and among bodies. An embodied approach understands the sensual body as a site of learning itself, rather than as a raw producer of data that the mind will fashion into knowledge formations.

Embodiment however must not be mistaken for essentializing the individual physical body. The body's surfaces can be misleading; while sites for sensuality, they are neither identifiers nor boundaries separating what is inside from what is outside. The core conceptual shift of an embodied experiential learning is from a *learning subject* to the larger collective, to the

systems of culture, history, social relations, and nature in which everyday bodies, subjectivities, and lives are enacted. This shift is toward what some call a “complexified” view of cognition, casting experiential learning as something that various commentators have characterized as “participative,” “distributed,” or “complex, organic” learning processes constituted in systems of practice. Complexity science, examining webs of action linking humans and nonhumans in complex adaptive systems, is one area of contemporary theory and research that informs an embodied view of experiential learning. A second area focuses on the dynamics of desire currently being explored in feminist and psychoanalytic learning theory. A third area studies learning as struggle evolving in the body politic, evident in social action movements.

These three perspectives are outlined in the following section. All three emphasize fluidity between actions, bodies, identities, objects, and environments. They point to complexities and contradictions in experiential learning that can be obscured through paradigms of transparent reality, individual meaning making, or domination and oppression. All three share a focus on learning as complex choreography transpiring at different nested levels of complex systems adapting to and affecting one another: bodily subsystems; the person or body biologic; collectivities of social bodies and bodies of knowledge; society or the body politic; and the planetary body. (These nested system levels are described by Brent Davis, Dennis Sumara, and Rebecca Luce-Kapler in their book *Engaging Minds: Learning and Teaching in a Complex World* [2000].)

COEMERGENCE: EXPERIENTIAL LEARNING AS COLLECTIVE PARTICIPATION IN COMPLEX SYSTEMS

Discussions of embodied learning informed by complexity science highlight the phenomenon of coemergence in complex adaptive systems. The first premise is that the systems represented by person and context are inseparable, and the second that change occurs from emerging systems affected by the intentional tinkering of one with the other. Humans are completely interconnected with the systems in which they act through a series of “structural couplings.” That is, when two systems coincide, the “perturbations” of one system excites responses in the structural dynamics of the other. The resultant “coupling” creates a new transcendent unity of action and identities that could not have been achieved independently by either participant. These dynamics are described in detail by Francesco Varela, E. Thompson, and Eleanor Rosch in their book *The Embodied Mind: Cognitive Science and Experience* (1991).

A workplace project or a classroom discussion, for example, is a collective activity in which interaction both enfolds and renders visible the participants, the objects mediating their actions and dialogue, the problem space that they define together, and the emerging plan or solution they devise. As each person contributes, she changes the interactions and the emerging object of focus; other participants are changed, the relational space among them all changes, and the looping back changes the contributor’s actions and subject position within the collective activity. This is “mutual specification,” the fundamental dynamic of systems constantly engaging in joint action and interaction. The “environment” and the “learner” emerge together in the process of cognition, although this is a false dichotomy: *context* is not a separate background for any particular system such as an individual actor.

Most of this complex joint action leaks out of individual attempts to control behavior through critical reflection. And yet, individual reconstructions of events too often focus on the learning *figure* and ignore the complex interactions as “background.” Complexity theory interrupts the natural tendency to seek clear lines between figures and grounds, and focuses on the *relationships* binding humans and nonhumans (persons, material objects, mediating tools, environments, ideas) together in multiple fluctuations in complex systems.

All complex adaptive systems in which human beings are implicated learn, whether at micro-levels such as immune systems or at macro-levels such as weather patterns, a forest or the stock market. Human beings are part of these larger systems that are continuously learning, and bear characteristics of the larger patterns, like the single fern leaf resembling the whole fern plant. But individuals also participate, contributing through multiple interactions at micro-levels. At the subsystem level, for example, the human immune system, like organs and other subhuman systems, functions as an autonomous learning system that remembers, forgets, hypothesizes, errs, recovers, and adapts. The outcome of all these dynamic interactions of a system's parts is unpredictable and inventive. The key to a healthy system—able to adapt creatively to changing conditions—is diversity among its parts, whose interactions form patterns of their own.

Learning is thus cast as continuous invention and exploration, produced through the relations among consciousness, identity, action and interaction, objects, and structural dynamics of complex systems. New possibilities for action are constantly emerging among the interactions of complex systems, and cognition occurs in the possibility for unpredictable shared action. Knowledge cannot be contained in any one element or dimension of a system, for knowledge is constantly emerging and spilling into other systems. For example, studies of safety knowledge in the workplace show that experiential learning emerges and circulates through exchanges among both human and nonhuman elements in a net of action. The foreman negotiates the language of the assessment report with the industrial inspector, the equipment embeds a history of use possibilities and constraints, deadlines and weather conditions pressure a particular job, and workers adapt a tool or safety procedure for particular problems—depending on who is watching. No actor has an essential self outside a given network: nothing is given in the order of things, but performs itself into existence.

Such studies of objects, people, and learning as coemerging systems are helping to challenge our conceptual subject–object splits, refusing the notion that learning is a product of experience, and showing ways to recognize how learning is woven into fully embodied nets of ongoing action, invention, social relations, and history in complex systems.

DESIRE: NEGOTIATING SUBSYSTEM DYNAMICS

Embodied systems of behavior and knowledge also are influenced in part by dynamics of desire, love, and hate, according to psychoanalytic theorists of learning. These analysts suggest that learning should focus less on reported meanings and motivations and more on what is occurring under the surface of daily encounters: things resisted and ignored, the nature of longings and lack, and the slippages among action, intention, perception of self, and experience. Psychoanalytic learning theory shares the position of complexity theory that experience is not contained in the body, and that the individual mind does not perceive the totality of micro-interactions in which it participates. One particular contribution of psychoanalytic learning theory is highlighting desire for and resistance to different objects, which can be argued to occur in both micro-interactions and in larger movements of coemergence. Desire may be manifested in longings to possess or be possessed by another, creating urges to act toward such longings. The complex influence of these urges on consequent actions arguably affects the directions in which systems involving humans coemerge.

For educational theorists working with these psychoanalytic concepts, desire and learning come together in daily, disturbing experiential encounters carried on at psychic levels that individuals manage to ignore using various cognitive strategies. But while these levels can't be known directly, their interactions interfere with intentions and conscious perception of direct experience. These workings constantly bother the (individual and collective) mind, producing breaches between acts and wishes. Despite varied and creative defenses against confronting these breaches, the

conscious mind is forced to notice random paradoxes and contradictions of experience, and uncanny slips into sudden awareness of difficult truths about itself. These truths are what learning theorists such as Deborah Britzman call “lost subjects,” those parts of self and its communities that people resist, then try to reclaim and want to explore, but are afraid to. Full knowledge of these lost and perhaps disturbing subjects jeopardizes the conscious sense of identity as self-determined, sensible, and knowledgeable. But in learning processes, individuals and groups notice the breaches between acts, dreams, and responsibility. Learning is coming to tolerate conflicting desires, while recovering the subjects that are repressed from the terror of full self-knowledge. The implicit difficulty in learning from experience—forcing people to tolerate frustration and uncertainty, to reconsider meanings of past experiences and change their relationship to their past knowledge—is the unconscious “hatred of development” it produces. But desire points not only to knowing resisted (“active ignorance” in Britzman’s terms), but also to what Sylvia Gherardi describes as passionate knowing, to pleasure-seeking, to sensing lack, and pursuing objects. These dynamics influence the direction and shape of coemergent communities and action.

Experiential learning is thus posed as the opposite of acquiring transparent experience—it is entering and *working through* the profound conflicts of all the desiring events bubbling within experience that comprise “difficult knowledge.” This psychoanalytic perspective may ultimately imply a somewhat deterministic conception of humans helplessly controlled by simple drives or by a mysterious “unconsciousness.” Nonetheless, the important effects of desire in learning are undeniable. Psychoanalytic theory offers useful analytic tools that highlight, in human participation in systems of experience, the learning dynamics of working through psychic conflicts at the fulcrum of desire.

STRUGGLE: DISEQUILIBRIUM AND CHANGE EMERGING IN COMPLEX SYSTEMS

Some proponents of critical or emancipatory pedagogy believe that experience must be educated, that individuals are overdetermined by received meanings that reproduce existing oppressions and inequalities. They argue that emphasis on experiential or informal learning depoliticizes the core purpose of education. Certainly many cultural systems, unless interrupted, continue to produce toxic or exploitive conditions that benefit a few members at the expense of many. However, the assumption that dynamics of struggle bubbling within systems are seduced into silence until released through (proper) education is self-serving and arrogant on the part of critical educators. The emancipatory position is challenged by some commentators as representing people as dupes of ideology, puppets of overdetermined social structures.

Furthermore, emancipatory learning models that depend on critical rational detachment from one’s sociocultural webs of experience appear to overlook the fact that detachment is never possible even if it were desirable. Rational critique of individuals’ culturally located beliefs is itself inescapably embedded in their historical nets of discourse and action.

In fact, complexity science shows that complex adaptive systems generate the seeds of their own transformation. According to complexity theory, learning is the continuous improvisation of alternate actions and responses to new possibilities and changing circumstances that emerge, undertaken by the system’s parts. More sudden transformation can occur in response to a major shock to the system, throwing it into disequilibrium. A shock might originate in abrasions with external systems, or through amplification (through feedback loops) of disturbances occurring within a system. Computer-generated images of systems undergoing disequilibrium show that they exhibit a phase of swinging between extremes, before self-organizing gradually into a new pattern or identity that can continue cohabiting with and adapting to the other systems in their environments. Examples of social disequilibrium abound in social movements. The

diverse patterns of growth and activity of such movements defy explanation limited to notions of educating consciousness. Multiple interactions at different systemic levels leading out from disturbance, influenced by system shocks, desire, diversity among system parts, and mediators such as Internet communication, are evident in recent movements such as transnational advocacy networks protesting multilateral-trade agreements. People are not necessarily docile dupes of capitalism. They struggle against forces that threaten their freedom.

Social action demonstrates processes of collective experiential learning that emerge through struggle. Case studies of social action refute notions of rational critical deliberation that reframes “distorted understandings” and “false ideology.” Radical transformation of both social order and consciousness, as praxis or dialectic of thought and action, appears to be embedded in complex systems interacting, adapting, and influencing one another: the body politic, diverse collective bodies, and persons as body biologic. In other words, as people enact solidarity, strategizing and learning together about unjust social arrangements in a choreography of action, they recognize new problems and possibilities for action. Each action opens alternate micro-worlds, while expanding people’s confidence and recognition of the group’s capacity to influence other systems. This experiential learning is continually inventive, and also filled with conflict and contradiction.

Then, how is the educator implicated in these processes? Radical action emerges in social movements in ways that it cannot in schools and postsecondary institutions, themselves contested spaces of transformative and reproductive impulses, to create spaces for inventive transgressive knowledge and alternate visions for society. Some have argued that an important catalyst for radical impulse within education institutions lies in its alliance with social movements: just as institutions need the political energy and grounded struggle that social action engenders, social movements need the resources of formal education. This might be not just a plea for collaboration, but also perhaps as a complexified awareness that struggle and social change is possible when educators view themselves as diverse parts of the system, not its rescuer, and when mutual interaction and adaptation is enabled with other system parts.

These theoretical dimensions of coemergence, desire, and struggle explored through complexity science, feminist/psychoanalytic theory, and collective social action encourage a view beyond individual learning subjects separate from the objects of their environments and the objects of their thoughts, to understand knowledge as constantly enacted as they move through the world. They focus on the *relations*, not the components, of systems, for learning is produced within the evolving relationships among particularities that are dynamic and unpredictable. They help explain how part and whole cospecify one another, and how participation in any shared action contributes to the very conditions that shape these identities.

These dimensions offer a way out of the individualization and fragmentation that can lead to commodification of experiential learning in the classroom and the workplace. They also suggest useful starting points for conceiving roles for educators in experiential learning. Rather than limiting their focus to planning experiential occasions and assessing the learning produced in experiences, educators might think of themselves, their classroom activities and texts, and learners as part of experiential activity systems. These intersect simultaneously with each other’s and many other sub- and suprasystems, influencing and being influenced by one another, in learning that is ongoing and expansive, at biologic, psychic, social, and political levels.

TERMS FOR READERS

Cartesian—Referring to ideas of Rene Descartes, 1596–1650, who proposed in his long-influential *Principles of Philosophy* that material substances (bodies) and mental substances (thought) both exist, but do so separately as quite distinct entities.

Critical (or emancipatory) pedagogy—An approach to teaching and learning, rooted in critical social theory, that aims toward social transformation by helping individuals develop awareness of social injustice through analyzing their own problems, tracing their connections to historical social forces, then developing reflective action for change.

Complex adaptive system—An open system of human and nonhuman elements, such as a forest, an immune system, a market system, etc., that is characterized by internal diversity among its agents, redundancy among agents (sufficient commonality to ensure communication), interaction, simple rules, decentralized control, a self-organizing tendency, and feedback loops.

Co-emergence—A term associated with complexity theory and increasingly with cognitive science, referring to the simultaneous emergence of beings, environment, and cognition through the ongoing actions and interactions among elements in a complex adaptive system.

SUGGESTED READING

- Davis, B., Sumara, D. J., and Luce-Kapler, R. (2000). *Engaging Minds: Learning and Teaching in a Complex World*. Mahwah, NJ: Erlbaum.
- Michelson, E. (1996). Usual suspects: experience, reflection, and the (en)gendering of knowledge. *International Journal of Lifelong Education*, 15(6), 438–454.
- Usher, R., Bryant, I., and Johnston, R. (1997). *Adult Education and the Postmodern Challenge: Learning Beyond the Limits*. London: Routledge.
- Varela, F. J., Thompson, E., and Rosch, E. (1991). *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge, MA: MIT Press.

CHAPTER 64

Workplace Learning, Work-Based Education, and the Challenges to Educational Psychology

HUGH MUNBY, NANCY L. HUTCHINSON,
AND PETER CHIN

This chapter focuses on how the differences between learning in schools and learning in the workplace shape our view of the learner and prompt a rethinking of teaching, learning, and knowledge within authentic settings. The approach shows how concepts like communities of practice, situated cognition, and workplace learning influence views about the nature of school learning and about the relationship between school and work.

DIFFERENT KINDS OF KNOWLEDGE

Many of us who can ride a bike are unable to describe the complex laws of physics that explain how a bike stays upright when ridden. When we begin to fall to the right, we compensate by turning the wheel to the right. A physicist would explain that we are accelerating along the curve and balancing against the gravitational pull to the right. But that is not the knowledge we draw on when we ride a bike. This example was used by Michael Polanyi, in his *Personal Knowledge: Towards a Post-Critical Philosophy* (1957), to make a point about skilled performance and knowledge of natural laws, like the laws of physics. A flute player can perform skillfully without knowing the details of the physical laws governing harmonics, overtones, and lengths of vibrating columns of air. One can perform skillfully without knowing that one is following these laws, yet there is a form of knowing here. When we do something, we use an intriguing kind of knowledge, a kind of knowledge that is not easily put into words. Declarative knowledge, which is expressed in words, is familiar to us: the disciplines that make up most school subjects are like stockpiles of declarative knowledge. We can teach this kind of knowledge by saying or declaring it, and we can show that we know it by doing the same. But knowledge that cannot be put into words is different: how we ride a bicycle, how we recognize the face of a friend in a crowd, how we “bend” a soccer ball, how we carry out a dental procedure on a tense patient. All these activities use knowledge, and this chapter is about this kind of knowledge: how it differs from declarative knowledge, how it has been researched, how it is valued in society, and how we can help people acquire it. Ultimately, we show how a better understanding of the knowledge of action (sometimes called procedural knowledge) can lead to improvements in learning in school, and can help us

recognize the importance of learning in authentic situations, like workplaces, which offer tasks and problems that represent everyday practice and that are within contexts outside schools.

Polanyi's important book argued against the dominant view at the time that scientific knowledge was objective—free from the distortions of human thought. In his book, Polanyi acknowledged the importance of Heidegger's concept of "in-living," which draws attention to the intimate relationship between ourselves as knowers and the world that we want to know and learn about. Our difficulty is that we live within our shared social system, and we cannot get outside it to inspect it objectively. This understanding severely damages the idea of objectivity in knowledge. The idea of objective knowledge is further dashed when we recognize that the social system we live within provides us with a language we then use to describe our world. So our knowledge is inseparable from our living within a social system. We can illustrate by showing the differences in descriptions of major events: if you studied U.S. history in a school in the United States of America, you would have learned about the War of Independence; but if you studied that same period in a school in England you would have learned about the American Revolution. The names convey quite different political stances toward the events, differences that illustrate how humans are socially engaged in their own declarative knowledge.

Before the idea of objective knowledge was questioned, theoretical knowledge was held in high esteem simply because it was separate from practical concerns. It was free from the appetites of experience: in a word, it was ideal. The philosopher John Dewey, in his *Democracy and Education* (1916), attempted to restore the balance by urging that significantly more attention be paid to experience and to "practical studies" in the school curriculum. We can see that modern classrooms do not reflect Dewey's views. And we can see the overwhelming influence of theoretical knowledge when we look at modern textbooks on educational psychology. These textbooks are dominated by research that assumes that all learning and all education of value occur in classrooms; only students who fail in this important learning are offered an alternative. Unlike successful students, failing students and at-risk students are encouraged to engage in low-status learning through action in authentic situations; they can participate in workplace learning, often called co-operative (co-op) education or work-based learning. The low status of knowledge gained in action presents problems for schools, for workplaces, and for psychologists interested in understanding how we acquire such knowledge. In this chapter, we argue that to advance the field of educational psychology, we must challenge the importance placed on theoretical knowledge and acknowledge the value of knowledge gained in action for all learners.

HOW DO WE LEARN TO DO THINGS?

Early accounts of human action leaned heavily on ideas about declarative knowledge and argument. For example, Aristotle distinguished between theoretical reasoning and practical reasoning. Theoretical reasoning ends in statements of declarative knowledge: all swans are white; this is a swan; therefore it is white. Practical reasoning ends in action: rain is forecast and I do not wish to get wet; therefore I take my umbrella. Practical reasoning sounds straightforward, but it is by no means the only kind of practical or action knowledge, and it certainly fails to tell us much about how such knowledge is acquired.

Interest in the nature of knowledge in action and its acquisition is a comparatively recent phenomenon in the psychological literature. This can be explained in part by the social status of declarative knowledge. In contemporary Western society, the careers that enjoy higher status are closely associated with declarative knowledge. Careers in law and in medicine, for example, are achieved after success in school and in university subjects that are largely repositories of declarative knowledge. To be sure, the professions themselves involve knowing in action just as

most employment positions do. But candidacy for high-status professions results from success at examinations involving declarative knowledge.

Another reason for the comparative recency of interest in how we acquire knowledge in action may be a function of where research on learning has traditionally taken place. Research on learning, like most psychological research, has traditionally been conducted in psychology departments on university campuses, where it is relatively easy to find an abundance of potential research subjects and many examples of learning. Research on learning has also been conducted in schools, which aspire for their students to succeed in university, and thus teach the declarative knowledge that universities value. Not surprisingly, research on learning tended to reflect the available participants and material. So the high status of academic knowledge appears to have distracted us from asking questions about how the knowledge of action might be acquired.

Many writers have challenged the high status of academic knowledge. John Dewey argued strongly for the inclusion of vocational subjects in the education of all high school students. More recently, Donald Schön championed the cause of action knowledge. In *The Reflective Practitioner: How Professionals Think in Action* (1983), Schön demonstrated the complexity of knowledge-in-action and showed how successful practice depends on two different kinds of reflection. Reflection-on-action is the more usual form of reflection in which we think about our actions and their consequences after the event. This is to be contrasted with reflection-in-action in which there is a “conversation” between the knower and the action, a kind of conversation in which unusual events in practice are processed without deliberation but with a reflection within the action itself. Schön expands on this in his second book, *Educating the Reflective Practitioner* (1987), in which examples of complex performance are used to show how reflection-in-action contributes to competence, as in piano playing and architectural drawing.

At about the same time that Schön was demonstrating the demands and complexity of knowing-in-action, other researchers were becoming intrigued with a rather different form of action knowledge that has become known as situated cognition. The research emphasis in situated cognition is jointly on the role cognition plays in authentic and complex learning and on the role that the context or situation plays. Learning is assumed to go on in the interplay between the learner and the context, with the context being an integral part of what is learned. Vygotsky in his *Mind in Society* (1978) described how human activities take place in cultural settings and cannot be understood apart from those settings. In this perspective learning is fundamentally experiential and fundamentally social. Thus research on situated cognition takes us into realistic settings that are quite different from studies of learning in schools and universities. Many of the settings studied are workplaces.

In situated cognition, the interest is the complex relationships between the knower or learner and the relevant elements of the environment, sometimes called affordances. For example, in *Communities of Practice: Learning, Meaning and Identity* (1998), Etienne Wenger (1998) reported on his ethnographic fieldwork in the medical-claims-processing center of a large U.S. insurance company. He uses his accounts of the way people interact with one another and with the shared knowledge of the workplace to develop a social theory of learning. This way of understanding learning rests on the dual concepts of practice (especially a community of practice) and of identity. In Wenger’s study, a group of claims processors were observed struggling with a complex worksheet that the company called the COB worksheet and that the processors called “the C, F, and J thing.” The processors knew the steps to complete the worksheet and described it as “self-explanatory,” while they professed no understanding of the reasons that the calculation was the way it was. The processors gave up on making sense of what they did, acknowledging that perhaps the company didn’t want them to understand, and they put their effort into creating a work atmosphere in which that bit of ignorance would not be a liability. In practice, understanding

is the art of choosing what to know and what to ignore in order to get on with our lives, and learning shapes who we are and how we see ourselves.

The practices for completing “the C, F, and J” worksheet and for understanding the process were the property of a kind of community and were created over time by people in a shared enterprise with shared ways of doing things. A community of practice can help a newcomer to acquire knowledge, and identity as a community member, by designing social structures that foster learning. Or a community of practice can keep newcomers on the margin or the periphery, forcing newcomers to make their own sense guided by their personal experiences. Learning belongs to the realm of experience and practice. Learning happens, whether by design or on its own terms, although it may be much more effective when systematic and planned.

The later part of the twentieth century witnessed growth in research and scholarship on forms of learning and knowing that departed from the more traditional experimental studies of learning. Many of these studies, like Wenger’s work, were conducted in workplaces. It is probably not sheer chance that psychological research into action knowledge, situated cognition, and workplace learning coincided with increasing acceptance of descriptive and ethnographic studies alongside experimental studies. Detailed observational studies of, and interview studies with, workers are necessary precursors to identifying the research that needs to be undertaken in order to understand and then improve authentic learning in complex contexts like workplaces.

In his book, *Learning in the Workplace* (2001), Stephen Billett of Australia reported strategies for effective practice based on observation and interview studies in a wide range of workplaces. For example, workplaces can tacitly structure learners’ experiences so they engage in increasingly more accountable tasks. More experienced workers can provide guidance so that novices can move to more independent responsibilities, whether they are miners, hairdressers, or chefs. Common or routine tasks in the workplace are a key source of learning about practice. They reinforce what the worker already knows, help the worker to make sense of what has been learned, and enable the worker to be vigilant for the nonroutine. The nonroutine may represent the breakdown of the routine or may represent wholly or partly novel tasks. Billett emphasized that many complex tasks in everyday experience in workplaces have combinations of routineness, resulting in many kinds of learning with varied implications for competence and identity. Authentic contexts like workplaces can contribute to rich learning in three ways. First, the particular situation provides activities to engage in, problems to solve, and goals to achieve. Second, direct guidance available in the workplace enables collaborative learning between novice and experienced workers. Third, the workplace provides indirect guidance both in opportunities to observe other workers, and in the affordances of the physical workplace setting and its tools. Because the context is part of what is learned, learning *in* the workplace, when socially structured, is particularly effective learning *for* the workplace. As we shall see, the effectiveness of work-based learning poses two challenges to long-held assumptions about school-based learning.

AN ENDURING TENSION: PROBLEMS FOR SCHOOLS

The functions of school, indeed the purposes of public education, have long been debated. Before the invention of public education, the early school curriculums consisted of classical subjects—declarative knowledge—that were deemed appropriate to the preparation of clergymen, doctors, lawyers, and teachers. The advent of public education, and then compulsory public education, saw attention given to educational purposes relevant to vocations other than middle-class ones. Vocational education thus became part of public education but, at the same time, it did so in a nonintegrated fashion because educational discourse soon became the ground for the now familiar distinction between academic and vocational courses, classes, streams, programs, and even students.

In the early part of the twentieth century, John Dewey railed against this distinction on several counts. For example, he found it socially divisive because it appeared to demean nonacademic knowledge while promoting academic knowledge and pursuits. More important, he found it miseducational because it seemed to ignore the need for schools to prepare youth for the world of work. Thus Dewey in *Democracy and Education* argued for the inclusion of vocational education in the curriculum for all high school students. Nearly 100 years after the publication of *Democracy and Education*, calls for some compulsory vocational education are still being made, under the heading of “New Vocationalism.”

Among the curriculum challenges faced by schools are “What should be taught?” and “What are schools for?” A look at typical high school curricula over the last 100 years would lead one to suspect that the curricula are directed at preparing students for college and university entrance, and that little account seems to have been taken that as many as 75% of high school graduates will be in the workforce one year following graduation from high school. The assumption that the academic curriculum appropriately prepares high school students for “life after school” could well be erroneous, even though attempts are made to create instruction around tasks that mirror the context outside school.

It can be argued that preparing high school graduates to function in the workplace is the responsibility of the workplace itself, and that all schools should do is to prepare graduates to learn in the workplace. But there are striking differences in how schools and workplaces operate, and these differences suggest that schools may not be well suited to preparing students for how to learn in the workplace. These differences become evident when we adopt a curriculum perspective and ask questions about how information is organized, about who teaches, and even about the purposes of school and the workplace. In schools, information is organized and presented incrementally. But this is not necessarily the case in the workplace, where many tasks must by their nature be presented completely. As Billett observed, a learning task often involves observing a more experienced worker and then participating in the complete task.

In much of the school curriculum, the teacher stands, as it were, as mediator between the knowledge and the learner. This form of mediation is generally absent in the workplace, with the knowledge of action confronting the worker learner without the mediation of a person educated to teach. A third difference of note is the overall purpose of the enterprise. Schools, we know, ultimately exist to promote student learning, and one may presume that the activities of school are all designed to facilitate and promote that learning. The same cannot be said of the workplace. While it benefits workplaces to enhance the learning of novice learners, ultimately, in the private sector, the aim of the workplace is to make profit so that the enterprise thrives. In the service sector, this translates into serving clients. It is not that workplace learning is unimportant in these situations; rather workplace learning is subservient to these ends. It is not the prime motivator as it is in schools.

All these differences contrive to make the culture of workplace learning very different from the culture of school learning. As a result, we would expect that efforts to prepare high school students for the world of work would include ways to introduce students to the cultural differences. Work-based education (WBE) programs, like co-op education offer a route to this. These programs involve students for extended periods of time at a workplace while they are enrolled in school. Typically, students also engage in classroom orientation to the workplace and in reflective seminars. WBE programs usually are intended to forge relationships between school subjects and the workplace. But they can do more: they allow students to explore possible employment and careers, and they enable schools to provide credit courses that are closely aligned to the workplace.

WBE programs are places for helping high school students to make the most of workplace learning. However, these programs are raising questions that must be answered before schools can prepare adolescents well for learning in the workplace. First, if the workplace demands

both declarative and practical knowledge of every worker, shouldn't schools be affording every student opportunities for both school-based and workplace-based learning, regardless of the student's goals for life after school? Second, if recent research on workplace learning rests on notions of situated learning in which the context is part of what is learned, how can we ensure that learning in one workplace is generalizable to other contexts? In other words, how can we be confident about what learning might be transferable and what is clearly not transferable, so high school students can be optimally prepared to learn from workplace settings?

Before we rush to place every high school student in a workplace, in response to the first question, we require an answer to the second question. In a recent paper, the Co-operative Education and Workplace Learning (CEWL) group at Queen's University in Canada showed that recent research in metacognition can inform instructional theories that may be helpful. When students are taught about commonalities among workplaces' demands for practical knowledge, while developing knowledge in action in a specific workplace, the students can then use that practical understanding of knowledge in action. With it, they can monitor and regulate (metacognition) their own performance in the current workplace, and analyze the demands of other workplaces. Routines illustrate this well. Most work consists of common demands or routines (and subroutines). For example, our observations of workplaces revealed "opening routines" such as the routine followed by a gardening center employee when he arrived for work at the beginning of the day: putting up "Open" signs, setting out lawn equipment, removing plastic from shrubs and plants, watering, etc. We noted "opening routines" at other workplaces, but they differed according to the workplace. Although individual routines are different, all routines have common features: something initiates them, they run until a defined end point is reached, they can get off-track, and they can be improved. These general features could be taught so that novice learners in the workplace monitor their own learning about the work they perform. As Billett argued, recognizing the routine reinforces the familiar, encourages increased understanding, and frees the worker to anticipate the nonroutine. Pushing work-based learning to encompass an understanding of the shape and characteristics of knowing in action within contexts, while acquiring knowing in action in one context, may surmount the challenges posed by the threat of context-bound learning.

In a recent case study, CEWL demonstrated the applicability of David Hung's (1999) notion of epistemological appropriation for understanding how work-based learning might be made effective for high school students. A high school senior, in a co-op education placement, was observed regularly over a six-week period during which she moved from an awkward novice who nearly fainted while watching a procedure to a competent dental assistant. By the end of the observation period, Denise, the high school senior, had appropriated the social aspects of the role, joining the community of practice by modeling her uniform and language on those of the preventative dental assistant (PDA) who mentored her. She had also engaged in cognitive appropriation and was able to aid the dentist unprompted, anticipating his need for tools and materials just as the PDA did. Extensive observational data that showed the PDA's regulatory behaviors of scaffolding, modeling, and coaching and the novice's corresponding regulatory behaviors of submitting, mirroring, and constructing contributed to Denise's learning in action. Unlike the sequential progression suggested by Hung's theory, the supervisor's and novice's regulatory behaviors continued for the duration of the term. Even during one day, there would be examples of all regulatory behaviors. This finding suggests that sequential progression occurs for each instance of significant new learning, and that new learning is constantly being introduced. Hung's regulatory behaviors focus attention on how supervisors can improve opportunities for novices' learning, and on how novices can become more engaged in both social and epistemological appropriation in work-based learning.

The second challenge to schools runs deeper. If high school seniors like Denise can appropriate knowledge in action and join complex communities of practice within one school term, can schools ignore the possibility that their emphasis on declarative, decontextualized knowledge in the

classrooms of school is misplaced? The thrust of emerging frameworks like situated cognition is that learning ultimately belongs to the realm of experience and practice and follows the negotiation of meaning. Learning happens by design, and when we neglect to create the social infrastructures that foster learning, learning happens without design. But it may not be learning that we value or wish to encourage. And it may not be learning that enables individuals to negotiate successfully unfamiliar contexts and to join communities of practice by knowing in action, anticipating the nonroutine, and developing understanding. Our understanding of workplace learning challenges the school curriculum, and it also challenges the axiom “theory first, then practice.” This axiom seems to have guided public schooling for over a century. Oddly, it seems absent from the unwritten rules of procedure that govern the 1000-year-old traditional relationship between master and apprentice. Recent research on workplace learning invites educational psychology to inspect this social tradition carefully.

The perspectives we bring to our encounters matter because they color our perceptions and our actions. If concepts like knowing in action, communities of practice, identity, and epistemological appropriation apply to the learning that goes on in workplaces, they are most likely applicable to the learning that goes on in other social contexts, including schools and classrooms. The social perspective on learning is relevant even when we don’t intend to learn, because all meaning making eventually gains its significance in the kind of person we become. Like those claims processors observed by Wenger, how we negotiate—what we will know, what we will stop trying to understand, and who we will become—is the project of each of us. Thus situated cognition challenges educational psychology to shift from framing learning as essentially static and declarative to understanding learning as socially mediated, dynamic, and significant to who we are.

TERMS FOR READERS

Communities of practice—Informal social structures in which each individual is involved in joint or similar tasks, usually within a workplace. Wenger uses “communities of practice” to illustrate how learning is encouraged and acquired within authentic settings like workplaces. For Wenger, communities of practice have ownership of their knowledge.

Epistemological appropriation—Hung’s term for the complex cognitive learning by novices. Hung’s theory of epistemological appropriation was inspired by Polanyi’s notion of the apprentice learning with the experienced practitioner, and it takes account of the regulation of learning afforded by the social relationship and by the situation itself.

Knowing-in-action—Schön’s term for the knowledge of action or practice. Schön used the term to emphasize that this form of knowing resides in the action, as in tying a shoelace. As the laces are being tied, our knowledge is cued by each successive part of the complex action; it does not lie outside the action.

Metacognition—Knowledge about one’s own thinking and problem solving. We use metacognitive processes when we plan and monitor our thinking in problem solving, decision-making, etc.

Situated cognition—The term comes from Vygotsky’s view that learning is both social and contextual, or within the situation. Situated cognition has come to refer to the knowledge one uses in settings outside school, or the authentic settings of everyday practice.

SUGGESTED READING

- Billett, S. R. (2001). *Learning in the Workplace: Strategies for Effective Practice*. Sydney, Australia: Allen Unwin.
- Hung, D. W. L. (1999). Activity, apprenticeship, and epistemological appropriation: Implications from the writings of Michael Polanyi. *Educational Psychologist*, 34, 193–205.
- Munby, H. (Ed.). (2003). What does it mean to learn in the workplace? Differing theoretical perspectives [Special Issue]. *Journal of Workplace Learning*, 15(3).
- Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*. London, UK: Cambridge University Press.

CHAPTER 65

Dialogic Learning: A Communicative Approach to Teaching and Learning

SANDRA RACIONERO AND ROSA VALLS

Dialogic learning is the result of the interactions produced in an egalitarian dialogue that is oriented to the creation and acquisition of new knowledge, which is the fruit of consensus. Dialogic learning depends basically on the interactions with others and it requires the maximization of the use of communicative abilities in any context—from home to the community, work, etc., and a more active, reflexive, and critical participation in society. In experiences grounded in dialogic learning, people are cognitive subjects of acting on the basis of a dialectic relation between thought and action. In this sense, dialogic learning is not another theoretical conception of learning but it implies a series of organizational and participative measures that favor learning, especially in contexts where other conceptions have only brought partial solutions.

Dialogic learning depends much more on the interrelation of the interactions that each individual has beyond those that take place in the educational context (the neighborhood, home, store, at work) or with the teachers. Dialogic learning is useful not only in educational centers, but also in the many spaces in which students relate, learn, and develop with others. In fact, dialogic learning does not refer exclusively to the instrumental teaching–learning relationship, but also occurs in the relations among educational agents in the school and the community.

Dialogic learning does not occur in power relations. It takes place in dialogic relations in which people contribute their knowledge from their experience and skills, on an egalitarian basis, with the intention of understanding, based on shared agreements, collectively creating learning through solidarist interactions, which would not have been possible in solitude. The result is learning with a deeper instrumental dimension and steeped in meaning as a result of the characteristics of the very interactive learning process.

This chapter explains dialogic learning on the basis of the communicative conception of teaching and learning, its theoretical bases and principles. First, we discuss the differences between dialogic learning and other learning conceptions: traditional and significative. Second, we present the seven principles of dialogic learning: *egalitarian dialogue*, *cultural intelligence*, *transformation*, *instrumental dimension*, *creation of meaning*, *solidarity*, and *the equality of differences*.

FROM SUBJECTIVITY TO INTERSUBJECTIVITY

From the industrial society until today, the understanding of learning has been enlivened integrating every time more aspects that surrounds it. The development of different understandings of learning is parallel to the series of changes that have affected all of the social spheres as a result of the shift from the industrial society to the information society. The technological revolution has permeated the very core of companies and we have gone from an industry-based economy to a globalized one based on information. The forms of work are changing: new labor sectors, an increase in the options available, and communication goes beyond the traditional boundaries of space and time. These changes have also transformed the educational and psychological sciences, which are currently evolving toward new perspectives in coherence with the centrality of information and dialogue in today's societies.

Teaching and learning processes are not maintained at the margins of these profound changes. In the information society, learning transcends the individual, as universal communicative skills become essential. From the earlier conceptions of teaching and learning, the focus in developmental psychology and education has moved from looking at the individual in isolation to looking at the subject in relation to their social and cultural context, where "the others," but especially the communicative interaction with "the others," is the main object of interest. In this context, within the psychology perspectives with a dialogic orientation, the communicative conception of teaching and learning emphasizes the importance of coordinating interactions among different educational agents and the learning contexts with the objective of obtaining the maximum results. This process has also determined the disciplines that have been integrated in the study of learning: from pedagogy to psychology and sociology, ending up with the need to recognize all of them. In the process of different understandings of learning, we could identify three basic conceptions in learning: the objectivist conception, the constructivist conception, and the communicative/dialogic conception.

Objectivist Conception

Learning in the objective conception was based on the idea that the students are passive subjects who receive information from a subject agent, the teacher, who possesses expert knowledge on the topic and transmits it. This learning is in consonance with the objectivist conception in psychology, for which reality exists independently of people's perception of it.

Learning is conceived of as the transmission of knowledge, in which the girl or boy's role is to assimilate the information. The teacher possesses the knowledge the student must grasp, the objective reality that must be assimilated by rote. Pedagogy, in this case, places the focus on the teacher as the fundamental element in teaching and learning, given that it is the teacher who has the knowledge to transmit. On the other hand, the psychology of traditional teaching emphasized the importance of the individual characteristics, such as memory, in order to favor an increase of learning, given that this was measured by the quantity of knowledge accumulated. This implies a learning that is fundamentally based on memory, largely absent of meaning, and highly dependent on the message relayed by the teacher.

The tradition of filling up the mind with information is no longer useful in the information society. Today information is available on the Internet, continually updated and much greater in quantity than what the human memory can store. If we want our students to be successful in the information society, we have to focus learning on the development of skills for processing and selecting information. Traditional exams that test the knowledge a person memorized without consulting any resource have lost their utility.

In the objectivist conception, teaching is homogenizing. The same things are taught without taking into account differences in context and culture. It is, therefore, an equality that also produces

inequalities, given that it does not contemplate difference. The theme of multiculturalism would be dealt with from an approach of assimilation. School culture corresponds with the hegemonic culture, making it impossible for girls and boys from minority cultures to feel identified with the school if they do not abandon their ethnic and cultural identity in order to take on the dominant culture interpreted as superior. From this relationship of superiority–inferiority, the rest of the cultures are considered to be inferior, worse, and underdeveloped.

Constructivist Conception

In the eighties, there was a shift from the hegemony of the objectivist conception to the constructivist conception. The idea behind constructivism is that people construct social reality, and this construction is different because the meanings that each person gives to this construction are different. The constructivist conception sees learning as a cognitive process of construction and creation of meaning that takes place between two individuals. This occurs when a student is capable of relating what they already know, their prior knowledge, with what they are taught, the new forms of knowledge. When this happens, it is referred to as *significant learning*.

According to the constructivist conception, each process of knowledge construction is different for each person. Therefore, degrees in learning are referred to, and processes of learning or “not learning.” Prior knowledge is the factor on which these degrees of learning depend. In this way, maximum learning is made to depend on the quantity and quality of prior knowledge of the student. The different learning results are justified by the level with which the student begins. The constructivist conception of teaching and learning, in consonance with Ausubel’s *significant learning* does not highlight the objectives that must be attained at each level, the point each girl and boy must reach in learning within a given educational area or stage, but instead it stresses what they already know at the onset of learning. In the constructivist conception, the most decisive element in the teaching program is to know these different points of departure and to attend to them in a diversified way. That is to say, they teach different contents: a higher level for girls and boys who have more prior knowledge, and lower level for those with less prior knowledge.

Therefore, prior knowledge and how the girl or boy has this knowledge structured on a cognitive level, the knowledge schema, are the most important factors in learning. Further on, we will see how Vygotsky explains that teaching directed to levels of cognitive development that have already been reached (prior knowledge) is inefficient from the learning point of view. Teaching that is adapted to the deficits, to a low entry level, is not a form of teaching that provokes an improvement in learning and positively challenges the learner to move forward. The constructivist conception, by centering on the subject who learns, implies a step forward from the oversight in the traditional objectivist conception of learning, which is focused on the teacher as the unique agent of the process. The constructivist conception of teaching and learning recognizes the contribution of the student in the teaching–learning process, but they are seen as individual processes that do not take sufficiently the pedagogical and sociological aspects into account.

Communicative Conception

The communicative conception is grounded in everyone’s capacity for dialogue. It is through dialogue and interaction with others that learning happens. It implies a form of learning that is based on the egalitarian dialogue of girls and boys with the teachers families, all equal, the community, etc., with *validity claims*. That is to say, everyone that interacts with the students has the same objectives of fostering learning; their claims are for truth. In all of these interactions, the aim of the people who relate to the girls and boys is for them to learn and there are no other personal interests whatsoever, such as gaining protagonism, involved in their relationships. From this conception, reality is seen as created by people, who depend on the meanings that they have constructed through interaction. Object reality is reached through the intersubjective process.

Psychologists like Vygotsky, Bruner, and Mead have stressed this idea from the sociocultural perspective and from symbolic interactionism. Freire says that people are dialogic by nature, and tend toward dialogue and relating with others. Chomsky explains how people are gifted with a cognitive structure for language. Habermas, in his theory of communicative action, develops the conception of communicative competency, with which he demonstrates that we are all subjects capable of language and action. Dialogism is part of the very nature of the person, they dialogue with others, with the norms, with themselves, with their emotions, norms and memories. Learning cannot be limited to a mechanism of grasping reality and its assimilation in line with Piaget; instead, it is a process that is much more complex, which includes an on-going intersubjective dialogue that is later internalized and taken ownership of. In accordance with symbolic interactionism and sociocultural psychology, everything that is individual was first social.

The meanings that are created and the meaning that is produced with respect to school learning depend on the interactions that students have with other persons in different spaces. The most influential factor in learning is the interactions. Therefore, learning from the communicative or dialogic conception is the product of a process of collective construction of meaning through interaction. The interactions are aimed at reaching higher levels of learning. These higher levels of development are the focus of dialogic learning.

In dialogic learning, teachers, families and other adults facilitate dialogue, overcoming the limits of their own cultural borders that only allow them to see others through the lens of their own culture. From the communicative perspective, teachers have to know how to develop interactions with the context and processes of meaning construction that take place within them, emphasizing the egalitarian and the communitarian, in a series of actions in which education is not restricted to the teacher–student relationship but, instead, includes the entire social context in a global and unified activity. If the students learn in the interactions with a variety of adults besides the teacher, their education will have positive benefits with a greater richness of adult–student interactions from the learning point of view. Dialogic learning is valid on any educational level; it can be applied from early childhood education till adult education.

Conception	Objectivist	Constructivist	Communicative
Bases	Reality is independent of the individuals that know it and use it.	Reality is a social construction that depends on the meanings that individuals attribute to it.	Reality is a human construction. Meanings depend on the human interactions.
Example	The paper is paper regardless of how we see it.	The paper is a paper because we see it as an object that is appropriate for writing on.	The paper is paper because we agree to use it to write on.
Learning	Traditional Teaching One learns from the message that is emitted by the teacher.	Significative One learns through relating new knowledge that is incorporated in the cognitive structure on the basis of prior knowledge.	Dialogic One learns through interactions between equals, teachers, family members, friends, etc. who produce egalitarian dialogue.

(Continued)

Conception	Objectivist	Constructivist	Communicative
	of Teachers	of Teachers	of Teachers, Family Members, and Community
Education	The contents transmitted and methodologies used to do it	Knowledge of the learning processes of the actors and their form of constructing meanings	Knowledge of the learning processes of individuals and groups through the interactive construction of meanings.
Discipline	Pedagogical orientation that does not sufficiently take psychological and sociological aspects into account	Psychological orientation that does not sufficiently take pedagogical and sociological aspects into account	Interdisciplinary orientation: pedagogical, psychological, sociological, and epistemological
Consequences	The imposition of a homogenous culture generates and reproduces inequalities.	The adaptation of diversity without taking into account the inequality of the context generates an increase of inequalities.	With the transformation of the context, respect for differences is included as one of the dimensions of egalitarian education.

PRINCIPLES OF DIALOGIC LEARNING

In the following, we present seven basic principles that aim to provide a guide for reflection and implementation of the practice of dialogic learning. The principles of dialogic learning are expressed in different ways in each situation. All of them take into account psychological, educational, and social theories, as well as cultural knowledge, feelings, and academic aspects.

Egalitarian Dialogue

Dialogue is egalitarian when the different contributions are considered in terms of the validity of the arguments, instead of being valued on the basis of the position of power of the speaker, or on criteria like the imposition of culturally hegemonic knowledge. The educational process can be understood as a dialogic act. Through egalitarian dialogue students, teachers, family members, and others learn, given that they all construct their interpretations on the basis of arguments made by the others. Each person makes his or her own contributions to the dialogue; this equality approaches the ideal speech act of Habermas. Their relation is, at once, real and ideal. Real because the greater influence of certain voices is a reminder that the conversation is taking place in an unequal context, and ideal because they are on the road toward overcoming these inequalities. Dialogue becomes an instrument for learning. Everyone is capable of language and action as affirmed by Habermas; there is a universal capacity for language as Chomsky contends; and for Vygotsky, mind and society are inseparable—these contributions indicate to us that everyone can participate in dialogue on egalitarian terms, in which each person contributes his or her knowledge and experience to a process in which reaching the best agreement is sought.

Egalitarian dialogue transported to the educational center implies a profound change in the school culture, which is traditionally based in hierarchical relations where teachers determine

what must be learned, how, and when. To reach egalitarian dialogue in the school, educational professionals should overcome certain conceptions of the families and especially those who are nonacademic. Furthermore, families should also be open in relation to the teachers, who have an image of them that distances them from a dialogic relation, an image that reflects institutionalized relations of power between them. Egalitarian dialogue in school is made possible when the community and school interact from bases they share: the maximum learning for girls and boys, and work jointly to reach it. In some schools this is manifested with mixed work commissions (family members, adults from the community, teachers, students) who are dedicated exclusively to working together to attain specific educational, social, and cultural objectives expressed by all of the agents for improving the school.

Cultural Intelligence

In the educational context, theories based on deficit have generated many low expectations with respect to students' capacities, as well as compensatory policies that have not been able to respond to the demand for quality education for all. Dialogic learning is contrary to the idea of "compensation" of deficits. It is about parting from the capacities of the students, their families, the teachers, and all of the people who interact with the boy and girl in order to accelerate his or her learning, especially those boys and girls from disadvantaged contexts.

Certain conceptions of intelligence tend to focus on certain abilities but to ignore others. Academic intelligence has been the most valued by privileged groups, designing standardized intelligence tests in which these groups turned up as intelligent and those who did not belong to them as deficient. An illustrative example is the Weschler intelligence scale, which places a high percentage of girls and boys "below the median," which leads them to receive an education of the minimum and very low results, which is fruit of this label.

Today we know that intelligence is not defined only by the concept of academic intelligence, and many studies (Cattel's fluid and crystallized intelligence, Gardner's Multiple Intelligences, Sternberg's Triarquic Theory) have presented evidence of it. The concept of cultural intelligence includes academic intelligence and other types of it. The three subareas of cultural intelligence are the following:

- *Academic intelligence*: Which we develop in academic settings and which is not alone in defining the intelligence of a person. In relation to the tests mentioned earlier, these are simply based on measuring what the boy or girl is able to do, but, considering Vygotsky, does not measure what he or she is able to do with the help of others.
- *Practical intelligence*: The differentiation between practical (which is used, and learning in the daily context) and academic intelligence is fruit of more recent research, thanks to the recuperation of the works of Vygotsky and Luria in the field of cultural psychology. One of the most important works about practical intelligence is by Silvia Scribner, who explains how we develop the same mental schema when we work with our minds, a theory that questions Piaget's homogeneity in the description of intellectual evolution.
- *Communicative intelligence*: This intelligence refers to the communicative and other skills that are useful for resolving situations to which a person in solitude would not be able to find a solution only with academic or practical intelligence. With communicative intelligence, strategies for shared resolution are proposed, which are based on communicative action taken on by participants in the learning processes. People can understand each other and act by using our communicative skills for everyone's success. On the basis of the idea that we all have capacities for language, as Chomsky defends, we are gifted with communication and through this the capacity to resolve any kind of situation on a day-to-day basis, and in the case of education, concrete learning situations. In a dialogic relation, a girl might have greater explicative strategies than a teacher to explain to her peers the process of resolving a problem, while she too is consolidating what she already knows or has just learned.

Dialogic learning is based on the recognition of the three types of intelligences in everyone, and the same capacities for participating in an egalitarian dialogue. Academic intelligence is only a consequence of school experience. In today's information society, increasingly, cultural and communicative intelligence take precedence over the academic. Dialogic learning promotes the development of these three types of intelligence, but, by parting from the recognition of the three, it does not obstruct anyone's participation in the teaching and learning processes in school.

Transformation

All of the educational projects that pursue transformation need utopia. Dialogic learning requires high expectations from all those involved in the interactive learning processes, trust in all of the students, and an orientation toward maximum results because without all these elements it is impossible to have teaching that is directed toward transformation of the entry levels. The transformative content that is proposed by this learning conception, in coherence with the rest of the principles, advocates for transformation of reality instead of adaptation to it. We are beings of transformation and not accommodation as Freire said.

In dialogic learning transformation transcends the classroom and the school, reaching the very context. The schools have to be another space in which students increase their interactions; that is why schools should open their doors to the whole community so that this transformation can be extendable. At the same time, the learning experience is extended for all participants; education for family members becomes a key element. In that moment family members and boys and girls share a learning space in the home that until then did not exist, transforming the boys' and girls' reference points.

Instrumental Dimension

Too often curricular contents have been adapted to the boys' and girls' context, parting from the idea of the importance of prior knowledge, instead of offering the necessary learning contents for them to move beyond their initial points. This curricular adaptation has been manifested in placing boys and girls from underprivileged contexts in groups, on levels, where the instrumental learning required for the information society is not guaranteed. This ends up making these schools parts of a system that instead of breaking down social exclusion contributes to reproduce it.

Dialogic learning is contrary to any reduction of learning, as many times is wrongly understood. Dialogue serves to increase and improve instrumental knowledge acquisition. The instrumental dimension ensures that dialogue is used for learning everything that is needed to live with dignity in the information society. In this way, prioritizing the learning of values to the detriment of instrumental learning is avoided, which was the fruit of proposals from decades past like the "pedagogy of happiness."

The effects on boys' and girls' academic self-concept when working in inclusionary situations, where the maximum learning is offered, is to increase their expectations in their capacities. School education must promote the instrumental dimension of learning for all boys and girls. There are many activities and initiatives that schools can adopt to guarantee this. One way is by opening learning spaces in the school beyond the school hours for its use and management by the community, where adults interact with boys and girls for learning comprehension (tutored libraries), for improving the use of ICTs (authorized digital rooms), etc. Dialogic learning is also produced in these spaces. Similarly, education of family members has an important influence on improving the instrumental learning of boys and girls.

Creation of Meaning

The danger of the absence of creation of meaning is extended to many spheres of our lives, beyond the school, and related with the risk and the plurality of options that characterizes our societies. Meaning resurges when people become protagonists of their own existence, or when they participate in joint projects through which they can transform their lives and society. The educational projects that generate the most motivation in today's information society are those that are promoting the creation of meaning. Meaning arises when interaction between people is guided by them, and when they are directly involved in the resolution of concrete problems or situations.

We must take into account that meaning is created in family members and students when the educational center offers learning that will make possible for them to be successful. In this sense, educational projects based on dialogic learning foster the creation of meaning in all educational agents. In terms of teaching-learning processes in the classroom, the student creates meaning in learning when he or she feels like they are learning something that is socially valued. The creation of meaning is related with motivation, but does not depend on it. The creation of meaning also increases motivation. In any case, motivation to bring meaning to learning does not depend on intraindividual factors, but instead it is a fundamentally social process. Motivation, just like meaning, is created in social interaction. This perspective dismisses the conceptions that attribute a lack of motivation in learning to the student, and justify low learning, pointing to little motivation and interest.

Solidarity

Dialogic learning is inclusionary and solidarist. Any educational project that aims to be egalitarian and to offer quality education must be based on solidarity. This solidarity does not only have to be present between boys and girls, but, especially between teachers toward boys and girls. Solidarity is based on offering the same learning and results to all students, regardless of their social, economic, or cultural background. The objective of maximum learning for all girls and boys, just like we would want for our own children or loved ones, means solidarity. This objective will not be attained in solitude, but in solidarity with the other agents that interact with the boys and girls. For this it is necessary to be grounded in the idea of not excluding any boy or girl from the classroom, or placing them in groups by level. Solidarity signifies work with all boys and girls within the classroom, attaining successful learning for all.

Solidarity ensures shared values, for which discourses on coexistence and pacifism are lived as something coherent with what is lived at home, the street, school and in the classroom. In integrated groups where students with different backgrounds and levels receive the same opportunities and instrumental learning is ensured for all, values like solidarity and respect for diversity, on the one hand, and social skills like teamwork, initiative, self-esteem, and even communicative skills, on the other, are more easily attained.

Equality of Differences

Beyond a homogenizing equality and the defense of diversity without contemplating equity among people, education based on the equality of differences is oriented toward real equality, where everyone has a place on egalitarian terms but from a respect for their differences. For people from the most excluded collectives, and disadvantaged situations with respect to other groups, it is not enough to have the same resources as their peers, or to offer them education "that

compensates” their deficits; they need more than the rest, they need to accelerate their learning in order to be able to attain the same learning their peers with more advantaged personal situations have.

The idea that we are different has always existed and is tied in education to the need for different learning. But the reality that we are fundamentally equal does not mean we need homogenizing education, but instead respect for diversity with the pursuit for the same results. Dialogic learning takes into account diversity and equality. Beyond a homogenizing equality that is based on assimilation of ethnic minorities and cultural groups within the dominant model, and a defense of diversity that does not contemplate equity between people, the egalitarian education considering differences is oriented toward real equality, where everyone has the same right to live in a different way.

DIALOGIC LEARNING IN EDUCATIONAL PRACTICE

Dialogic learning can be found in educational practices for all ages, and academic levels. An example of the ways that dialogic learning is carried out in educational practice is through *interactive groups*, which are reduced and heterogeneous groups of students, dynamized by a volunteer. In these groups the students help each other in the joint resolution of activities parting from the premise that everyone has the capacities for resolving the activity. There are no differences between who knows more or less on that topic. As a result of this intersubjective dialogue the learning results are better, in terms of elaboration and because all of the students learn. Egalitarian and reflexive dialogue develops capacities with more depth than the usual forms of teaching. When a student explains to another how to resolve an activity, he or she reinforces what they know and consolidates it, at the same time as contributing to complex cognitive processes, strategies, and skills, which make understanding possible. The organization of classrooms in interactive groups promotes students to help each other in learning, and specific and individualized follow-up is attained for each learner. *Interactive groups* in the classroom favor instrumental learning in all participants.

In contrast to segregationist measures that separate learners by their levels such as tracking or special education units, it is important to point out the heterogeneity present in this practice. This is an essential factor, since the interactions that improve instrumental learning are the interactions that are produced through heterogeneity. *Interactive groups* augment instrumental learning in an environment of solidarity where everyone learns. All of the entry learning levels benefit from this form of learning.

Dialogic learning can be a way to attend to the new educational demands generated in the information society. Traditional proposals of teaching and learning centered on the boy or girl are no longer useful and do not promote equality of results in today’s classroom. Dialogic learning is a communicative and interactionist alternative to reaching egalitarian education by means of *egalitarian dialogue* between all educational agents, *transformation* of the context and learning, the recognition of *cultural intelligence*, the *creation of meaning* through interaction, by prioritizing the *instrumental dimension* of learning along with *solidarity*, from the *equality of differences*; in this way success is possible regardless of any cultural or socioeconomic difference.

TERMS FOR READERS

Intersubjective dialogue—It refers to interaction oriented to reaching consensus and mutual agreement that takes place among people who, despite being different, agree to the aims and conditions of the interaction that make it possible to consider each other on equal terms.

Maximum learning—It refers to the provision of a high quality of learning that prepares each learner to face the challenges posed by the current society. This means that he or she will be prepared to access higher education or any job that he or she decides. It can be understood as the learning that provides the maximum opportunities to everybody.

Power relations—Those direct or indirect interactions in which, given an existing individual or structural inequality, the person or group holding the privileged position takes advantage of in order to impose their perspective. In power relations, interactions are based on the force of the power attributed to the privileged position, and not the force of the arguments themselves.

Validity claim—A term used by Habermas to refer to the situation of dialogue in which agreements are reached on the basis of the force of the arguments used by the speaker rather than the status of the position they hold.

SUGGESTED READING

- Flecha, R. (2000). *Sharing Words. Theory and Practice of Dialogic Learning*. Lanham: Rowman & Littlefield Publishers, Inc.
- Freire, P. (2003). *Pedagogy of the Oppressed*. New York: Continuum.
- Chomsky, N. (2000). *Chomsky on Miseducation*. Lanham, MD: Rowman & Littlefield Publishers.

CHAPTER 66

John Dewey's Theory of Learning: A Holistic Perspective

DOUGLAS J. SIMPSON AND XIAOMING LIU

When examining Dewey's theory of learning, it is informative to begin with two essays—"Curriculum Problems" and "New Methods"—that he wrote in 1937 for a book titled *Educational Adaptations in a Changing Society*, which was edited by E. G. Malherbe. In the former essay, later renamed "What Is Learning?" he sketches several ideas that form important parts of the core of his learning theory, a viewpoint that he labels "the natural processes of learning" (LW 11:240). Consequently, he sketches his thinking about the child's "impulses," "needs," "hungers," and "purposes." He also gives attention to the child's "achievement," "growth," "satisfaction," and "elation" that come with learning as well as the teacher's responsibilities for "finding the occasions" and "creating the situations" that provide the means for "realizing [the child's] impulses" as she or he is led gradually from the early years of physical and social learning to more symbolic learning (LW 11:238–242). He emphasizes that "a well-balanced curriculum" provides for learning and growth of *all the elements of personality*, for [1] the manual and overtly constructive powers, [2] for the imaginative and emotional tendencies that later take form in artistic expression, and [3] for the factors that respond to symbolic statement and that prepare the way for distinctly abstract intellectual pursuits. (*italics and numbers added*)

He immediately asserts: A genuine school of learning is a community in which special aptitudes are gradually disclosed and the transition is made to later careers, in which individuals find happiness and society is richly and nobly served because individuals have learned to know and use their powers. (LW 11:242)

In these two comments several notable Deweyan ideas are manifest. First, learning involves the whole person or personality. Second, the scope of the student's abilities and interests are important. Third, learning is best achieved in a learning community, not as an isolated individual. Finally, learning is for both personal and societal development, not just for individual enhancement.

In the second essay, later renamed "Growth in Activity," Dewey provides insight into child and adolescent development and its relationship to learning and, thereby, amplifies his theory of learning. He claims that there are "three main stages" of a child's natural development (LW 11:243). These are as follows: (1) activity that is sufficient within itself, (2) activity that is controlled by its outcomes, and (3) activity that is focused on symbols (LW 11:243–246). We might refer to these three stages as the evolving periods of play, work, and symbols. But we

should be careful to note what he means by these terms: *stages*, *play*, *work*, and *symbols*. For Dewey, these stages are not fixed by age or necessarily sequential because “individuals differ enormously.” For instance, the symbols stage, in one sense the highest of the three because it becomes more dominant later in life, may start before the work stage does. Teachers, therefore, need to “guard against forcing square pegs into round holes” (LW 11:246). With these cautions, therefore, Dewey avoids the pitfalls of most developmental stage and structural theorists. The notion of a play stage in this context merely suggests that the young child—and the adolescent and adult, too—often engages in an activity for its intrinsic value or the satisfaction it provides. Personal satisfaction in the activity itself, therefore, is the dominant reason for play. The alleged second or work stage emerges gradually and is commingled with the play stage. As the child becomes more capable of and characterized by work, it is because she or he is interested more and more in an end, aim, or goal. That is to say, the child is interested in using her or his activities to reach a destination or to create an object. Or, as Dewey states, “Play tends to develop into games with certain objective conditions to be observed” (LW 11:245). This doesn’t mean, of course, that there isn’t intrinsic pleasure in the activity. Ideally, there is both intrinsic and extrinsic or goal-oriented pleasure in the learning process and outcome. The symbols or so-called third stage begins early in life but reaches its fruition in the “latter stages of schooling.” Dewey cautions, however, that “the curriculum should be sufficiently differentiated for the child to be able to learn only what is intrinsically congenial to him [or her]” (LW 11:246). Thus, intrinsic pleasure should be part of the play, work, and symbols stages.

As the student develops in the stages of play, work, and symbols, her or his learning is actively occurring and may be analyzed, as we noted earlier, from two different perspectives, the micro and macro. Neither perspective is viewed by Dewey as always being prior to the other in time or development. Both often occur simultaneously, and each is dependent on the other. Neither exists without the other. Both are seen as complementary depictions of an overall personal, natural, and social learning experience. While both aspects of Dewey’s learning theory focus on the child or adolescent, the micro-perspective delimits its field of inquiry radically to the learner, pushing the environment far into the background. The macro-perspective draws the learner to the forefront as she or he interacts with the physical, social, emotional, and intellectual environment.

A MICRO-PERSPECTIVE OF LEARNING

Dewey begins his learning theory with a reference to the child’s native appetites, instincts, or impulses, which are always active and seeking ways to express themselves (LW 17:214). So images of the teacher pounding or pouring in information or leading or drawing out the developed abilities of the learner are essentially misleading from his perspective. Instead, the child’s impulses overflow with activity, making learning a natural byproduct of being human. Thus, there is a sense in which “learning by doing” is an appropriate way to gain an understanding of aspects of his learning theory. Children don’t learn and then do something with what they have learned. They learn by doing something. But the child’s learning activities are not automatically and necessarily productive. Misbehavior and miseducative involvements are as probable as productive and educative ones if the child is left to herself or himself. Learning by doing, then, can be counterproductive, antisocial, and miseducative. As a result, parents and teachers—and other adults and older children who are informal educators in a community—need to guide children into worthwhile and educative activities. To ignore and withhold the guidance children and youth need isn’t showing respect for their personal autonomy according to Dewey. Instead, it is “really stupid,” for independent thinking does not emerge because students are left either to themselves or environmental influences. They grow as they are cultivated by respecting and caring educators, teachers and others (LW 2:59).

Table 66.1
Philosophical Assumptions and Classroom Practices

Natural Learning Theory	Natural Depravity Theory
A classroom is characterized by pleasantness and student alertness and activity.	A classroom is characterized by inhibition of impulses and teacher-instigated activities.
The teacher recognizes that there are learning impulses and seeks to use them.	The teacher doesn't think there are natural interests in learning and believes she must initiate it.
The teacher guides natural learning tendencies by means of external conditions and materials.	The teacher attempts to motivate learning by using external stimuli.
The teacher builds up natural learning tendencies via interaction with the classroom and school environments.	The teacher attempts to pour or drill facts and information into students because the student is not naturally interested in learning.
The student learns to express or apply what she or he is learning with others.	The student learns to repeat or reproduce what she or he is memorizing or learning by herself or himself or with others.

Since the activities of the child are for the most part exhibited through the body, the child is constantly using her or his hands, feet, ears, mouth, eyes, and nose. She or he is constantly engaged, doing something in and with the environment. As a result, impulses force the child to “investigate, inquire, experiment” (LW 17:215). Two points, then, are critical in understanding Dewey’s learning theory at this juncture: children have native instincts and they will express themselves in nearly any environment, including those settings that are not designed to provide freedom for them to do so. Accordingly, the child

is looking for experiences, and in every moment of his waking life, he shows this original and spontaneous eagerness to get more experience, and become acquainted with the world of things and of people about him. The parent or teacher does not therefore have to *originate* these activities, does not have to *implant* them, they are already implanted in the child’s makeup. What the teacher or parent has to do, is just to *supply* proper objects and surroundings upon which these impulses may assert themselves, so that the child may get the most out of them. (LW 17:215; italics added)

In this context, Dewey asks several questions about learning: Are there less apparent but intellectual appetites that are “awake, alive, alert, and looking for their food” during the school years? Are there key differences between school classrooms that are aware of these appetites and those that aren’t? How are the answers to these two questions related to learning in schools (LW 17:216–217)? His own answers to these questions follow. To begin with, he claims that there are intellectual appetites that are discernible, that teachers need to recognize them, and that they must provide “the intellectual and spiritual food for these tendencies to feed upon” (LW 17:216). In addition, he argues that classrooms developed on a natural learning theory (children are naturally active and, therefore, inquisitive) do differ sharply from those that are based on a natural depravity theory (children are naturally active and, therefore, bad). Thus his answer to the third question, rooted in the times and places of his life, is partially illustrated in Table 66.1. The depth and range of Dewey’s ideas on this specific point extend far beyond the content of this table, however.

Dewey’s next step in explaining his micro-perspective of learning is to note that natural impulses usually express themselves through the muscles and movement. Similarly, the child’s

mental activity reveals itself in her or his physical activity. As a result, physical movement is as much “a vital part of the very process of learning” as sensation is. Sensation is one-half of the learning circle; movement is the other half. The circle or process is one, nevertheless. In the midst of sensations and movements, however, the mind is not passive; it is active just as the physical person is active. Physical movement, in particular, indicates that the mind is active and selective, for “the loving eye, the inclined head, the caressing hand, are all signs” of its activity and selection (LW 17:217). Therefore, mental and physical activity occurs when sensations are experienced. In turn, it is clear that sensation isn’t isolated from mental and physical activity. Mental activity, sensation, and movement are a triad in that sensation “is the beginning of a movement which would investigate, would explore, and find out more about the thing producing the sensation” (LW 17:217). Even young children, because their minds are active and they are learning, make decisions or selections in different ways that influence further learning: (1) by attending to some sensations and not others and (2) by facilitating movement in some directions and not others. Instead of sensation and movements alone determining the learning process, the triad is involved: mind, sensation, and movement. Plus there is the influence of impulses and the purposing of the learner. Hence, neither mechanistic nor deterministic forces *cause* learning. They merely influence it. Learning is an ongoing, active, and selective process, not an unusual, passive, or stimulus–response outcome.

As a person matures, she or he learns to be more selective of responses to sensations (LW 17:218). The active, developing mind influences the learning process in the youth and adult in ways that it usually doesn’t in a young child. On the other hand, this is not to say that the young child is “mindless” or doesn’t use her or his mind. The opposite is the case even though greater maturity provides greater control of learning opportunities for older children and adults. As the learner develops as a complete person, selection is more conscious and made in the light of moral development. Throughout the learning process, then, the gradually developing but active mind initiates learning, selects stimuli, and responses to environmental realities. There is sensation and movement, impression and expression, mental income and mental outcome, instruction and construction, and ideas and applications. Collectively, they constitute the micro-perspective learning process (LW 17:218–221). The inseparable triad—the mind, sensations, and movements—are all involved in learning but, ultimately, “learning becomes part of ourselves only through the medium of conduct, and so leads to character” (LW 17:222). Conduct involves stopping to think of consequences, learning to select options that allow for present and future growth, and controlling one’s impulses and desires until they are converted and transformed into “a more comprehensive and coherent plan of activity” (LW 13:41).

When Dewey’s micro-perspective of learning is situated in a broader context, it is more clearly and correctly understood. His macro-perspective of learning provides this broader human, physical, material, intellectual, and interpretative context for understanding the activity and the learning of the maturing student.

A MACRO-PERSPECTIVE ON LEARNING

Dewey’s broader approach to learning continues to focus on the learner, but he adds several critical elements that his micro-perspective forces to the background or largely ignores, exempli gratia, the teacher, other students, and the pedagogical and physical environment. The dynamic nature of the student, of course, remains important. Yet, the teacher (as a professional and as a person), environment (social, physical, and intellectual), and pedagogy (specific and general) move more to the foreground. The student’s interaction, from a critical frame of reference, is with her or his environment, because it includes, among other things, her or his teacher and the teacher’s pedagogy.

The interaction of the learner and the environment involves a possible but not necessary linear flow of experiences that begins with (1) the instinctive reaching out of the student and her or his (2) ensuing actions. Following these activities, the learner (3) encounters barriers in the environment, which, in turn, (4) causes tension and (5) disequilibrium and results later in (6) problem-solving experiences, (7) adaptation to the barriers, (8) reinstatement of personal harmony, and (9) reestablishment of personal equilibrium. This learning scenario, as described, may be interpreted as a somewhat standard but not necessarily ideal one if—and this is an important qualifier—the cycle is always believed to be completed in an expeditious fashion. But not all learning experiences even complete the cycle, much less complete it without interruptions and reconfigurations. In fact, the cycle of interactions may deteriorate and collapse at any point in time for a variety of reasons. Also, the phases of the cycle are not necessarily discrete, separated from one another but overlap and commingle. This rather untidy depiction of learning is supported by observation and experience, Dewey believes, and, consequently, is important for the educator to remember. In his theory, Dewey sees the learner entering, exiting, wandering, and reentering the learning cycle as she or he prefers or as she or he is drawn into specific aspects of the environment again.

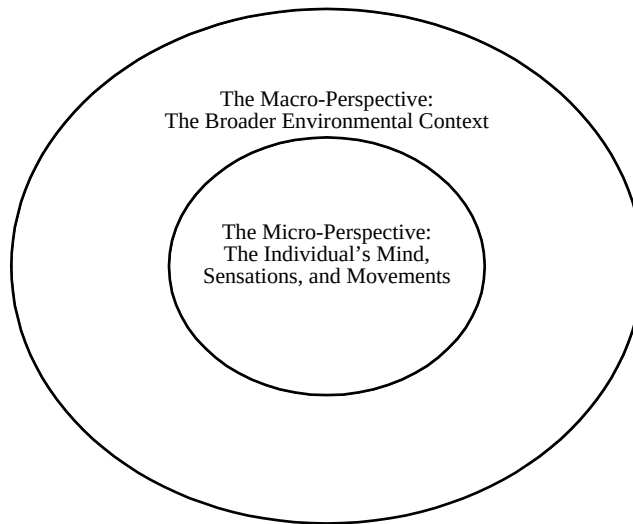
The complete learning cycle or, we could say, whole learning experience includes the energizing influence of the instincts, purposes, and interests of the learner as she or he enters into an activity and encounters obstacles and disequilibrium as well as success in solving problems and returning to inner harmony. Learning, then, occurs at the micro and macro levels concurrently. The energy, activity, thinking, and selection of the learner cannot be discretely separated into just one of the spheres. Learning, therefore, may occur as impulses urge the learner to act as well as during her or his initial action, meeting barriers, undergoing of stress and imbalance, but particularly as she or he thinks through, analyzes, and solves problems. Likewise, learning may occur as the person adapts to her or his environment or the barriers encountered and, to a lesser degree, the ensuing harmony and balance enjoyed. The student's attention throughout the interaction and learning is on personal matters at first and, if she or he grows socially and morally, others' interests later. Learning, then, is primarily a social event or experience from Dewey's perspective, not essentially an individual activity. Inclusively, it is a natural, personal, social, and moral experience that changes the individual and promotes individual and societal growth in the future.

Learning from micro- and macro-perspectives, therefore, involves the whole person in her or his complete environment. Figure 66.1 depicts this complete interactive learning experience. Dewey's holistic learning theory, therefore, ultimately includes both the elements and ideas noted in the micro-perspective as well as the elements and ideas discussed in connection with the macro-perspective. Of course, the depicted "boundaries" that separate the micro and macro spheres do not actually exist in Dewey's mind and shouldn't in ours.

Dewey believes that, ideally, the person or student is active in her or his physical environment as well as social environment. As the child pursues her or his purposes through activities that the teacher has created, she or he regularly encounters barriers or problems and these produce, among other things, personal stress. The tension, if amply robust, may result in an inner imbalance or disequilibrium for the student. Since it is somewhat natural to like order in one's life, the student may then begin to think through the problem or attempt to address it. When the thinking is both reflective and fruitful, it provides the student with options to consider as she or he adjusts. Ordinarily, then, a person is stimulated to surmount an obstacle so that she or he can achieve her or his consciously selected purposes. Eventually, when the process and outcome yield a successful conclusion, internal balance returns and the person enjoys another state of equilibrium. Shortly, however, the student reenters the cycle as she or he focuses on a new purpose and pursues it.

In reality, learning is probably a great deal more complex—not to mention chaotic—than described for at least two reasons. First of all, it seems likely that the learner is often

Figure 66.1
A Holistic Interactive Learning Experience



multi-purposing as she or he learns and that one of her or his purposes may reduce the efficiency of pursuing other goals. The learner also is probably prone to enter, exit, and reenter the cycle at different times and after encounters with more than one obstacle. She or he might, for instance, encounter tension with one purpose and retreat to another school task or abandon the first task permanently. Or her or his disequilibrium may fade during class and return in another class or during the evening. The problem solving desired in one course or experience may actually occur later in the day in another class or on the way to school the next morning. As a result, the student may return to school the next day, then, not with an obstacle, tension, or disequilibrium but with satisfaction and explanations about how to adapt to the obstacle and move on to other challenges.

Second, the description given does not convey the complexity of the classroom that has twenty-five to thirty students. When thirty students are interacting with one another in activities, the factors that influence learning are exponentially increased and, thereby, the possibility of educative and miseducative experiences increases. Only a sophisticated, experienced teacher can take advantage of these diverse variables and students and turn them into desirable learning situations for each person. With pedagogical experts, "learning is controlled by two great principles: one is participation in something inherently worth while, or undertaken on its own account, [and] the other is perception of the relationship of means to consequences" (LW 2:56). Consequently, teachers spend a great deal of their time planning for participatory learning activities that enable students to understand the relationship and means of what they are doing to the learning outcomes.

CONCLUSION

Learning, for Dewey, is obviously a complex and, often, chaotic activity. The person is active in learning from her or his moments. Impulses and selections are a part of the process. But this micro-perspective understanding of learning needs to be merged with the macro-perspective, including the environmental sphere of others in the classroom and school. When combined, these two perspectives of learning create a personal, natural, social, and moral learning process in which

a person is consistently looking for experiences and becoming more and more familiar with the world of things, people, and ideas. In this process, the teacher's job is not to attempt to pour information into the learner. Rather, she or he should "supply proper objects and surroundings" in order that "the child may get the most out of them." This learning process also results in part from the learner's activity that results in encountering obstacles, tension, and disequilibrium. Likewise, she or he thinks through problems, adapts to new environments, and experiences personal harmony and equilibrium. Dewey's holistic learning theory, therefore, provides a framework that may enable the educator to think more clearly and comprehensively as she or he builds educational environments that entice and guide learners to become independent thinkers, problem solvers, and community builders. So, we return to where we started: a well-conceived curriculum provides learning experiences that involve the whole person interacting with a community of learners, including the teacher.

SUGGESTED READING

- Boydston, J. A. (Ed.). (1967/1972). *The Early Works of John Dewey, 1882–1898* (Vols. 1–5). Carbondale: Southern Illinois University Press.
- Boydston, J. A. (Ed.). (1976/1983). *The Middle Works of John Dewey, 1899–1924* (Vols. 1–15). Carbondale: Southern Illinois University Press.
- Boydston, J. A. (Ed.). (1981/1991). *The Later Works of John Dewey, 1925–1953* (Vols. 1–17). Carbondale: Southern Illinois University Press.

CHAPTER 67

Crash or Crash Through¹: Part 1—Learning from Enacted Curricula

KENNETH TOBIN

Amira²: I'm going to be a doctor. Oh, I'm going to be a doctor. Ain't nobody going to stop me from being a doctor.

When I first met Amira she was a thirteen-year-old, Grade 9, biology student. She loved biology and was by far the best science student in her class. No problem appeared too challenging for her, she made an effort to respond to most questions asked by her teacher, and frequently her oral contributions overlapped with her teacher's talk. Especially in biology, Amira was a leader in the classroom, an active participant in lectures, small groups, and labs. She did her homework and was on the lookout to learn at every opportunity.

Amira lived with her mother and siblings in inner-city Philadelphia and attended a neighborhood high school in which most students were African American, living in circumstances of economic poverty. The school, referred to as City High, had an enrollment of more than two thousand students and, in an endeavor to create safer, more personalized environments, the school administrators created ten Academies, or schools within a school. Amira was in the Health Academy, which had five teachers and about two hundred students, mostly females. The Academy had one teacher for each subject area, Mr. Kendall being the science teacher.

Amira was a motivated learner and accepted responsibility for maintaining a productive learning environment during science classes. During a lesson on genetics, in which I was a researcher and coteacher with Ms. Stein, a prospective biology teacher, Kendall, and another researcher, there was insufficient time for the final planned activity. Rather than start a hands-on activity and be unable to finish, the coteachers decided not to begin. Fifteen minutes remained and, without further planning, Stein didn't have the experience to maintain a central teaching role. She looked fatigued as she announced to the students that Kendall would teach them about the dihybrid cross. Although he appeared startled by the announcement Kendall nodded his head in agreement and confidently strode toward the overhead projector, his mind feverishly reconstructing how he typically taught the topic.

"It's 9, 3, 3, 1," he said as he switched on the overhead projector and sketched a four-by-four matrix. However, despite 30 years of experience of teaching biology, as he considered what to teach he did not recall the salient starting points to get to the final solution. Left with no viable

alternatives he tried to recall the pathway to a solution as he taught, frequently back-tracking as he searched for the right place to start.

A videotape of Kendall teaching at the overhead projector shows me at the side, interacting with students and on occasion talking animatedly to Stein. At one time I suggest quietly to Kendall that he let the students work out the phenotypic ratios associated with a dihybrid cross. However, Kendall was resolved to teach in an expository way from the front of the room and he never seriously considered an alternative division of labor among the participants (especially student-centered problem solving). He taught “off the cuff” and inadvertently made errors from which he was unable to recover. His confusion was apparent in repeated attempts to fill in the cells of his Punnett Square, nonverbal signals of frustration when his attempts failed, and his use of expressions such as “sorry,” “can’t remember,” and “I got it wrong.”

With the exception of Amira, the students quickly lost interest and ceased to participate. Amira knew how to solve problems like this and had well-developed ideas on how they should be taught. She had a strong sense of what Kendall was trying to teach, enjoyed genetics (“the dihybrid cross is fun”) and her aptitude in math afforded an intuitive sense of how to proceed (“Yeah. I love math”). Unlike her peers she assumed collective responsibility for maintaining the flow of the lesson, and her efforts to make sense of the problem, ask questions, and solve the dihybrid cross were pronounced, helpful, and unique. Amira noticed Kendall’s errors and offered suggestions in a continuous flow of dialogue. Toward the end of the lesson she worked on her own solution while Kendall continued to address the whole class, focusing intently on the overhead transparency on which he was creating his solution. However, his attempts were futile and the lesson ended with Kendall trying different permutations on the sides of his matrix and the students filing out of the room, headed to their next class.

WHAT IS AN APPROPRIATE LEARNING ENVIRONMENT?

In this section I place the vignette of the dihybrid cross in a historical context of the goals of science education, examining the relative emphases on concepts and inquiry skills. In opting for a perspective on science education that is grounded in cultural sociology I explore the salience of knowing and doing in ways that are both aware and unaware to learners and of the importance of being able to use what is known in anticipatory, appropriate, and timely ways.

Concepts or Skills

Historically science learning has been considered in terms of a conceptual perspective on science (i.e., facts, concepts, principles and big ideas) and then dichotomously as conceptual and inquiry skills (often referred to as process skills). During the curriculum revolution of the 1960s some of the teachers’ guides and textbooks took polar positions, emphasizing either conceptual science or inquiry skills. However, as curriculum development proceeded into the 1970s and beyond there was growing awareness that the goals of science education should incorporate a balance of concepts, inquiry, and attitudes and values. Instructional models were developed and infused into resource materials such as textbooks and teachers’ guides so that in science activities students were actively involved and had opportunities to construct their own knowledge through engagement, exploration, explanation, elaboration and evaluation (Bybee et al., 1989). This approach aimed to ensure that students used inquiry skills to create conceptual models for their experiences with science.

Constructivism, in its many forms, focused attention on the necessity for individuals to have rich sensory experiences with phenomena and opportunities for social collaboration with peers

and the teacher as they made sense of their experiences in terms of what they already knew. Prior knowledge, negotiation, consensus building, and increased understandings of canonical science became hallmarks of learning science. In many science programs, emphases on learning science by doing science assumed a central position as did small-group and whole-class discussions in which students had opportunities to collaborate with peers and use the language of science.

Ways to Know and Do Science

A key goal in science education, which extends beyond constructivism and its emphasis on conceptual change, is to be fluent in using science to attain success in different fields. One way to address this goal is to regard science as a form of culture (Sewell, 1999), a system of schema (i.e., the conceptual side of science), and associated practices (i.e., patterns of action) that are enacted within fields (bounded by space and time), which are structured by resources (i.e., material, human, and schematic). Hence, opportunities to enact and learn science, in a field such as a classroom, depend on the resources available and the extent to which they can be used to meet the participants' goals. I use agency (Sewell, 1992) to refer to an individual's power to act in a field and use its resources to meet particular goals (i.e., appropriate the field's structures). As participants act, their actions are resources for themselves and others to pursue learning and other goals they might have (e.g., to earn respect of peers). Hence, as Kendall spoke and wrote on the overhead transparency, his actions were resources that participants could access and appropriate through attentive listening and other forms of participation. Kendall assumed a central role in which he expected everybody else to listen, observe, and silently work along with him, thereby restricting legitimate opportunities for participation. In spite of Kendall's implicit expectations, Amira created opportunities for participation. Her talk often overlapped with Kendall's and became a resource for the learning of all participants—for Amira, to clarify her thinking—for Kendall, a flow of suggestions on how to proceed—and for peers, ideas to evaluate and possibly remember.

Considering science education as culture focuses on processes that reproduce and transform the canons of science, not only as schema, but also as associated practices, some of which are unconscious. Like constructivism the concern is to ascertain what learners know and can do and structure learning environments accordingly. What does it mean to take into account the knowledge of the learner and teach him or her accordingly? What participants can do refers to their interactions with the structures of a field—the extent to which they appropriate resources, through successful interactions with materials, other persons, and schema (e.g., ideas, attitudes, values, rules, conventions). Part of doing involves participants' being aware of what can be and is being done. However, perhaps most culture is enacted without awareness. When particular resources are available, participants can anticipate their use and then deploy them in routines built from prior experiences of being in places like this one using resources like these. For example, if students have had prior experiences in a science classroom they may have developed dispositions to act appropriately in similar circumstances in anticipatory and timely ways.

Because the practices of individuals are part of a dynamic structure, a critical focus for science educators is to find ways to expand agency and ensure that all individuals can use their cultural resources fully to reproduce and transform the culture of science. As well as drawing attention to the salience to learning of the resources that can be appropriated, a cultural perspective draws attention to the fluency of enactment and reminds educators that when culture is enacted flow is often an important criterion in being able to use resources in anticipatory, timely, and appropriate ways to produce successful interactions. Hence, it is a goal for Amira to learn science in ways

that would allow her to act scientifically in her lifeworld without having to be conscious of what she is doing and why she is going to do it.

The unusual circumstances associated with Kendall's having to teach without being fully prepared provides insights into some very central issues associated with learning. My sense is that Amira would have solved the problem if she had been asked to do so in an individualized task. She had the necessary prior knowledge and the motivation to formulate a solution. Amira was determined and this was exactly what she wanted from education—interest, challenge, and relevance. As we learned six months later, she remembered the solution was 9, 3, 3, 1 as Kendall stated from the outset, but she did not appear to learn from his subsequent efforts to obtain a solution in class time. His efforts to teach through exposition did not provide a structure to allow Amira or others in the class to solve the problem. However, his teaching did allow Amira to be actively involved as she interacted verbally with Kendall, attempted solutions in her notebook, and continuously made public suggestions on what to try next. However, there appeared to be few others in the class who were motivated or prepared to work alone in the structural environment that unfolded.

Structures can limit opportunities for some participants to successfully interact and learn, in which case their agency is truncated. From this perspective Kendall's practices during his teaching of the dihybrid cross may have truncated the agency of most students by limiting their possibilities for action and thereby minimizing both the number and types of resources available for appropriation. Kendall struggled and was not fluent while attempting to solve the dihybrid cross problem and his efforts were characterized by starts, stops, and changes in direction. However, even though most students lost focus as the lesson progressed it cannot be assumed that they learned nothing of science. Each student experienced a seasoned teacher struggling to solve a problem, persevering when he could not generate the correct solution, and continuously talking science as he thought aloud in successive attempts. The students were aware that the teacher knew the correct solution was 9, 3, 3, 1 and observed his serious efforts to show why this was correct. It is possible that by being in the classroom with Kendall as he endeavored to solve the problem of the dihybrid cross, the participants (students and coteachers) learned something about science even though they might not be aware of what they learned.

Looking back at what happened in the vignette leads me to suggest that the optimal learning environment is one in which students are active in producing structures to expand the agency of others in the class. Hence, setting up an environment in which participants interact overtly with material resources and others has the potential to enhance learning. Although I would have preferred more active and sustained forms of involvement, the students' experiences of the dihybrid cross allowed for their peripheral participation in problem solving and opportunities to hear and remember facts about genetics, witness how mathematics is used in explicating key ideas in science, and see how the big ideas of science are built on complex interrelationships among other science concepts. However, had Kendall followed my suggestion to allow the students to figure out the dihybrid cross for themselves, they could have been organized into small groups, a different array of human resources and actions would have structured their experiences, and the additional resources might have expanded their agency and hence their opportunities to learn. If the students were assigned the task of verifying that the solution to the dihybrid cross was 9, 3, 3, 1 it is probable that peers in Amira's group would have solved the problem, with Amira providing the structure necessary for them to succeed. In other groups the students would probably have required more structure, which in this case was available because of the presence of four coteachers. If only one teacher was available, then he or she could have provided each group with appropriate structure by moving from group to group, providing verbal and nonverbal assistance as desirable.

COGENERATIVE DIALOGUING

As a part of our research in urban schools we have instituted a form of activity in which the classroom (co)teachers, researchers, and two to three students meet as soon as possible after a lesson to review what happened, consider changes to the roles of participants, and negotiate consensus on what would happen in subsequent lessons (Roth and Tobin, 2002). The activities are called cogenerative dialogues, because their goal is to “cogenerate” collective agreements through dialogues in which all participants are encouraged to represent their perspectives truthfully, forcefully, and respectfully. Active listening of all participants is central to effective cogenerative dialogues. Our research suggests that participation in cogenerative dialogues allows students and teachers to communicate effectively across the boundaries of ethnicity, class, and age (Tobin et al., 2005).

Amira was selected and agreed to participate in a cogenerative dialogue concerning the lesson described above. Because of the way the lesson finished we entered the cogenerative dialogue abuzz with chatter about what could and perhaps should have happened in the last segment involving the dihybrid cross. As we approached the table around which we would be seated, the two researchers argued over different ways to set up the axes on the Punnett Square, Stein explained how she preferred to teach dihybrid crosses, and Kendall expressed frustration at losing the thread of how to teach it. Amira contended that she had just about figured it out and then she focused on the way that Kendall taught the final activity. In her analyses, Amira demonstrated a keen sense of how to be an effective learner and how teachers could best mediate the learning of students like her. Her advice to the coteachers, especially Kendall, included the following incisive comment.

Make an example to himself before he shows it to us. You understand what I’m saying? Like if I was to write a book, I would write it myself, read it myself to make sure that I didn’t make any mistakes. And if I did I’d correct them right there before I make a good copy of it . . . a rough draft. He would have to make a preplan before he goes over it with us. That’s the only thing I would think he would have to change to get a little more control because some of them kids is out of control.

Amira’s analyses of teaching were not confined only to weaknesses in teaching nor to planning and organizing the class. In a good-humored way she chided Kendall on his tendency to tell stories and thereby lose focus. Also, Amira made the following comments about Stein:

Ms. Stein had a lot of control. Ms. Stein always got what she want whether we got what we wanted or not. Majority of the class passes, and she . . . mainly what she wanted is to get at least 80% of that class to pass, and you could just tell that by the way she taught. She wanted to get the majority of the class to pass. She got everybody except for like three or four people passing that class. And that is because either they didn’t come to school or just didn’t turn their work in.

Amira also commented on the extent to which Stein always used materials and equipment in her classes and supported her oral presentations with charts and well-constructed teaching aids. That is, she embraced the value of teachers using materials to structure learning in ways that expanded students’ agency by increasing the number and variety of resources to access and appropriate. Amira’s comments also recognized the value of having high expectations and the energy to reach out to all learners, even if their levels of motivation were not high initially. That is, Amira recognized the importance of teaching practices that led students to active participation and, in so doing, produce positive emotional energy.

Embedded within the remark about Stein having adequate control is the issue of how she was able to maintain appropriate participation and shared responsibility for learning. Stein did not always have quiet and well-ordered classrooms. In a one-year field experience she never gave up on her students. Every day she was well prepared to an extent that was obvious to her students, a sign that she was a teacher who cared for them. She got them actively involved, made strenuous efforts to create social capital, and never backed down when students needed firm discipline. Despite her slight build and cultural otherness (i.e., blond hair and white skin), Stein broke up fights and quieted students when they were boisterous. These practices earned the respect of students, who regarded Stein as very cool, caring, and anxious to better their education.

Amira was sensitive to the need for teachers to prevent students from disrupting the learning of others. Consistently, she connected this to the level of planning, the consistency of effort in class, and the demonstration of care for learning and welfare of students. Amira was concerned for the well-being of not only the students, but also the teachers. For example, she wondered how her mathematics teacher could stand the stress of teaching without more control of disruptive student practices. In an excerpt of an interview with me, Amira made the following comments about her mathematics class.

You don't get nothin' done in Ms. Smith's class. Ms. Smith has no control. She has no strategy. She has nothin'. I'm like how have you been a teacher for as long as you've been a teacher if you have no control, no organization? She loses everything. I'm like I don't understand how you've been a teacher for as long as you've been. And I be like Ms. Smith, come here. And I tell her to watch what I'm watchin'. I be like don't say nothin', just watch. This one turned around. This one talkin'. This one eatin'. This one playin' with the calculators. I'm like, what is this? This make no sense.

The above comments are salient because it is unusual, a contradiction, for students to explicitly evaluate and provide a teacher with feedback on her teaching performance. They show how Amira's participation in cogenerative dialogues equipped her to speak with her teacher about the quality of teaching and learning in the mathematics class. This seems especially important since Amira enjoys mathematics yet was failing in the class. Adopting shared responsibility for the teaching and learning in the class is consistent with our goals for cogenerative dialogues, in which Amira participated in her science class. However, Smith had not participated in cogenerative dialogues and may not have welcomed unsolicited feedback on her teaching. Hence Amira's comments to Smith may have been detrimental to subsequent interactions between them and the teacher's constructions of Amira as a mathematics learner. Educators should take care to protect students who, having expanded their roles to support their own learning, could end up in hot water with their teachers.

Students can experience identity problems if in one subject area they participate in collective bargaining about the roles of teachers and students and in other subject areas they do not. Similarly, teachers who have not participated in cogenerative dialogues can be threatened by the changing roles of students and efforts on their part to assume more power in relation to what happens in classrooms. Amira's initiative in adopting the role of critic and teacher educator was against the grain since the roles of students traditionally have been crafted as less powerful than those of the teacher and usually it is regarded as disrespectful for students to advise a teacher on how to improve her teaching.³ If cogenerative dialogues are to reach their potential it will be important for teachers and students within a community to accept the expanded roles that inevitably unfold.

Although Amira is willing to assume responsibility for collective actions for agreed-upon goals, it is important to acknowledge that her perspective is just one of many to be considered. Amira knew what student practices should be eliminated and made suggestions on how to

redirect students and enact a curriculum to minimize disruptions. Her arguments were rational and reflected a student perspective that is very much needed in urban schools. Even so, it is by no means certain that her suggestions would lead to sustainable learning environments that support the learning of science, and they do not take account of those practices that are unintended and beyond conscious awareness. Vigorous debate, preferably supported by video vignettes of what happens in classrooms, is necessary to illuminate roles and practices from a variety of theoretical perspectives. Accordingly, there is some benefit in having outsiders from time to time participate in coteaching of a class and associated cogenerative dialogues (e.g., university researchers, school administrators). What seems most important is for the teacher and his or her students to adopt a spirit of inquiry about teaching and learning and build a sense of community associated with collective goals and expanded roles for the different types of participants. It seems likely that through collective responsibility students, teachers, and other stakeholders could pull together with the intention of increasing learning through active participation in science.

DID SHE KNOW THE SCIENCE?

Some six months after the lesson on genetics I asked Amira what she remembered about the dihybrid cross and how it was taught. The following three vignettes capture some glimpses of her knowledge and the key steps involved in arriving at an understanding of the dihybrid cross.

Off to a Good Start

Amira sat down and stared alternately at the blank writing pad and her lunch. “I remember that it is 9, 3, 3, 1 but I’m mad at myself. I can’t remember what it stands for.” With that Amira began to eat her lunch and I started to draw the 16 cells of the 4×4 matrix. I did not get far before Amira reached out for my pen. “You do the monohybrid for father and mother first,” she said as she drew and labeled two 2×2 Punnett squares. “What will we have?” queried Amira. “Let’s have hair and eye color,” I suggested. Amira labeled the matrix for the father as E, e for eye color and H, h for hair color. For the mother she selected recessive alleles for both traits (i.e., e, e and h, h). Skillfully Amira set up the 4×4 Punnett square with the four possible alleles for the father across the top (HE, He, hE, he) and for the mother down the left-hand side (he, he, he, he). “This is not 9, 3, 3, 1,” she said immediately. “What is it?” I asked. “It’s 4, 4, 4, 4.” Amira responded intuitively. Without having to work all of the combinations she knew. However, she methodically worked all combinations and then described each phenotypically. Within a short time she had solved the problem and listed the solution as 4 Hh, ee brown, blue; 4 Hh, Ee brown, brown; 4 hh, ee blond, blue; 4 hh, Ee blond, brown.

Getting Closer

Amira smiled as she crunched into a mouthful of her sandwich. She seemed pleased with her success. Lately she was not experiencing too much success at school. Just today she was tossed out of French for failing to participate actively and her grades in English and computing were much lower than she wanted. But Amira was good at mathematics and genetics was a love of hers. She was enjoying herself. Once again Amira selected the alleles for hair and eye color for the father (H, h; E, E) and mother (H, h; e, e). Quickly she created the four possible gametes for the father (HE, HE, he, he) and mother (He, He, he, he). “It’s 4, 4, 4, 4 again,” she declared. “But it is different this time.” Amira recorded the genotypes and alongside of each wrote the frequency and the phenotype. Then she combined those that had the same phenotype to obtain 8 brown, brown; 4 brown, blue; and 4 blond, blue.

They're Both Heterozygous!

"I know. I know. They will both be heterozygous on each trait." With a look of triumph on her face Amira created the 2×2 crosses for the mother and father. She then entered the possible gametes for father and mother as she had done before. Inadvertently she made a mistake in entering the possible gametes for the father (HE, hE, HE, he), but neither she nor I noticed. Accordingly, when Amira followed her routine she arrived at a frequency distribution of genotypes and associated phenotypes that she knew to be incorrect. Carefully she inspected the data in the matrix and admonished herself for making a careless error. "You've got to be careful," she announced as she changed the columns for the father to read (HE, hE, He, he). She corrected the information in the cells and turned her attention to her lunch. There was no need to finish the details—Amira knew she had it. "9, 3, 3, 1," she declared with a broad smile. "It has got to be the phenotypes."

IMPLICATIONS FOR LEARNING

The example of the dihybrid cross illustrates that, even though the full solution was never taught explicitly, and Amira did not seek the full solution either from books, the Internet, or other sources, six months after the lesson she had the resources to fully solve the problem, explain it discursively, and quickly identify and remediate flaws in her logic. The structure I provide in drawing the matrix and responding to her queries and suggestions is sufficient to support her agency and deeper learning. In this example, several important factors align. Amira is intensely interested in genetics and despite her failure to thrive in school mathematics she loves to solve puzzles involving pattern recognition and generation, combinations, and probability. Her prior knowledge and drive to know more are central to her deep learning and problem-solving success in this example. Also central is the provision of sufficient time for her to work out solutions, test them, and self-evaluate the adequacy of her final solution.

What is not clear from this example is the importance of Amira remembering that the solution is 9, 3, 3, 1. Could she have solved the problem without that knowledge and without me drawing the 4×4 matrix? Possibly she would have created these structures if I had not been present—we cannot know for sure. What is interesting though is that Kendall had similar structures, but under the pressure of having to teach others he could not proceed to a solution. I am not implying that Kendall could not solve the problem, just that in the context of having to teach others he needed additional structures to produce a solution.

The vignette about learning the dihybrid cross is salient because it highlights several advantages of thinking of learning as cultural production, thereby advancing beyond the mechanistic ways in which educational psychology often frames learning in terms of the cognitive processes of individuals. An examination of Amira's participation in a science classroom shows how her power to act, that is to access and appropriate resources, is dynamic and constantly unfolding. Her agency is mediated not only by her own beliefs, values, and goals, but also by the schema and practices of all others in a community. Hence, the material and human resources of a setting and schema such as rules, conventions, and ideology are central parts of the dialectical relationship between agency and structure, a relationship that mediates learning in a classroom. Amira's interest in biology and mathematics and her desire to become a doctor and hence do well at school are schematic resources that mediate the ways in which she accesses the somewhat limited resources to support her learning. Even though her teacher's practices appear to truncate the agency of most students in the class, Amira acts and thereby creates structures to support her own learning and the teaching and learning of others.

A key advantage of exploring teaching and learning in terms of the agency–structure dialectic is that efforts to improve learning do not focus only on individuals. Here the focus is on creating collective agreements and responsibilities for the quality of teaching and all learning within a community. Because agency is recursively related to structure, cultural production is always contextualized, involving interactions with material, human, and symbolic resources. If interactions are to be successful, participants in a community must have effective social networks and, within a particular field, those with the respect of others can use their social capital to access resources and enact culture in ways that reproduce and transform the culture of science.

CRASH OR CRASH THROUGH

Will Amira crash through or will she crash? Of course the metaphor of crashing connotes many images, from sleeping to meeting a grisly end in a motor vehicle accident. The vignettes about the dihybrid cross are evidence of an adolescent female with the power to coordinate mathematical and abstract thinking with science concepts such as genotype, phenotype, heterozygous alleles, and dominant and recessive genes. Amira could work out the details of the dihybrid cross despite her teacher having struggled to present the ideas in a whole-class activity. Although she was unsuccessful in completing the task in class, she was clearly on the right track. Even though the topic was not taught in subsequent lessons, in an interview six months later Amira worked out the details of the phenotypic ratios for a dihybrid cross when both alleles are heterozygous. In so doing she demonstrated an impressive knowledge of the culture of science and reiterated her confidence in being a successful scientist. Amira had an identity of being interested in and good at science. But how is her ability to solve problems that she has not previously been taught evidence of agency that can be transferred into fields not associated with learning introductory biology? Can Amira appropriate the culture of science to meet her own goals, especially those pertaining to academic success and life outside of school? If only success depended on Amira's determination to succeed. However, her agency is interconnected with the structures of the many fields in which she participates. Accordingly, whether or not Amira meets her goals is dialectically interconnected with the practices of others and schema such as expectations and rules, at least some of which are potentially hegemonic. In the next of this two-part series of chapters I examine contextual factors that structure and mediate Amira's achievement in school and progress toward her goal of becoming a doctor.

ACKNOWLEDGMENT

The research in this chapter is supported by the National Science Foundation under Grant No. REC-0107022. Any opinions, findings, and conclusions or recommendations expressed in this chapter are those of the author and do not necessarily reflect the views of the National Science Foundation.

NOTES

1. The philosophy of Edward Gough Whitlam, the former labor prime minister of Australia for three years, Dec 1972 to November 1975, was to crash through or crash. In the end Whitlam was to crash when Sir John Kerr, the Queen's appointed representative in Australia, removed him from office. The act of removing an elected national leader was highly controversial.
2. Pseudonyms are used throughout this paper.
3. There is a hint of disrespect in the interview that is not evident when Amira approaches teachers with suggestions for help.

REFERENCES

- Bybee, R., Buchwald, C. E., Crissman, S., Heil, D., Kuerbis, P., Matsumoto, C. and McInerney W. (1989). *Science and Technology Education for Elementary Years: Frameworks for Curriculum and Instruction*. Washington, DC: The National Center for Improving Science Education.
- Roth, W-M., and Tobin, K. (2002). *At the Elbows of Another: Learning to Teach Through Coteaching*. New York, NY: Peter Lang Publishing.
- Sewell, W. H. (1992). A theory of structure: Duality, agency, and transformation. *American Journal of Sociology*, 98, 1–29.
- Sewell, W. H. (1999). The concept(s) of culture. In V. E. Bonnell and L. Hunt (Eds.), *Beyond the Cultural Turn: New Directions in the Study of Society and Culture* (pp. 35–61). Berkeley, CA: University of California Press.
- Tobin, K., Elmesky, R., and Seiler, G. (Eds.). (2005). *Improving Urban Science Education: New Roles for Teachers, Students and Researchers*. New York: Rowman & Littlefield.

CHAPTER 68

Crash or Crash Through: Part 2—Structures That Inhibit Learning

KENNETH TOBIN

Based on what we know of Amira from the previous chapter, her future looks bright. Amira's goal of becoming a doctor seems within her grasp and her connections with our research team will open the door to opportunities for her to study advanced-level science while still at high school. However, there are worrying signs that her academic performance is slipping, especially in English and mathematics. Also, Amira's lifestyle is changing for the worse. During a meeting with her, after the dihybrid cross interview, Amira was not her bright self and looked downcast. Events in her home had changed appreciably and the impacts on Amira's identity, participation at school, and achievement were significant. In the following section Amira describes some issues from home and school that mediate her participation in science and other school subjects.

Slowly But Surely I'm Losing It

Amira: Every now and then for a long period of time I'll get really bad headaches everyday. Like last year from about the midsection of the year, just before changing classes and right after changing classes, that whole period of time, I had really, really bad headache at the end of the school day, right after lunch. And like this year ever since the beginning of the school year for like a week at a time, I have a really, really bad headaches where my eyes would water, my eyes would be red, my head would dry up for like a week, and then it'll go away. I'll be fine for like two weeks and then I'll get another headache.

My Aunt Tracey got evicted . . . something happened with her house, and they kicked her out. My big sister was living with my Aunt Tracey. My brother started being at home more. And his daughter and his baby's mom moved in. Only two people clean up in the house. Every now and then my brother would help, but only me and my older sister clean up in the house. There's other people supposed to be helping, but don't nobody else do it. And I get really bad headaches.

I can't be in a house everyday all day and then have my mom nagging me about gaining weight. I'm like, "Mom, I'm normally out running about. I'm normally on my feet." And then she will nag me. "You look like you gaining weight. You need to start doing more stuff. . . ." As soon as summer hit I'll be outside all day if I'm not baby-sitting my niece. If I'm not baby-sitting, I'm never in the house during the summer except . . . I don't come in the house until 2:00 in the morning during the summer. Nine times out of ten, I'm on the steps from like 10 to 2 just sitting there. But during the day, I'm on my bike, I'm on my skates, I'm at a skating party, or I'm at a party at the swimming pool. I'm doing everything. I'm at the movies. I'm walking around South Street. I'm doing everything during the day. So I don't have time to sit and gain weight. I'm so active during the summer and now I'm in the house. I get really bored and I get headaches.

I want to move out of my mom's house, but for real I don't want to leave my mom. I don't want to move to my father's 'cause we don't get along. I don't want to move in with my grandmother 'cause we don't get along. I really do want to stay living with my mom, but I can't be where she's going to just put all the chores on me. If I'm not there, she can't put them on me. Then I'm going to feel bad for my older sister, because that's who it's going to fall back on 'cause there ain't nobody else going to do it, but I can't do it no more.

Yesterday I came this close from cussing out my mom, and I really do not appreciate that. It's not right. I have all the respect in the world for my mom, and even just thinking about cussing at her really, really irritates me.

I don't have the control . . . I'm slowly losing it, and I really don't want to. I'm trying to hold on to it as much as I can, but it's not working. It's just been little stuff just been irking me. And I guess it's because there's so much big stuff around me really, really messing with my head. The little stuff really irks me. Like the knuckleheads in my Academy. Every time I get a little mad I won't do anything . . . and then on top of everything, the grade.

I got a F in English because I didn't turn the work in. I found out about that the day before yesterday. Man, I cried from the minute I found out until I went to bed last night.

I was shocked at the unfolding story that began at home and bled into Amira's practices at school. Within the home there was an interest in Amira doing well and a determination on her mother's part to administer punishments if the report card did not measure up to expectations. The support took the form of dealing with deficits and there were no efforts to identify and change contradictions arising from home life and academic performance, especially the impact on school performance of an expectation that Amira and her sister would attend to cleaning, cooking, and child care on an as needs basis. Fortunately, Amira had a small group of friends who supported her, and that included watching out for her academic performance. Amira noted that,

the thing is the crowd I run with, they won't let you do stuff that's not going to let you achieve what you want to achieve. Like Sherida and Felicia, those are my friends; those are my heart. And they won't let me do anything that's going to keep me from . . . like when Sherida heard that I had got an F she said, "How you get an F?" She would actually make sure that I did my work cause the first report period I didn't do my English work. That's how I got a C. But she would make me do my work. Sherida would actually sit there until I would finish my work. And she did her work while she was making sure I was doing my work in English class.

Although it is reassuring that Amira has friends who encourage her to reach her academic potential, it is evident that there are many issues associated with home and school that are mediating her health and participation in academic work. Above all, Amira needs to create social networks with adults in the school and thereby gain access to structures she needs to help resolve the difficulties she has identified and create a program of study that leads to high school graduation and entrance into a pre-med program. However, it is evident in the following interview that Amira is unlikely to build the social networks she needs without the proactive intervention of others.

Somethin' About Me Has Changed

The following dialogue between Amira (A) and me (K) is an excerpt from an interview between the two of us.

A: I personally do not feel that I deserve that F. C or D, but I do not feel I deserve that F in no way, shape, or form.

K: It's probably a combination of what you did and what you didn't do.

- A:** But I didn't even really get bad grades and stuff like that. I do not appreciate that at all.
- K:** Have you talked to your teacher about it?
- A:** I don't want to say nothin' to her.
- K:** Given that it doesn't affect her at all, and it affects you a lot, doesn't it make sense to get together all your stuff in English and say, "Can we have a talk about that F?" You know grades can always be adjusted and changed.
- A:** I don't know what to do about that F. The reason I really don't want to talk to her is because I don't know what I'm going to say to her. I told you I lost a lot of my self-control. I don't know what I'm going to say to her. Something about me has changed so rapidly that I don't know . . . I'm very unpredictable to myself, let alone to other people. I don't know. I guess I'm more unpredictable to myself than other people because people sell me short for what . . . like first of all, a lot of these ninth-graders don't think I'll punch them in their mouth for saying something dumb. Because the dumb stuff that happened last year, people don't know what to expect . . . they think that I'm not going to react in the way that I would. But they only know from what I didn't react to last year.
- K:** These kids you're talking about? Are they ninth-graders?
- A:** Some of them. But now, I'm actually talking about the tenth-, eleventh- and twelfth-graders. Like last year was a lot of stuff that I didn't retaliate, that I would retaliate to this year. Like . . . I didn't retaliate because then I had the self-control that I don't have now. Like last year you could say whatever you want to me, and I would ignore you. You could still do that sometimes. It depends upon who you are. But if you're like Shawanda or somebody, you'll get punched in the mouth by me as bad as that sounds. . . . There's this one girl, she try to keep testing me and testing me. So far I haven't hit her yet. It all started from something dumb that happened around my way. And she keep thinkin' I'm a chump because I won't retaliate to an argument . . . and right now I don't have the time or patience for anybody. I really, really don't. There's so much stuff goin' on and I got so much built-in anger I don't have the time for it. I don't have the energy. I don't have anything to deal with the stuff I deal with.

Amira is clear in her appraisal of her present circumstances that physical violence is likely to be inflicted on some of her peers and she avoids contact with one of her teachers, just in case. Presently there are many pressures and Amira does not have the resources to cope with them. She needs assistance, not only from among her closest friends and family, but also from within the school. Many of Amira's dispositions to act are framed by street code (Anderson, 1999), and she is chillingly aware of the likelihood and consequences of enacting those strategies either at school or at home. Urban youth, according to the code of the street, often seek to earn the respect of peers by physical aggression, including taunting and beating those they consider physically weaker. These codes seep into the school field, and Amira explains as almost inevitable the necessity for her to inflict violence on a group of peers she describes as knuckleheads. The consequences of not engaging in physical aggression will not stop at school life and there is an air of inevitability that Amira will probably have to fight and suffer the consequences of being suspended or expelled from school. More optimistically, and in contrast to those who seek to divert Amira from her goal of school success is a group of peers, Amira's *homies*, who look after her interests and provide structural support for her participation in activities that will ensure her success. According to Boykin (1986), communality is a disposition shared among African American youth. Hence, some of Amira's peers will assist her to navigate the conflict she anticipates and overcome the difficult structural problems of her home life, especially those that prevent her from studying and doing homework. However, as is evident in the next section, Amira's interactions with adults are not successful; significantly, she is not developing necessary social networks with her teachers, and is even avoiding essential conversations about her academic progress. The skills she developed in cogenerative dialogues are not being used to her advantage and her opportunities to learn are suffering accordingly.

STRUCTURES FROM THE HOME MEDIATE LEARNING

Events at home mediate Amira's practices at school (I think my home life affects a lot of my school work). Many problems seem to originate from an increase in the number of people living in her house from two to seven, including a child in need of care. Amira believes that she and her sister had to do all of the household chores, and she notes that the additional people reduce the space for study to such a degree that there is no longer room nor quiet space for her to do homework. Not only that, there is constant noise in the home and it is no longer conducive to life as Amira once knew it. Amira has gained weight and constant reminders from her mother increase her self-consciousness and she yearns for the summer when she dreams of life returning to normal. Even if it is desirable to do so, Amira cannot leave events from home at the front door to the school. When she comes in with a headache and bad feelings about her treatment at home, it is difficult for her to be enthusiastic about her classes and tolerant of her peers. In classes, the highly interactive target student of just one year ago is likely to put her head down and sleep or appear to sleep. Amira has headaches that probably are stress induced and efforts of a teacher or peers to get her to lift her head might be met with verbal or physical aggression.

I was aware that Amira's life was changing. To begin with, her hair changed color. First it was bleached, then dyed purple, and then red; finally she shaved her hair off. One year after the genetics class, Amira's participation in the classroom was different too. I observed her in social studies, was alarmed at her lack of participation, and discussed the changes in her practices with a concerned social studies teacher. However, when I saw her in a physical science class I decided to intervene on her behalf. Head down Amira seemed unmotivated and unchallenged. She slept through the class I observed and I then requested time to meet with her.

I had many concerns, not the least of which was that Amira did not have an advocate for her educational progress. Her relationship with her mother was close to dysfunctional, and her schedule at school was seemingly unrelated to the courses she took as a freshman and her career goals. I found it ironical and more than a little sad that Amira was attracted to the Health Academy because of her interests in becoming a doctor, yet the Academy had modest academic goals for the youth, whom they regarded as most suited for positions in the health field that did not require degree-level studies. Fortunately there was a small honors-level biochemistry class being taught by two graduate students from my university and I suggested to Amira that the challenge would be just what she needed. Her initial response might have been anticipated.

I don't need a more challenging curriculum . . . I need organization right now. Not so much as me personally organizing my books and stuff. No organization in my life. It might sound like I'm just blowing everything out of proportion. But I'm not. I need to get organized first. All I need is a break right now, and then I can decide what I want to do, where I want to go.

Amira's priority was to focus on the burden of events in the home and interpersonal conflicts with some of her peers. However, as I talked more about the biochemistry class in relation to her interest and strength in genetics and her goal of becoming a doctor she brightened up and showed enthusiasm for making a shift to the biochemistry class (For real? For real? I want to start . . . a lot of my friends, well, not a lot, like three of my friends have Saturday college classes). Not only that, a change to biochemistry would necessitate rescheduling of other classes too, leading to a fresh start in mathematics and French.

To my relief, Amira showed enthusiasm for the plan and because of the social capital I built over a period of five years of being a researcher and an occasional teacher at City High, I could act on her behalf, speak to the principal about Amira's problems at home, and convince the

Academy coordinator to change her schedule so that she could take the biochemistry class and thereby change her assignment to French and mathematics. Not only did she get a new science class, but also new French and mathematics classes and teachers. These changes breathed new life into Amira's academic life at school. However, the deep problems were not resolved. Amira's problems extend beyond school boundaries and it is clear that others must be involved in resolving them.

SCHOOL STRUCTURES ARE INADEQUATE

Amira's problems need the input of adults if they are to be resolved. However, Amira does not have trusting relationships with adults in the building. She likes her science teacher and respects her social studies teacher. However, she does not regard any adults as having the resources to assist her to solve her present academic and social problems. Furthermore, she perceives the counselor for the Academy as ineffective.

Ms. Wise is the counselor. I don't like her because she is more of a talk person. She's more of You listen, I talk. No matter what your problem is this has to be the solution to it. I'm like Ms. Wise, not everybody's problem is the same. She say, "Well, this will help." It won't. She just don't listen . . . she makes me so mad.

Apart from having a counselor with a reputation for not listening and suggesting one solution for all problems, there are no structures to identify and assist students in the Academy whose learning is hampered by factors outside of the classroom. I am curious about the structures that might emerge to take into account that most students in the Health Academy were African American, female, and living with economic poverty. My inscriptions of ethnicity, gender, and poverty are not intended to catalyze deficit remedies but to examine the strengths of these students and identify structures they can access to support their learning. Rather than planning and acting to control and truncate the students' agency, is it possible to provide structures to expand their agency, affording greater opportunities for them to act in pursuit of their own interests?

Although Amira's academic performance and classroom practices have plummeted in the last year there are few signs of awareness among the faculty and no steps from within the Academy to reverse the trend. The signs of decline are apparent to me as an outsider, yet from the inside they seem to be accepted as normal for some fifteen-year-old females. Perhaps this is a problem of having so many students with similar ethnic and economic histories. To be fair to the teachers and other adults in the Academy, there are 200 students with needs and providing personalized attention for each of them can be difficult. However, this was a primary reason for creating Academies in the first place: to allow for greater levels of personalization between smaller numbers of students and faculty and for enduring relationships to form over the four years of high school.

How is the Academy structured to identify students having problems and to resolve them? Regular weekly faculty meetings occur and students regarded by faculty as problems are identified and Academy-wide solutions are sought. Rather than diagnosing learning problems and taking appropriate actions, most time is given to resolving problems associated with student misbehavior, sporadic attendance, and late arrival to class. Ironically the focus is on management and control of students rather than curriculum, learning, and building a community. It is as if students have to make the changes needed for the Academy to function as a learning community. Furthermore issues such as fighting and sexual orientation are creating factions among the students and there is a growing necessity for dialogues about the different forms of diversity in the Academy and ways to deal with difference.

At the beginning of each day there is a homeroom class. Although Amira admires her homeroom teacher, the following vignette illuminates some major contradictions.

Druger's a good teacher. He's my advisory teacher. Like one day, I wasn't here. Somebody tacked his chair in computer class. And when I came back we couldn't do nothin' in advisory except we just had to go by the book. Like usually he would let us out of advisory. And all he had to do was see us to mark us in. And we didn't have to sit there like any other advisory teacher would make us do. And when he got his chair tacked, he made us sit in the class. We couldn't go out the class, couldn't nobody come in the class that didn't belong in our advisory, and if you were more than five minutes late you were late. And if you went back out, you were marked late. And it was like we was on punishment. That's what he called it. And he said, until I find out who tacked my chair, you all not going nowhere.

Neither Amira nor Druger see the potential of the homeroom period for communicating across boundaries such as those I identified above. Many teachers regard it as an imposition and not part of their professional duties. A problem throughout the school is that faculty arrive late for the homeroom period and students wander the hallways and use the time to socialize with peers, often from other homeroom designations. Amira prefers to socialize with peers outside of the confines of the classroom and she does not consider the opportunities that homeroom can provide her to build social capital with an adult and learn to communicate successfully across such boundaries as class, gender, and age.

The role of Druger as an advisory teacher must be questioned. The homeroom period is an ideal place for him to build rapport with students in a nonacademic context. Druger might have learned about the difficulties of Amira's home life, thereafter assisting her to achieve her goals at school. For example, it is an opportunity for Druger to learn about conflicts associated with heterosexual and lesbian youth in the Academy. Even if Druger does not have the personal resources to resolve issues like this as they unfold, he might bring them forward as discussion topics for all participants in the Academy. Arguably the homeroom period is a seedbed for the creation of culture that is essential to the Academy's mission, especially since the social and cultural histories of the teachers and students are so dramatically different.

BREACHING THE INEVITABLE

Will Amira become a doctor? Will she graduate from high school? The likelihood of either or both responses being affirmative is contingent on the extent to which Amira breaches or succumbs to the forces of social reproduction (Bourdieu and Passeron, 1990). She has a brilliant mind and is determined to succeed. If there is a way for her to break out of the mold in which she has been cast I am sure she will find a way to do it. Presently the forces of social reproduction appear to be moving Amira adrift of the course toward medical school. However, school structures allow her to redress some of the failures on her academic record. Having failed English, Amira went to summer school and passed the subject with ease, thereby expunging the failing grade from her academic transcript.

Now, as a junior Amira is once more on course to graduate from high school. However, the active and extroverted individual we observed in her freshman year is not actively involved in her present chemistry class. Yes, a chemistry class. Even though Amira took an advanced biochemistry class she was assigned to an introductory chemistry class, well below her level of attainment. This is a problem faced by many students in a school committed to maintaining the advantages of an Academy structure in which a small number of students and teachers comprise a community, thereby limiting the variety of science courses offered in a given year. It is easiest for the school to schedule students for the course that suits most of them and aligns with the preferences and qualifications of the Academy's science teacher. However, taking an

introductory chemistry course is not in Amira's interests and will likely diminish her already plummeting interest in school. If City High is to address the problem of scheduling classes that better fit with the educational goals and career aspirations of students, there is a need for more input from the students and a greater degree of local control over the schedule. It is probable too that the Academy structure would have to be modified to allow advanced classes to be offered on a schoolwide basis so that such classes could contain viable numbers of students, be taught by well-qualified teachers, and be supported by appropriate material resources.

If teachers are to make a difference in the lives of their students, it is imperative that they are thoughtful and responsive to what students know, can do, and are experiencing in their lives. I regard it as important for teachers to be researchers of their own practices and the ways in which those practices afford the education of their students. A thoughtful teacher would not just look for patterns of coherence in the culture enacted by his or her students but would also probe to identify contradictions and make sense of them. Too often the language of teachers in and out of the classroom is replete with statements about patterns regarding classroom life, with little attention to the extent that these patterns are robust and whether or not there are contradictions that could be removed or perhaps strengthened to create new patterns of coherence. Unless we take significant steps to change the nature of urban schools, addressing the oppression of students and teachers and imagining how they might be differently construed, the futures of many students like Amira will be bleak indeed. Who will prevent Amira from reaching the goal she so desperately seeks—or dare I ask, who will step forward to help her on her way?

BEYOND STATIC MODELS OF LEARNING

"Girl, you got three strikes against you. You're Black, you're poor, and you're a woman. You've got to rise up. Take this chance and use it well." The Black, female principal of City High was an advocate for her students. She saw the potential in every one of them and refused to take deficit perspectives on what they could accomplish. I was confident that she would support my suggestions to provide greater challenge in Amira's academic program. Her support, a political act, was grounded in her short history as a principal at City High, where almost all of the students were Black and poor. Her approach was to be highly energetic and hands on. If there was litter on the floor, she picked it up, if students were out of line, she let them know about it. When she saw things she liked she was expressive in her support and encouraging to do more things like that. The principal wanted to offer more advanced placement courses and took every opportunity to get her students out of the building to learn in the community, especially on the campuses of nearby universities so that the students of City High would have images of themselves on college campuses, learning at a university. The principal realized that learning had to do with goal setting and being able to imagine possibilities that were related to experience. She knew only too well that the students of City High constituted an underclass, most of whom had never experienced the fruits of middle-class upbringing and adults who were college graduates. Accordingly, my requests to provide Amira with a new program were at first met with derision and then unwavering support. "Dr. Tobin! We got more than two thousand kids in this school. We cannot save them one at a time!" she chided me. Then without a moment of reflection she announced, "Let's do it Tobin. Bring Amira to see me"

In a principal's office, far from Amira and her peers, structures were created to support her agency. Those changes did not propel Amira in a deterministic way toward a pre-med program at College, but they did make it possible for her to stay on course with her vision of becoming a doctor. Amira's opportunities to learn were structured by others acting on her behalf and the new structures expanded Amira's agency, such that her cultural production, reflected in her learning of science, was now aligned with the political necessities of having to pass four science courses

to graduate from high school and to know some science so that success was possible in college science courses.

In this chapter learning has been situated far beyond what is customary in standard education psychology, which often explores learning in ways that are decontextualized, individualistic, transhistorical, and politically neutral. Amira's life is complicated by society's inscriptions of her as a teenager with ethnicity, gender, class, and sexual orientation as especially salient. These inscriptions mediate her own dispositions, values, interests, beliefs, and talents, coming together in an identity that is fluid, changing as Amira crosses the boundaries of the fields that constitute her social life. Amira is not entirely free to inscribe her own identity because others interact in the fields she inhabits; thereby constantly changing the structure to which Amira's agency is dialectically interconnected. Because agency and structure are dialectically related within a field, and because the boundaries of fields are porous, the conditions of Amira's home life frame her experiences with peers in the streets, and then when she enters school, the stress of social life, as it is experienced macroscopically (across time and space), mediate Amira's readiness to access resources and her physical well-being.

The theoretical perspectives I have adopted in this chapter situate learning in historical, political, and social contexts that illuminate Amira's struggles against social reproduction. Part of Amira's struggle is against hegemonies that favor inscriptions that are masculine, upper- and middle-class, White, and heterosexual. However, my theoretical model is not deterministic and there are pathways to academic success and social transformation. Nonetheless, it is apparent that Amira cannot succeed solely through her own efforts. Others, especially those within the school, must intervene to create structures to expand the agency of students like Amira. Of considerable promise in this regard are structures that lead to the emergence of communities of learners, in which collective agreements about rules, roles, and goals can evolve and be negotiated.

CONCLUSIONS

Social life is enacted in multiple fields, each of which has porous boundaries. Accordingly, culture that originates in one field can be enacted in others. Enacted culture is experienced as patterns of coherence and associated contradictions and, depending on the specifics, culture may appear as related to learning or resistant to it. Many of Amira's practices described in this chapter might be regarded as structures that would not support or signify academic progress and its associated successful interactions. Unlike those practices described in the dihybrid cross vignette, which so evidently were associated with deep learning, those described in this chapter point to failure and lack of motivation to succeed. I have endeavored to point out that there are other ways to make sense of Amira's practices and schema rather than through the pervasive deficit lenses often used by adults to explain what they experience of urban youth in urban schools. The struggles that faced Amira in her lifeworld, many associated with her ethnicity and class, were overwhelming for her and she did not have human networks outside of the school to resolve her problems. Unfortunately the adults within the school were not responsive to Amira's changing patterns of participation. Although it is possible to point to my interventions and argue that the rest should be up to her, I argue that many others like Amira did not have an adult to advocate for them and presumably they failed to meet their goals.

The evidence I present in this chapter suggests that schools adopt perspectives that assume that individual students are on their own and will either crash through or crash depending on their personal efforts, including what must be done away from school. Hence structures associated with ethnicity and class, for example, might be regarded through deficit lenses and efforts might not be made to structure the school environment to allow students to use what they know and can do from their lifeworlds as foundations on which to build successful interactions and deep

learning. An essential and all too rare focus might be on building solidarity within communities, such that social networks extend across the boundaries of ethnicity, social class, and age.

Schema that appear to be hegemonic for urban youth are beliefs that they are not university bound, do not enter professions such as medicine, and must overcome deficits associated with their ethnicity and social class through individual efforts, talent, and hard work. Schema such as these are counter to those that highlight the centrality of successfully accessing and appropriating resources in successful interactions, thereby generating positive emotional energy and solidarity within a community of learners. If efforts can be directed to the creation of collective commitments throughout a community and across boundaries such as those previously identified, then the success of students like Amira is more likely.

CODA

Amira graduated from high school after what was a roller-coaster ride replete with contradictions. In her senior year she left home and struggled to support herself with a variety of minimum-wage jobs. Even though she is presently in her freshman year of college, participating in a pre-med program, her grades are precarious and her eventual success remains dubious. Even so, I do not count her out. Amira remains committed to becoming a doctor and struggles against the forces that steer her off course. That agency is dialectically constituted with structure does not preclude Amira from becoming a doctor and fulfilling her dreams. Rather, through her agency, Amira can appropriate structures to navigate chosen pathways successfully, ignoring temptations to appropriate structures in pursuit of other goals, and identifying and crashing through hegemony, thereby resisting oppression and its reproductive cycles.

ACKNOWLEDGMENT

The research in this chapter is supported by the National Science Foundation under Grant No. REC-0107022. Any opinions, findings, and conclusions or recommendations expressed in this chapter are those of the author and do not necessarily reflect the views of the National Science Foundation.

REFERENCES

- Anderson, E. (1999). *Code of the street: Decency, violence, and the moral life of the inner city*. New York: W.W. Norton.
- Bourdieu, P., and Passeron, J-C. (1990). *Reproduction in Education, Society and Culture* (2nd ed.). London: Sage.
- Boykin, A. W. (1986). The triple quandary and the schooling of Afro-American children. In U. Neisser (Ed.), *The School Achievement of Minority Children: New Perspectives* (pp. 57–92). Hillsdale, NJ: Lawrence Erlbaum Associates.

Memory

CHAPTER 69

Memory: Counter-memory and Re-memory-ing for Social Action

KATHLEEN S. BERRY

FOCUS OF THE CHAPTER

Memory as constructed by educational psychology to suit dominant features of modern life has particular flaws that need to be addressed. Critical theorists and pedagogues challenge educational psychology's traditional construction of memory. Furthermore, to rethink what memory is has implications for what counts as teaching and learning in a postmodern age. Why and how to transform modern notions of memory and a host of educational practices is the focus of the discussion that follows.

WHAT IS MEMORY?

This question requires a tracking of the changing faces of memory. How and why have constructions of memory changed over time and place? The significance of this question leads us to an examination of different modern theories, definitions, and practices that involves how knowledge and beliefs about memory were constructed. An examination of the history of memory can be tracked from everyday, informal existence to how and why it entered into the formalized structures of knowledge such as a discipline like educational psychology and the mainstream, formalized policies, discourse and practices of disciplines, institutions and daily activities in educational circles. For our purposes, educators need to ask how the theories and practices of memory entered the mainstream in a manner that speaks with authority and as if the knowledge and truth is absolute, generalizable, correct, natural, and normal. In other words, why have teachers and others consented to the constructs of educational psychology as having the dominant say on what is memory?

In Western civilization, memory has its roots in the origin of the word from the Latin *memor*, "to be mindful." The mind, body, and spirit could not be separated as the center of knowing and thus memory. This placed ideas of what memory is into a more bodily, spiritual dimension not simply as materially located and thus less visible, measurable, and controllable. The discourse surrounding what memory is also influenced what counts as teaching and learning. Teaching and learning in a fashion that enhanced and stored information in/as memory would be treated as a holistic

dimension with no specific locale. In addition, the knowledge, values, beliefs, and histories of society and institutions would be constructed around an oral society, existing in the storytellers' renderings of truth, fact, events, and so forth. Memory informed mainly by oral knowledge, value, and history was dependent on immediacy, spontaneity, and playful structures. Each telling had a different twist, a different carryover from the first telling to each subsequent telling. This premodern information and storage of memory was context-specific. Societal knowledge and values of Self and Others was carried in the oral language of the storyteller. Although specific to the time and space, memory in pre-modern contexts was shifting and elusive, difficult to measure and control. What, of course, is missing from this earlier definition is memory as mindful of who, what, where, when, and how—which will be addressed later.

As society and technologies changed, so did the meaning and practices of memory work. Two major events occurred in Western civilization that affected the original interpretation of memory as mindful and the uses of the word. The first turning point was a philosophical revolution known as the Enlightenment. A major philosopher of this period, and the first to set the future theories and practices of Western psychology still in use today, was Descartes. He created the mind–body dualism that shifted memory into the mind as pure thought. “I think, therefore I am” (*cogito ergo sum*) became the catch phrase that captured the power of memory as mind separated from body and spirit. According to his philosophy, the latter two were not reliable as sources of knowledge. Memory became attached to cognition, to thinking, to a biological matter called the brain. This perspective set the foundation for scientific rationality (follow a method and you'll be rational), objectivity (subjective, personal, experiential knowledge does not give truth so cannot be used) and logical positivism (eliminate the human variables and that's logical). Cartesian philosophy legitimized treating memory as an object. Since that time, memory as a site for objectivity entered the theories and practices of modern education. In fact, memory today is constructed as a function of the brain thus producing, circulating, and sustaining the knowledge, belief, and value that memory can be rational and logical only if it is “objective”; that is, as an object separated from the body and spirit. With this theory as dominant, educators can control, manipulate, and test memory as cognitive knowledge, truth, and value. Other memories such as those produced and sustained by the body and spirit have limited to nil value in current modern, institutional policies and practices. One discipline in particular, educational psychology, used this Western, modern objectification of memory to produce and legitimize teaching and learning theories and practices that still dominate the field of education today.

A second major influence on how memory has been constructed by current academic disciplines such as educational psychology was the invention of the printing press. This may seem a strange connection—memory and the printing press. The intent here is to briefly track how Cartesian (Descartes) dualism moved from an initial position of power and reached the status it still holds today, especially in several areas including teaching, learning, and memory. Approximately within one hundred years of each other, the printing press, European colonization, and Cartesianism brought together the theories and practices of dualism—worldwide. There was barely a part of the world that was immune to the philosophical, intellectual, cultural, linguistic, political, and economic changes brought by the European colonizers. The authoritative power of Cartesian thinking was spread across the world by European colonizers and the powerful communication technology of the printed word. Print as the dominant communication technology of the modern era, along with other societal and institutional practices, enabled the circulation and legitimization of memory as objectified cognition.

Today, textbooks such as educational psychology's constructions of memory and other culturally constructed artifacts organize knowledge, truth, and practices that speak with a voice of authority that needs to be challenged. Historical changes in what memory is, as previously discussed, is compatible with the rise to power of scientific rationality, objectivity, and logical

positivism, the most powerful intellectual and political forces in circulation today. The hegemonic forces used throughout the history of memory have led to consent by the masses (hegemony) of what memory is. In addition, practices that carry out the theories of memory enter the field of education, mainly through the discourses of educational psychology, and become accepted by policy makers, researchers, and practitioners all as naturalized, normalized, generalizable, and universalized. Memory remains an object; individualistic, singular, controllable, manipulable, testable, and measurable. Finally, and dangerously so, an object that can be controlled socially, historically, intellectually, and for political purposes. For critical pedagogues, this construction of memory, although dominant, is very problematic.

PROBLEMATIZING EDUCATIONAL PSYCHOLOGY'S CONSTRUCTION OF MEMORY

Critical pedagogues ask several types of questions about power; to name a few—intellectual, economic, social, cultural, historical, linguistic, gendered, racial, classed, spiritual power, and so on. Is the power equitable, inclusive, diverse, plural, and socially just for all? Who has the power and who doesn't? Why do some have it and not others? How did some get it and not others? What and whose knowledge, beliefs, truths, values, and practices count and don't count? And for the focus of this chapter, what counts as memory? Whose memories count and whose don't count? What other constructions of memory need to be included in theories and practices of teaching and learning? These are only a few of the questions asked by critical pedagogues for the purpose of problematizing texts, structures, policies, and discourses. In other words, critical pedagogues make everything and everyone problematic. That being said, it is not the same as making the world a problem, or positive and negative (a binary logic that is problematic), and then seeking a final solution. It is about examining and critiquing the world for locations of inequities, exclusiveness, and so forth. It is about making informed decisions but not for all people, all times and all places. It is about rethinking and changing the structures, policies, and practices that challenge the status quo, taken for grantedness of everyday practices such as, in this case, memory.

The brief history of memory presented previously is made problematic by the fact that critical pedagogues work with a host of theories about constructions of the postmodern world. Theories and their discourses that challenge, put into question educational psychology's dominance in the field of studies on memory come from areas such as postmodernism, postcolonialism, and post-structuralism; studies about delineated cultures such as by gender, race, class, religion, sexuality, age, nationality, ethnicity, and a host of other intellectual activities too vast to include here. Memory in traditional educational psychology is dominated by theories and discourse of cognition, brain studies, and scientific rationality, thus making it possible in educational circles to easily measure by quantitative means and treat memory as an object removed from human experience and the body. In addition, memory as object ignores the responsibility of society, institutions, and Western civilization to produce practices and spaces for personal and collective memories to be included in curriculum policies, classroom practices of teaching, and evaluation. Educational practices that support this dominant construction of what constitutes memory are legitimized and hegemonically enter teacher education, professional development, classroom activities, teaching methods, testing, learning, and administrative and curriculum policies. Furthermore, memory, as constructed by educational psychology, sets up a continuous interrelated system of marginalization (of other ways of knowing and being and remembering), erasure (selective forgetfulness), colonization (of the Other's memory and memories, imperialist's superiority), exploitation (of memories that are silenced, assimilated, or misrepresented), and violence (brainwashing by the dominant).

Memory as constructed by critical theorists and pedagogues is counter-memory and re-memory-ing. Memory is a location, neither subjective nor objective, neither concrete nor abstract, where a world of pain and struggle, joy and success, exists in time and space. Although contained in the phenomenological body through “lived experience,” memory is connected to the world through intertextuality. Texts that construct memory range from oral to print texts, from family to civilizational texts, from ancestral to future times and spaces, and from texts that create totalitarianism, oppression, fear, and silence to those that ask for freedom, social justice, agency, equity, and inclusion. Without memory as counter-memory to the discourses and practices of totalitarianism and without the education of memory for social action, the dominance of educational psychology’s notion of what counts as memory strangles the hope for freedom, social justice, and participatory democracy.

Traditional educational psychology works with scientific rationality and logical positivism in construction of memory. These approaches construct knowledge and knowledge processing as neutral and biological. Memory is seen as an information processing cycle of encoding, storage, and retrieval. Teaching and learning practices take on particular content, structures, and methods that sustain the cycle even to the point of testing and evaluating. Educational Ministries at the state and national levels decide on what knowledge is to be encoded and how. The knowledge usually is that which supports the culturally and intellectually dominant—enculturalization of the subjects, so to speak. How to encode is stated in curriculum documents and textbooks on teaching and learning such as those produced by the disciplinary paradigms of educational psychology and its fraternal disciplines, counseling and human development. Storage is seen to be in the brain; the cognitive mind that knows; a mind [not the human, just their mind?] is a terrible thing to waste. Retrieval lies in methodologies of measurement: recall, recognition, and relearning. In recall, the subject must produce the correct response given very limited cues (mnemonic devices). Recognition is a method of testing retrieval in which the subject is required to choose the correct answer from a group of choices. Finally, relearning, a method of testing retrieval in which students learn material and then relearn the same material after an interval of time and trials (Kaplan, 1990). And we know what happens to those learners who question the knowledge sources and producers. We know from experience, history, and research what happens to those who can’t accept the knowledge; to those who store memories in other places like the body and the spirit; and we know that those who can’t retrieve correctly and accurately the second, third, and tenth time are failures, bored, drop-outs, and deviants. Many of these learners are labeled learning disabled, intellectually deficient; learners with *poor* short-term, long-term memories. Dollars, time, and effort are spent on these learners to increase/improve their cognitive abilities, thus their memory. Programs are developed and professionals trained accordingly to provide remedial materials and sessions to correct, cure, reform, restore, and rehabilitate a learner’s memory ability and capacity. The usual method is repetition of the very practices that the learner encountered in the first stage of encoding, storing, and retrieving knowledge. These approaches to memory and the methods used by traditional educational psychology are very problematic if contextualized in the theories, discourse, and practices of critical theorists and pedagogues.

Knowledge is not neutral; thus memory is not neutral. In other words, memory is a marker of power. Yet in most educational disciplines, policies, and practices, memory is considered as a neutral object. In critical studies, memory is located in the body, mind, and spirit at the individual level, a reclaiming of the original meaning of memory as mindful. Memory in critical studies is also constructed by societal, institutional, and civilizational policies and practices. This broadened arena of memory offers a multitude of locations and possibilities compared to the reductionist model of traditional educational psychology. It also necessitates the excavation (archeological examination) of what constructions of memory exist at certain spatial and temporal

points that reproduces or resists the mainstream constructions of memory and its knowledge stored. Critical pedagogues also examine the connections (genealogy) between the different discourses on memory and critique the ways in which certain memories are supported by particular intellectual, economic, social, and historical contexts.

The examination and critiques are not meant to be mere exercises in academic logic. Foucault's analysis of discourse/text/practices, in this case of memory, called archeological genealogy, is concerned with the relationships between power and knowledge. In addition, archeological genealogy investigates how the relationships of power operate as conceptual frameworks that privilege particular modes of thinking and certain practices about memory and excludes others. Since symbolic systems of thought are the way humans organize and construct these frameworks, critical theorists and pedagogues find the competing discourses and practices about memory the site of unequal power relations and practices. "Moreover, power should not be thought of as a negative force, something which denies, represses, negates: power is productive . . . in fact power produces reality . . . domains of [knowledge, truth, belief and value]" (Storey, 1993). It is in these competing domains that critical pedagogues find inspiration to teach using counter-memory and re-memory-ing for social action.

Previously, I mentioned how and why modern constructions of memory were tied to scientific rationality and the printing press. It is now time to elaborate on how critical studies and pedagogues consider the role of postmodern technologies. Needless to say the most influential technology that redefines what memory is and how a reconstruction of what and whose memory counts is the computer. What the book was to the modern era, the computer is to the postmodern age. Even in terms of encoding, storage and retrieval, the computer has changed, not only how we think and act through memory but how we teach and learn. Without a doubt, it is the technology of the future and when it comes to knowledge is power, it is the computer that offers the power. On the one hand, we know it is the major source of knowledge for those who (individuals, societies, institutions, etc.) own and control computer technologies. An even greater power, as with book technologies, is for those who produce and control with the click of the mouse the multiple memories encoded, stored, and retrievable in a computer. Just because this technology can store and retrieve more varieties of knowledge and faster than books, what memories and whose memories count are still major questions for critical theorists and pedagogues.

I'm reminded of several undergraduate students who were asked to do a library search on a specific topic. We were in a 300-year-old university setting with books and documents dating back to the 1700s. Of the twenty-nine students given the task to do a research project, everyone of them headed to the computers. As a pedagogue of 40 years' experience, I was alerted very dramatically to the fact that the major source of knowledge for these postmodern students was the computer. Indeed they also use the technologies of television, film, and music as sources and occasionally parents, teachers, and books. However, the students still accepted these prosthetic memories (Landsberg, 2000); memories we have without having lived the experience it represents. For several reasons this is still problematic for critical theorists.

Memories, whether from body/mind/spirit experiences or second hand sources such as books, computers, and film, still remain individualistic possessions and reproduced those of the dominant group. The knowledge and values were researched and assumed to be the authorities as memory and memories were being constructed by the text's technologies. The way the students read the texts and reproduced the knowledge in essays and assignments remained unchallenged. Without alternative ways and the institutional spaces to challenge the knowledge, values, and structuring of memories, identities, and content, they had succumbed to the Enlightenment's philosophy of scientific rationality, objectivity, and logical positivism. Moreover, they accepted the knowledge and truth as essential (natural), stable, and for all people, for all times and spaces (universalizing). The knowledge is stored in memory for retrieval on exams or decision making in the future. If

we accept educational psychology's traditional theory of memory, the above example presents no difficulty for teachers and learners. For critical theorists it does.

When teachers and learners accept the traditional theory of memory as produced by academic disciplines such as educational psychology; when this dominant construction of memory enters society and institutions as natural, normal, and universal; when memory is encoded with singular truths; when memory is stored as homogenous, authoritative knowledge; and when memory is retrieved as individualistic yet universal, the fundamental promises of a postmodern democratic society are being corroded. This takes us back to the questions asked by critical pedagogues: What counts as memory and what doesn't? Whose memories count and whose don't? What happens when dominant status quo memories are challenged (counter-memory)? What happens when one person's, one cultural group's, one nation's, one civilization's memories are in conflict with the dominant's? In what contexts were the memories constructed? By whom? How? How does context influence what and whose memories count? Why those and not others? What does it mean to have a "good" memory or a "bad" memory? These are just a few of the possible questions that can be and should be asked when the postmodern principles of democratic societies, institutions, and nations are at stake. Theories and practices of plurality, diversity, inclusiveness, equity, and social justice are just a few of the principles used when examining and critiquing, excavating and connecting, articulating memory and memories. Without these principles and freedom to ask the questions, memories are no more than objects of totalitarianism and brainwashing made to appear natural, neutral, and normal.

RETHINKING TEACHING AND LEARNING PRACTICES

A theoretical rethinking of what counts as memory produces a change in practices. Postmodern memory and counter-memory do recognize the practices of modern constructions of memory and uses their frameworks sometimes. They do so, however, with a different set of questions similar to those listed in previous paragraphs. To rethink our teaching and learning practices, what seems the best and, dare I say, logical place to start is with particular questions; questions that situate memory and memories in larger contexts than those of cognition as an activity of the mind/brain and beyond the responsibility of but not separate from individual memory. Practices that involve supplying memories works mainly through the symbolic (oral, print, visual, audio, concrete, abstract, etc.) ordering of thoughts. For these reasons, we also have to rethink how symbolic ordering of memories also has to change. The following is a partial list of ways that educators (teachers, administrators, parents, community, television and film producers) might begin to rethink their practices for the inclusion of postmodern memories and counter-memories.

1. Examine the practices you use to teach that has students learn in particular ways. Are they what you would consider complicit with, in conflict with, contradictory to, resistant to, negotiated with those of traditional modern ways of teaching and learning? In what ways? Why so?
2. Examine how other teachers, parents, educational administrators, institutional policies, disciplinary textbooks on teaching and learning think you should teach. In what ways do they support differences from or confirmation of the dominant ways of scientific rationality and logical positivism as discussed above? Are practices that include different teaching/learning styles, multiple intelligences, and multiple mnemonic strategies encoded with messages of objectivity and methodological homogeneity that reproduces or challenges scientific rationality? In what ways do you teach that prevents the reduction of individual memories to objectification and instrumentalism?
3. Examine the materials (oral, books, film, TV, computer, etc) that store knowledge, beliefs, values, representations, etc. that become memories. Whose memories? Are they those of the dominant, negotiated, or marginalized? What memories are excluded? How does the knowledge and the structure of the

material/textbook order/encode memories? Are the memories individually retrievable or a group's collective memories? Whether individual or collective, how does the text/material privilege and legitimize their memories and silence or misrepresent the Other's memories? How and why does one set of memories deny the authenticity of the Other's memories? How and why do one set of memories constructed by one culture/nation/gender/race etc. minimize or trivialize the memories of the Other?

4. Examine the academic disciplines that produce certain memories. What boundaries exist between the memories on one discipline and another? In what ways do the disciplinary boundaries hierarchize certain memories such as those belonging to the highest form of knowledge according to Aristotle's theology, mathematics and physics, or the lowest in the hierarchy, which included fine arts, poetics, and engineering? How and why are the values, knowledge, and the memories stored considered universal? How can you teach that disciplinary memories can be challenged? What creative memories are produced when interdisciplinary studies are integrated into the teaching/learning difficulties? In what ways might creative memories point to the problematic claim of scientific objectivity and neutrality?
5. Locate yourself and your students in the memories of your teaching/learning contexts. What memories were/are produced by your ancestors? What gender, race, class, religion, history, nationality etc. shaped those memories? Those of your community? The institutions you teach and learn in? Whose memories are they? How did they become the official memories to teach/learn? Why? How are you/students positioned in the memories? Which positionings are privileged and which aren't? Why?
6. Contextualize your practices. What time and place were/are the memories generated from? What was/is the historical, cultural, economic, social, intellectual, and political contexts in which the memories were generated? What made certain memories generated in the different contexts have staying power? Why? What was going on in the different contexts that produced dominant memories and continue to reproduce exclusions, inequities, and social injustices? What memories are planted that are connected to other contexts that produces power and powerlessness? What memories produce and legitimize practices of violence, direct and symbolic?
7. Challenge assumptions carried in unexamined memories. What types of teaching and evaluation can be used that teach students to challenge truths, knowledge, beliefs in memories that are passed off as absolute, stable, neutral, and official? How can a variety of texts (oral, film, etc.) on the same topic, issue, content, and history act as counter-memories? How can you teach readers to disrupt the stability and authority of canons (texts considered classics), thus disrupt established canons of memories? ? What intertextual readings (how the memories generated in one text are dependent on memories borrowed from other texts) of a text can reveal contradictory memories that challenge dominant/authoritative visions of society and human relations?

These are only a few possible questions to initiate a change in pedagogical thinking and practices that are mind-full, about Self, Others, and relationships of power at the individual, societal, institutional, and civilizational levels. Articulation of these and many other questions challenges and expands the traditional constructions and practices of memory developed by disciplines such as educational psychology and modern educational policies and structures.

ACKNOWLEDGMENT

I would like to thank Scott Powell, undergraduate student at UNB, for his insights and research assistance during the writing of this chapter. He has a postmodern memory that is always mindful of the past, present, and future of the Other.

REFERENCES

- Kaplan, P. S. (1990). *Educational Psychology for Tomorrow's Teacher*. New York: West Publishing Company.

- Landsberg, A. (2000). Prosthetic Memory: Total Recall and Blade Runner. In Bell, D., and Kennedy, B. M. (Eds.), *The Cybercultures Reader*. New York: Routledge.
- Storey, J. (1993). *An Introductory Guide to Cultural Theory and Popular Culture*. New York: Harvester/Wheatsheaf.

SUGGESTED READING

- Cavallaro, D. (1997). *The Body for Beginners*. New York: Writers and Readers Publishing Inc.
- Foucault, M. (1977). *Language, Counter-Memory, Practice: Selected Essays and Interviews*. USA: Cornell University.
- Gur-Ze'ev, I. (2003). *Destroying the Other's Collective Memory*. New York: Peter Lang.
- Kincheloe, J L., and Steinberg, S., and Villaverde, L. (1999). *Rethinking Intelligence: Confronting Psychological Assumptions about Teaching and Learning*. New York: Routledge.
- Macey, D. (2000). *The Penguin Dictionary of Critical Theory*. London: Penguin Books.

CHAPTER 70

Memory and Educational Psychology

LEILA E. VILLAVERDE

Memory as cultural phenomena is regarded with romanticism and nostalgia most times. Memory as educational phenomena is considered as the quintessential storage space of intelligence. Memory as psychological phenomena becomes the marker of true reality orientation and normality. We tend not to think about memory unless we are losing it or can't remember an important date, somebody's name, where we placed something, or a password. Therefore remembering and remembrance are both performances that mark our history or signal our emptiness. As the chapter unfolds I will discuss memory in cultural, educational, and psychological contexts in addition to elaborating on the performances of memory (remembering and remembrance). Last but not least I will discuss public memory and its effect on our pedagogical practices. The chapter will start with a brief history of memory, how it has been defined, how its use has changed through time, and how it affects our use of it in pedagogical contexts.

HISTORY OF MEMORY

The creation of the printing press changed the use of our memory forever. Print culture privileges isolated practices such as reading and writing as opposed to the more communal practices of storytelling, folklore, and shared social learning. Prior to printing or other documenting practices (i.e., writing), oral traditions and narratives were the main sources of knowledge construction and transmission. Jeremy Rifkin believes print detaches people from each other, therefore allowing words to be privatized and commodified. Dialogue, conversations, and other communicative interactions exercise our cognitive processes employing information stored, applied, and enacted. The use of memory to record history and pass it down from generation to generation was integral to many cultures. The success of philosophers, poets, theologians, politicians, and other leaders or orators relied heavily on the use and quality of their memory. Their intellect, creativity, and imagination are the products of rich and extensive processes. Memory was considered the great portal to history, morals, ethics, and culture. Different techniques were developed to sharpen memory and improve the use of language, as well as to increase what was known and how. In the ancient times of Greece and Rome memory was regarded as an intellectual/emotional space of boundless potential and human transformation.

As the premodern era gave way to the modern one, a paradigm shift occurred in how knowledge, learning, and cognition were constructed and studied. A more pronounced emphasis was placed on the sciences to explain any phenomena. The world and human beings were believed to mimic machines and the object was to focus on the discrete parts of the larger operating system. This was the age of reason, and cognition would be the source of scientific and industrial progress. Learning became mechanical, a process of rote memorization, recall, and skills. In fact the brain was often likened to a computer as it processes data, particularly the ways it encodes, stores, and retrieves information. Much attention has been given in educational psychology to the ways in which the brain sorts input, creating schemes to categorize unfamiliar information and therefore make it familiar and accessible. Piaget has discussed this through his concept of accommodation. Using the computer as an analogy for the way our memory works positions the learning process as a linear venture of give and take, of replication with limits and parameters. It subsequently assumes information remains intact through the input and output process. The more we mechanize this process, the higher the probability to assume control over it. Even when memory defies common retrieval strategies, experts are convinced the information can be accessed through hypnosis, medication, or drill practices. As a culture we have a difficult time accepting loss, or understanding that information as we knew it may not exist in the exact original form. Seldom does this mechanical approach to memory deal with understanding and application or transfer of skills from learned knowledge. The main concern is minimizing difference, increasing likeness, and restating what is known, not producing knowledge, learning, or insight, and much less focusing on the transformative potential of knowledge and how one knows it.

Human memory is a subjective entity and process. Memory cannot adequately be explained solely through the mechanics of a positivist paradigm. Another paradigm shift occurred, one that took us into the postmodern era, where subjectivity and multiple realities take precedence. This does not necessarily mean we have shifted our use of memory entirely, but rather we have come to recognize how past paradigms and inherent epistemologies produce a deskilling and deterioration of memory. As a result of the scientific and postmodern age many technological advances are widely accessible, from the proliferation of devices that will record and document important information, to the Internet, making all sorts of information available at one's fingertips, and finally the colossal increase of written texts. The largest task of memory in contemporary times is not to encapsulate cultural, individual, or collective history, but to remember where you wrote or typed the information. Memory is perhaps more heavily used to retrieve existing information whether it is our personal data or not. Intelligence (through a modern lens) is not about knowing the information, but where to get it, how to access it. This is yet another example of how the shifts in thinking overlap one another as time progresses. Even though chronologically we move forward in time, society and specifically institutions of learning use both static and dynamic/holistic approaches to cognitive studies. The postmodern shift allows for the rethinking of memory as it makes culture, place, location, and identity essential factors in how we process knowledge, emotions, and experiences. Educators can capitalize on this in order to bridge student lived experiences and school knowledge. Cognition is not a separate entity from emotion; on the contrary logic and emotion together forge the significance of what we perceive and experience. Understanding logic and emotion as integral to one another helps us process information for easier recall and application. In educational settings in particular, if we are able to relate students' meaning making process with how they feel and think about different disciplines and concepts we increase the quality of the learning experience. Postmodernism expands how we are able to see/perceive/internalize information to increase what and how it is possible to learn. The larger objective to rethinking educational psychology and, in particular, memory construction is to enrich the ways we learn, to learn more, and restructure who has access to learning in creative and meaningful ways. Understanding the complex process through which we remember, store,

and know exposes the potential for negotiating the explicit, implicit, and null curriculum across disciplines.

Lets move into how memory and cognition work. According to the Atkinson–Shiffrin model of information processing there is an external stimulus, a sensory register, initial processing, rehearsal and coding, short-term memory, and long-term memory. The sensory register or memory contains the unprocessed information collected by all of our senses. The amount of information we can register through our senses is infinite; most of it happens while we are unconscious of it. During the sensory registration, information could be lost or forgotten if the individual is not told to organize it in some way. That is if the register does not beckon the stored images in long-term memory, what we sense will go unnoticed. Similarly during the rehearsal and coding process information could be lost or forgotten if the individual does not engage in means to retrieve or repeat the information that has been designated as important. Through this particular model the individual remains passive in the learning or recognition process, always reliant on somebody else—an implied external (outside the self) expert—to guide what he/she should retain or process as knowledge. The model also implies an unencumbered delivery from stimulus to memory. One of the major contributions of postmodernism and feminist theory is that emotion and logic are intricately connected in how knowledge is perceived, interpreted, and retained. How a stimulus is registered or processed can depend on the relationship (and what emotions are associated with it) one has to that stimulus or the time of day or any number of factors. The initial negotiation of stimulus occurs in working or short-term memory, which allegedly lasts only seconds and has an extremely limited capacity. These seconds can increase exponentially if the stimulus can find like information in long-term memory. The relationships or links in this process are important, as it is usually based on memories and emotions. Learning of new information can consequently become less difficult if educators and students can mobilize their memories and emotions in linking information. Through postmodernism these connections or rather relationships are more readily accessible, in fact necessary. The epistemology undergirding postmodernism regards phenomena through holism, not fragmentation. By understanding from the beginning how bits of information are part of a context, of something larger, we are more apt to search for meaning, not only in what we already know, but elsewhere in search for connections.

According to Slavin, long-term memory is a more complex entity with several components (episodic: stores images of personal experiences or events; semantic/factual: stores facts and general knowledge; procedural: stores how to do things; and flashbulb: stores visual and auditory clues). Often long-term memory is called permanent memory since information is believed to stay indefinitely and only ways of accessing it may become distorted or destroyed. The computer analogy again is commonly used to describe the way that information is stored, and sometimes inaccessible if the computer/mind cannot find the folder or file as a result of bit partitions or file renaming. The computer and memory are believed to be procedural entities following step-by-step programs. To approach the complex process of long-term memory in the same way (as a computer) again eliminates the human/subjective elements that affect the storing and retrieval of information.

Other information-processing models attempt to address the subjective nature of learning and memory. Craik and Lockhart developed the levels-of-processing theory, which brings to our attention the varying degrees of mental processing and the different levels in which stimuli are perceived. What makes something memorable according to Craik and Lockhart was the act of naming what we see. Naming then facilitates our ability to remember the object or experience and make sense of it. Similar to modern/positivistic epistemologies that seek to name and then classify and possibly control phenomena, this theory privileges naming as a practice, but in contrast equally privileges the context in which this naming occurs and the influence it may have over what meaning it creates or retains for us. There is greater possibility for political insight and

critical awareness when credence is given to context, to the psychosocial factors that affect how we perceive and internalize knowledge. It is the theories that delve in these nuances that seem more fruitful to the call of the twenty-first century and seeing the individual not only as such, but as a social being historicized in a particular web of reality.

Dual code theory, developed by Paivio, explains long-term memory as processing information on two registers, visual and verbal. Not only are the visual and verbal recognized as important but as crucial, interdependent components in how and why we remember phenomena. Given our visually and textually saturated culture, the ways in which we code information would seem to resonate most with the structure of the surrounding environment. This coding makes most sense to the way in which information is organized in our society. Everywhere we look, everywhere we turn, we are bombarded with signs, directions, and logos. We navigate our world through color, symbols, images, and text. Dual code theory focuses our attention on the relationship between image and text, how together they enhance our understanding and learning. Image and text also create ample spaces for multiple literacies and narratives otherwise inaccessible with just visuals or just verbal cues/information. This theory offers great possibility in the classroom as well.

The parallel distributed processing model states that information is processed simultaneously in the sensory register, short-term memory, and long-term memory. This simultaneous process indicates that at the time in which we react or perceive to the external stimuli we engage in all sorts of connections through our senses and memory. This model also suggests that what catches our attention may be the result of what we expect to see through the familiarity of what we know, what we've known as stored/lived in long-term memory. This model leads us into discussing connectionism, theories that emphasize networks and associations through which knowledge is linked/weaved in our memory. These connections have significant implications for teaching and learning. Curriculum must be modified to deal with integration and not fragmentation. Rote memorization and recall would give way or would be complicated by inquiry-based projects and critical analysis. Questioning would anchor the core of knowledge production in order to maximize the connections between otherwise unrelated stimuli and increase the flexibility in thinking. Connectionism also refocuses our discussion to postmodernism as both theories stress the importance of relationships/connections/networks that create whole and dynamic systems, not static or linear structures.

These connections are also substantiated by the brain function; particularly the way neurons connect to one another through minute fibers (axons and dendrites) every time we engage in any mental activity. Rethinking educational psychology and the ways in which we approach the use of memory in educational experiences necessitates that educators reconceptualize curriculum, their ideology, and practice to suit students' growth and development in the twenty-first century.

MEMORY AS CULTURAL, EDUCATIONAL AND PSYCHOLOGICAL PHENOMENA

We use memories constantly. Anything we see, think, or experience acts as a catalyst to existing visual and textual information, whether we are conscious of this process or not. The memories activated create filters that interpret or classify potential or new memories. This is why many scientists believe that in large respect we only retain what to some extent we already know. Initially this may seem fatalistic or predetermined, only being able to know what you already know. I do not believe this is entirely true or prescriptive, but I do think it forces us to revisit the notion of "a priori knowledge." Many educational theorists strongly believe best practices of teaching rely on how well teachers can link to "a priori knowledge." The rationale being if we can access what we already know or what is familiar and position new knowledge in that light, then we are more likely to familiarize the unfamiliar, and thereby increase our wealth of knowledge and learning

potential. This thinking also supports connectivism as a theory, focusing on the networks that link phenomena. A holistic perspective appropriately addresses the complexity of the brain, emotions, soul, entire self, and society. New pathways of learning can be created through the exposure and comprehension of difference between people, cultures, religions, generations, identities and so on through the relationships/connections forged in how we employ memory in print and narrative.

Langer refers to memory as the great organizer of consciousness, simplifying and composing our perceptions into units of personal knowledge. She further states that to remember an event is to experience it again, but not in the same way as the first time, because memory is a special kind of experience, composed of selected impressions. So even our personal history, she adds, as we conceive it, is then a construction of our own memories, reports of other people's memories, and assumptions of casual relations among the items, places, and people. Why aren't the teaching of history and the writing of "official" history regarded in the same way? Not only is memory a complicated process and entity for the individual, but even more so in magnitude for the public, culture, and society. Any cultural or public work has the potential to mediate memory, consciousness, and reality; therefore looking closer at the ramifications of the pedagogical space can lend greater insight into both cognitive and identity construction. Public sites of memory may work on all three realms, cultural, educational, and psychological.

Culture not only provides information on how we relate to one another in a given locale, but how to prioritize or discard information or experiences. Culture also provides filters and lenses through which to sift external stimuli and experiences. Culture creates historical scripts that forge communal and individual identities, consequently shaping memory. The cultural phenomena we negotiate on a daily basis and those that are embedded in our consciousness since early childhood form particular expectations, standards, and values. Cultural memory not only produces, but regulates how we define a collective, even national identity and ourselves. Culture is a way of knowing and being as it provides a buffer between self, truth, values, and possibilities. Popular culture also mediates pleasure, desire, and potential. Memory as a cultural phenomenon raises our awareness of the social influences on how we construct, internalize, and apply knowledge. In traditional educational contexts there is an attempt to eliminate social influences for fear of complicating students' success in standard courses of study. The misnomer here is the way in which social influences are regarded as obstacles not bridges. As we rethink educational psychology, culture is central to understanding memory as a social process and the social formation of the learner. Priority is given to the socio-cultural interaction of the self as it relates to the classroom context and learning. As educators validate and better comprehend cultural memory not only for their students but also for themselves, history, language arts, science, social studies, mathematics, the arts, and physical education become resourceful grounds for interdisciplinary curriculum. Where academic disciplines, students, teachers, and schooling intersect provides a cultural zone of contention, rediscovery, and production. As the editors stated this type of reconceptualization highlights the subtle dynamics of interpersonal interaction, and an individual's or a group's position in the cultural landscape.

Memory as educational phenomena focuses on how we learn, what understanding educators have of how we learn, and consequently how intelligence is defined. As stated earlier in this entry the most common analogy for the way our brain works is a computer. Unfortunately this analogy heavily limits the potential of the mind, soul, and body, that is of being. The analogy defines intelligence in terms of capacity, how much one is able to retain, catalog, and exhibit. There is an extreme reliance on hierarchies of intelligence, critical thinking, and high ordered thinking. The step-by-step, linear processes of cognition eliminate the importance of memory and its role in historical, social, and political practice. Education and schooling are deprived from rich intersections and encounters of deeper understanding and reconciliation. The use of

memory in the classroom can unleash all sorts of curricular transformations. Giroux and Macedo discuss dangerous memories as those that contain perspectives disruptive to the master narratives in history. The memories are classified as dangerous because they challenge mainstream documentation and historiography. They invite different ways of knowing and remembering by illustrating the political, cultural, social, and individual struggles that mark the history of place, power, identity, and community. Many steer away from such memories fearing the hardship and pain would be too much for students, particularly the young. We grossly underestimate youth and their abilities to critically negotiate knowledge, questions, and awareness. The too costly effect is the perpetuation of developing future generations of ahistorical, apolitical beings with incomplete consciousnesses. The rethinking of memory in educational psychology for the twenty-first century requires classroom practice and curriculum development not to neglect the difficult moments in history, the struggles and sacrifices of generations past committed to making the world a more just and equitable place to cohabit. The conflicts, the collisions in discourse, ideology, beliefs, ways of life are essential to who we are as human beings; it is fundamental to the human condition. If we continue to dilute or truncate history and knowledge in general this practice endangers the freedom of questioning the nature of knowledge, what counts as knowledge, what is of most worth, who does it privilege or disadvantage, how we can link knowledge to individual meaning making, and so on. These narratives also help to debunk the biological determinants of cognitive abilities. Too many students are labeled or made to feel unintelligent if they are unable to play the politics of “good, quiet, obedient student” who does his/ her work and does as expected on tests or performance outcomes. Unless students are able to adopt this formula for success schooling continues to be a task not an experience engaging the self and society.

Memory as psychological phenomena overlaps the educational realm to some extent, but also allows us to understand memory as an affective realm. Previously in the entry I discussed different theories that help explain how memory works in the cognitive process. These theories place emphasis on different cognitive processes to explain how we store and internalize knowledge, yet most underestimate the role of emotions. Emotions have a distinct impact on memory, recall, memorization, recognition, performance, and overall meaning production, however most cognitive theories discuss the effects of emotions as impediments to “true” or “effective” learning. The rethinking project in this encyclopedia compels us to view emotions in the landscape of memory and education as a basic nutrient to the sustenance of the holistic system (mind, body, soul, being). Emotional intelligence gained great popularity in the late 1980s placing importance on emotional development and behavior. In most regards emotional intelligence tests evaluate how individuals are able to identify their own and others’ feelings to solve emotional issues. Many have questioned the research and tests that as a result prescribe “appropriate” behavior and displays of emotion. The attempt to standardize emotional response and understanding raises ethical questions in regards to differences in gender, culture, religion, and class, just to name a few of such important factors in determining the construction of subjectivity.

Memory as a psychological phenomenon has the potential to mobilize student engagement in curriculum and to increase the ability of students to become greater agents in their own life. If educators engage student desire, pleasure, interest, curiosity, creativity, and passion otherwise unfamiliar knowledge becomes familiar through new conduits. As educators expand their understanding of human relations theories, focusing much more on the cultivation of relationships in the classroom, the psychology of the classroom can be reframed from a competitive and sometimes punitive atmosphere to one of equitable inquiry, democratic access, mutual respect, and value of human life. Many educators may find it difficult to reconstruct the classroom environment because they have not had these types of reframed experiences before. The school is structured against a communitarian ideal; it is fragmented, competitive, and ordered for control. Knowledge

is similarly structured and tiered into hierarchies of intelligence and social worth. This reality constructs particular defenses and expectations in behavior, attitudes, and dispositions most likely unbeknownst to most students and faculty or staff. If asked some would probably articulate their boredom, apathy, failure, pressure, lostness, or success and excitement. The more time students spend in such schools and classrooms the more these less than perfect environments seem natural and as they “should” be. An alternative is far from imaginable, courage to risk something different is nonexistent, and the cycle continues. The memories accumulated through the years (K–12) sediment the normativity of these experiences and the significance of school success or failure in a young person’s life. When we delve into the psychology of school and schooling, not just cognitive psychology, we can focus on restructuring the psychological consequences of getting schooled. By understanding the psychology of memories, memories that are constructed through more than twelve years dictating how to know, then this awareness can produce proactive pedagogical reform, particularly of the learning environment. This perspective can not be reduced to pop psychology, but rather taken seriously as an opportunity to rethink, reconceptualize the artificial borders built between individual and community, self and other, and cognition and emotion as discussed by the book editors. The structure of schooling, schedules, curriculum, and the interactions with teachers, peers, or caretakers all contribute to the quality and intensity of memories. In closely examining the psychological dimensions of memories all of the above exert important influences in rethinking the connection between memory, educational psychology, and pedagogy. Educators in the twenty-first century must carefully attend to the nuances and possibilities unearthed by this reconceptualization.

REMEMBERING AND REMEMBRANCE

For learning to resonate with us, for us to retain it long enough to make meaning from it, and apply it to everyday living, there has to be a reason to remember. We tend to make remembering the linchpin to existing in a life of value. Think of the many individuals living with physical and psychological conditions that result in memory impairments or loss, which deem them unable to take care of themselves or classify them as a danger to themselves. Practices of control are implemented in the name of safety and the individual grows swiftly ill prepared to take care of the self. The apparent loss of memory should not impair or create a loss in connection, motivation, purpose, or identity. Sometimes individuals with impaired memory recall the past vividly but have trouble locating the present. Slowly, of course, the physical or psychological condition may deteriorate the past as well. But we become extremely upset when loved ones or we can’t remember names or can’t generate the appropriate emotions to display on cue. Anger or frustration results as the asynchronicity increases between the reality of the individual and the external/social world. As a society we rely on the use of our memory significantly to negotiate our identity on a daily basis and to connect to others, events, or things.

Huyssen defines remembrance as an essential human activity that shapes our connections to the past and the ways we remember shape us in the present. Remembrance, according to Huyssen, constructs and anchors our identity. Memories have a past, present, and future. Based on our experiences and our psychological and intellectual states at the moment of remembering, forgetting, and engaging we have the capacity to rewrite any given event for ourselves. Yet when we produce insight or learning the opportunity exists to rewrite/reembody our comprehension and engagement. Remembrance can be a pedagogical strategy to deter the repetition of unlearned lessons in history. Simon, Rosenberg, and Eppert assert that remembrance, inherently pedagogical, is implicated in the formation and regulation of meanings, feelings, perceptions, identifications, and the imaginative projection of human limits and possibilities. The use of memories in the

classroom can transport you back in time, back in proximity to historical milestones, struggles, and definitive traumatic moments in the construction of public consciousness.

Conversely the censoring of memories, that is, the distinct regulation of which memories are crafted for public or collective consumption can also have great impact on the way identity is formed. In other words, remembering can be an individual and collective practice. Either way it may be arresting at times as the individual or culture continuously remember, recreating a past that many times was not lived by the person himself or herself but is significant to who she or he is and how she or he may see himself or herself. We tend to either romanticize or intensify the past through our vivid or hazy memories. The act of remembering coupled with critical reflection is an important pedagogical part of our human development. Remembering as a practice for a culture or society is often begrudgingly undertaken, yet incredible in repairing the present and future actions of members of the collective. Remembering will not in itself fix or undo the social inequities and injustices; nonetheless it offers youth, in particular, a wealth of information to envision a different present and future complicated by the responsibility of knowing and research. Remembering as a pedagogical practice dismantles the investments in vacuous traditions that continue to erode the democratic fabric and theoretical constructs the United States is based upon.

In carefully crafting pedagogy around remembrance a reconceptualized educational psychology allows for the intricate investigation of how memory has culturally and individually shaped memory, self, and identity as an individual negotiates the world. Forgetting also shapes the self and helps to question what is and what is not yet, and aids in developing a critical awareness about one's environment. The performance and experience of remembrance allows students and educators to get lost, lost in areas of history otherwise unexplored and taboo. This pedagogy contributes to the politicization of youth's identity connecting them to the significance of place, power, and time.

PUBLIC MEMORY AND PEDAGOGY

Public memory is constructed by landmarks, statues, historic places, museums, newspapers, television, folklore, celebrations and holidays, schools, curriculum, books, cultural artifacts, and any number of representational tangibles that mark national or local identity. These objects, people, places, or events mark our past, present, and future as they furnish a particular cultural script/landscape and collective experience that define what is American and what is not. Public memory attempts to unite a people and/or place and creates a sense of belonging for its members. Yet as it unites, public memory can also divide depending on the narrowness of the perspective or the meaning assigned to the signs and symbols of a society. Thus the connection between public memory and pedagogy creates a dynamic site for transformative curriculum. Revisiting the many ways in which collective consciousness and public memory are constructed facilitates a productive alienation from that which seems "natural," "normal," and "always been there." Investigating our landscape (background and foreground) through monuments, cultural artifacts, media and so on provide multiple contexts for curricular inquiry. Unfortunately students oftentimes are taught not to question their environment, not to comment on their experiences, not to research independently. History unless lived goes unknown and unproblematized, the consequence is more often than not apolitical and ahistorical individuals unprepared to exercise a critical citizenship. Nonetheless, school policy continues to focus on more standards and tests as quick remedies for a problem of knowledge definition, construction, and experience. These cultural artifacts educate the mass public about one version or a dominant rendition of history, human relations, civility, political correctness, and expected reactions/standards of life. As educators acknowledge and appreciate

these resources in addition to the impact on cognitive processes, specifically memory, curriculum can transform into a living/dynamic system.

Other considerations for public memory and pedagogy are in the uses of technology. Media, television, and the Internet provide extensive access to knowledge, values, stereotypes, and assumptions about the self, other, and nation. These venues exert great power over public thought as well as contributing to how historical events are perceived and understood. Given the proliferation of images and saturation of the media in our lives, pedagogy has turned to the curricular riches inherent in the intersection of moving image, sound, and text. Cross-referencing these texts with traditional academic texts offers multiple intertextual readings for students and educators alike, exploring various perspectives and understandings of history, policy, customs, events, and politics. Documentaries can also reignite public memory and engage both questioning and dialogue in order to maximize the learning experience. Currently, many classrooms and schools are alienating places for youth instead of being exploratory places of knowledge, inquiry, and expression. Cognitive processes are not truly challenged or redefined, but rather just exercised in drill routines. Through the curricular use of technology, students can develop metacognitive abilities engaging in thinking about thinking and analyzing the ways in which they think and process information. Students discover greater agency in how they negotiate their learning experiences; these skills are also highly transferable to experiences out of traditional schooling structures.

The implications for the reconstruction of educational psychology are extremely powerful as it widens the possibilities for cognition and identity formation, expressly the social formation of the learner. Memory is a powerful tool in transforming places into living organisms with multiple perspectives of its history. A reconceptualized educational psychology helps understand how this works and how we might maximize the intersection of memory and educational psychology.

SUGGESTED READING

- Huyssen, A. (1993). Monument and memory in a postmodern age. *The Yale Journal of Criticism*, 6 (2), 249–261.
- Langer, S. K. (1953). *Feeling and Form: A Theory of Art*. New York: Charles Scribner's Sons.
- Rifkin, J. (1991). *Biosphere Politics: A New Consciousness for a New Century*. New York: Crown Publishing.
- Simon, R. I., Rosenberg, S., and Eppert, C. (Eds.). (2000). *Between Hope & Despair: Pedagogy and the Remembrance of Historical Trauma*. New York: Rowan & Littlefield.
- Slavin, R. E. (2003). *Educational Psychology: Theory and Practice*. Boston, MA: Allyn and Bacon.

CHAPTER 71

Where Is the Mind Supposed to Be?

RICHARD S. PRAWAT

The notion that the mind can occupy various locations may seem strange at first. Nevertheless, this is an issue that has captured the attention of a number of educational psychologists recently. That said, it is also fair to point out that the majority of educational psychologists have *not* abandoned the time-honored notion that knowledge generation, the mind's most important function, takes place entirely within the head. This second group differs about what aspects of knowledge creation ought to be emphasized—coherent structures versus the processes that turn up the patterns or regularities known as concepts—but they are not much concerned with the issue of where those processes take place. Others, like good businessmen, argue that location is everything. They believe that knowledge generation, and thus mind, is an outside-the-head phenomenon. Those that embrace this notion, however, like their more traditional counterparts, evidence some interesting and important differences about the particulars.

Before elaborating on these differing views, and attempting to provide an historical context that will shed light on the origin of these disagreements, I will take up the issue of why the mind's location might matter to psychologists and educators (as opposed to philosophers, who cannot avoid dealing with the problem). The argument goes like this: If you seek to understand how the mind creates knowledge, or if you are interested in efforts to enhance the process, then you ought to know where the action takes place. Learning theorists and teachers who locate the action in the head, in the child's own experiential workspace as it were, have some ideas about where to begin the process of studying, or intervening in, the mind's work. Similarly, psychologists or educators who believe that this process takes place out in the open (e.g., in the apprenticeship-like relationship that connects novice to master) focus on a different set of variables thanks to this assumption. (Not all mind-in-the-world psychologists ignore individual sense making. Sociocultural theorists, in fact, argue that it is alright to focus on individuals as long as one uses the larger interpersonal and cultural context to interpret what they are doing; this is consistent with the notion that mind is "distributed" across both public and private domains.)

Not surprisingly, the mind location issue strongly influences the views that psychologists and educators are willing (or able) to entertain with regard to the process of knowledge acquisition. This is obvious when one focuses on those who believe that the mind is in the world. For all intents

and purposes, they are limited to two overt or observable variables: routines or procedures that can be modeled and (hopefully) internalized, and language that can be appropriated or dispensed with depending upon the instructional agenda. Both can legitimately be viewed as knowledge acquisition processes that are *in* the world. It is not an accident, then, that the two groups of mind-in-the-world theorists have highlighted one or the other. Sociocultural theorists have opted for procedure or strategy, the most widely cited example of which might be “reciprocal teaching.” Like master carpenters or tailors, master readers (i.e., teachers) work with novice readers, carefully modeling comprehension strategies when reading text like paraphrasing main ideas, asking questions about segments of text, speculating about the future content of passages—all with an eye toward gradually passing off responsibility for this activity from teacher to student.

Social constructivists have settled on language as the mechanism for acquiring knowledge. They cite postmodern philosophers like Richard Rorty and, before him, Ludwig Wittgenstein to support their contention that much is to be gained by viewing knowledge as language, and the knowledge acquisition process as akin to participating in a kind of “language game.” According to this perspective, knowledge claims, in the form of propositions and assertions, represent moves in the language game. Whether or not a particular move is allowed to stand depends upon a number of things, including who has made the move and why. Ultimately, however, the fate of any new way of talking is decided on pragmatic grounds: Does the new way of talking—using nonsexist language, for example—increase the likelihood that those making this move will get what they want? Following this argument, use of the expression “mental illness” to describe aberrant behavior won out in the language game because its use came to be associated, at least in many people’s minds, with kinder and gentler ways of responding to what hitherto had been referred to as “mad” or “disturbed” people.

In the classroom, social constructivist pedagogy involves negotiating understandings through discourse. The teacher, by modeling disciplinary talk and guiding students in the use of that talk, seeks to reach a consensus with the class about how it, as a surrogate disciplinary community, will talk about certain shared activities and processes (e.g., using the term *refraction* to describe the bent appearance of a straw in a glass of water). The focus here is on the uses and misuses of discourse within a discipline: How does one go about questioning knowledge claims in a discipline like science? What constitutes a persuasive argument for and against such claims? Who participates in the discourse? Who remains silent?

The in-the-head theorists show a similar level of disagreement, equally polite, about process. At the risk of oversimplification, three differing schools of thought are in evidence here. There are the radical constructivists, with their close ties to the great Swiss psychologist Jean Piaget. There is the cognitive science or information processing school, which is a fairly diverse group. And, third, there is a group, mostly in mathematics, which has been heavily influenced by the work of George Herbert Mead and Herbert Blumer. Drawing on the theory known as symbolic interactionism, they share with social constructivists the belief that meanings are socially negotiated while still maintaining a firm focus on individual sense making. The latter takes place in the head but is shaped and influenced by the social interaction one has with others. In fact, this approach assumes that there is a dynamic tension between self and society. Meaning is owned by the individual but produced through social interaction.

Radical constructivism and information processing both have deep roots in philosophy. The former, as indicated, is based on the work of Jean Piaget. Piaget was quite explicit about the debt he owed to the rationalists. Similarly, information processing theory is based on empiricism. These philosophical connections are important because they help explain how adherents of the two approaches view knowledge and its acquisition. Rationalists and empiricists, historically, have taken different stances on the issue of the relationship between sense and intellect. Rationalists like Descartes drew a sharp distinction between these two domains. The first, which plays a

passive role, yields at best impressionistic data. It takes active intervention by the mind to turn this information into the clear and distinct ideas that he most associated with the intellect. Piaget built on these ideas in the key distinction he drew between what he called “figurative” (sensory) and “operative” (logical) knowledge. The latter consists of logical rules like the ability to look at something from more than one perspective—to realize that one can simultaneously be a brother to one member of the family and a son to another. Individuals use their logic, which becomes more sophisticated with age, to create knowledge structures; the latter, reflecting the development of logic, become more coherent or integrated over time.

Empiricists take a different stance toward the relationship between sense and intellect, viewing the two processes as distinct but more equal than the rationalists. Sensory input helps define particular objects—particular dogs or trees, for example. The role of the intellect is to sort through this particular data to find patterns, ways that one particular object resembles another. The basis for this resemblance is tested against promising additional candidates. If it is a key attribute, like having paws as opposed to brown-ness for a dog, it will continue to discriminate between members and nonmembers of the category. The rules that define like things become our concepts, the basic building blocks of knowledge. Concepts, in turn, are related through propositions. Cognitive scientists accept the most important premise of empiricism, the notion that information processing is inductive in nature. Mental activity flows internally from specific input to more general structures (schemas or frames). The process of identifying regularity in the environment, they believe, is made easier by the fact that information is packaged in ways that make this identification easier. Being about the size of a hand and having feathers are two attributes of bird-ness that covary with some regularity.

One assumption that information processors share with radical constructivists is that the internal processes that produce knowledge are deliberate; they cannot be turned on or off by someone else. This is not to say that the processes are not responsive to environment conditions. On the contrary, our minds become more active when we encounter difficulty or impasse, especially if our current ways of construing the situation appear not to be helpful. Problems that get in the way of things we want to accomplish become the impetus for restructuring or repatterning our experience. While radical constructivists and information processors view the process of restructuring or repatterning as primarily an individual event, sociocultural and symbolic interactionists do not. They do, however, buy into the notion that knowledge is instrumental—that it helps us overcome difficulties or, stated minimally, that it allows us to more effectively or efficiently reach our goals—but they reject the notion that there is such a thing as individual problems or even goals. The latter are culturally defined, even to the extent that there are fundamental differences between “school” mathematical problems and “out of school” mathematical problems.

The knowledge that allows us to solve these kinds of problems is also culturally defined and, more important, socially acquired. Furthermore, this knowledge is often less “taught” than “caught” as we work alongside more knowledgeable others in an effort to overcome difficulty or reach a goal (e.g., being able to go to recess in the case of school mathematical problems). Social constructivists, though they focus more on language than procedure, share the premise that teaching is “enculturation” and that knowledge plays an instrumental role in this regard. One learns to talk about phenomena in science or mathematics in disciplinarily acceptable ways, they argue, because it is associated with good things—good grades, good interactions with teachers, and more facile talk about related phenomena.

What is remarkable about these various constructivisms is not how they *differ* but what they share in *common*. In all cases, the teacher’s role is more the proverbial “guide on the side” as opposed to the traditional “sage on the stage.” In all cases, knowledge is seen as instrumental, as a means to an end. In all cases, the way to get students to engage with knowledge is to make sure that they see it as instrumental. This, in turn, means that the teacher must get students, individually or

as a “learning community,” to engage with personally meaningful problems. Given the notion that learning is enculturation, some theorists believe fervently that these problems must be more than personally meaningful—they must also be “authentic.” Unlike word problems in mathematics, for example, where students learn to apply algorithms in response to key words like “how much,” authentic problems are considered more challenging and more likely to lead to the acquisition of transferable knowledge and skills because they approximate the kinds of problems dealt with by people within the disciplines.

From an educational standpoint, it does not matter much which of the five alternative perspectives a teacher embraces. In fact, it may make sense to “mix and match.” If a teacher is intent on students’ acquiring a generic cognitive strategy or procedure, the sociocultural model provides the most explicit guidance about how the teacher can *facilitate* this process. If the intent is to challenge the way individual children make sense of their own experience—an example might be the commonsense notion that weight alone determines whether objects sink or float—then radical constructivism offers explicit ideas about how a teacher can *facilitate* this process. If the goal is to get students to appropriate certain modes of discourse in advancing and defending claims in a science or mathematics class, then social constructivism has some helpful ideas about how teachers can *facilitate* this process. It follows from this, of course, that the issue of whether or not the mind is inside or outside the head matters very little to teachers. If true, this interesting fact gives rise to two important questions: The first asks why the mind’s location is such an important issue for psychologists; the second asks why the four main views outlined are more alike than different in their application to education, at least as regards the all-important issue of the teacher’s role in the instructional process. The answer to both questions lies in the distant past—in fact, in the far distant past, the fourteenth century to be exact.

It was in the fourteenth century that the common ancestor to all of the philosophical “isms” mentioned above was born (i.e., rationalism, empiricism, postmodernism). The name of the common ancestor, philosophically speaking, was another “ism,” *nominalism*. Many, if not most, philosophers regard the triumph of nominalism in the fourteenth century as a signal event in the transition to modern times. Nominalism, a number of scholars have declared, is the philosophical basis for all of Western thought and culture. I have told the story elsewhere of how this set of beliefs came to prevail in the great philosophical debates being waged in the high middle ages (a time, by the way, that is being positively reevaluated by recent historians). These debates were so heated that many exchanges of views ended up being exchanges of threats and even of fists. The story is worth recapping here because it bears on the two questions raised above.

Many things were at issue in the great philosophical debate in the fourteenth century. The main bone of contention between William of Ockham, who developed nominalism, and John Duns Scotus, his predecessor, and main rival as the originator of scholastic realism, was the status of universals. Ockham insisted that all commonality between objects (i.e., horses, men) and events (the attraction and repulsion of magnetic poles) represents a mental creation, the mind’s detection of a resemblance or similarity between different, particular objects and events. Duns Scotus insisted that commonality actually exists, independent of our thoughts. What makes an object or event unique (e.g., this dog), he argued, is intertwined with what makes it an example of something more general (e.g., a dog). At issue, then, was the question of whether regularity is a word (e.g., a “concept”), a perceived and named similarity derived from one’s own particular experience, or whether it actually exists in nature. This argument may seem arcane but its resolution in favor of the nominalist position has had far-reaching effects on philosophy, both modern and postmodern.

One far-reaching effect is that nominalism led to a walling-off of mind or, in the case of postmodern nominalism, its encasement in language, thus eliminating the possibility that mind can have any direct relationship with the world. This last claim may seem strange, especially in light of postmodern efforts to locate mind in language and language in the world. Focusing on

this issue first, it is true that language is in the world and does, in a sense, “operate” on that world in a tool-like manner; this is not unlike how a shovel operates on the soil it moves. What language cannot do is mesh or join with that world. To do that, two things are required: ideas must originate in the senses, and the world has to be an equal partner in the enterprise. Nominalists limit the world’s role to offering up particular objects. The mind is the star in this scenario; it is the mind that acts on particulars in the process known as “induction” to create the generality or regularity that is associated with understanding.

Duns Scotus, writing some twenty years before Ockham, may have been the first to put mind and world on equal footing. Regularity or universality, like rationality in humans or, in later centuries, gravity or photosynthesis, is present in nature. Furthermore, the role it plays in making itself known is as active as that of the human mind. Scotus was the first to posit a relationship of true reciprocity between mind and world. This last point requires some elaboration. The middle ages were dominated by religion; both Scotus and Ockham, in fact, were members of a religious order as well as academicians. The vexing philosophical issues that Scotus struggled with was how to respond to Aristotle, whose newly discovered writings, lost to the West for a thousand years, were wreaking havoc with the Catholic church. Scotus, and before him, Aquinas, tried to square Aristotle’s notion of natural law with divine power, evidenced by God’s spontaneous will. Contrary to Aristotle’s teachings, the scholastics thought that God could, if he so willed, change a human embryo into a tree. Contingency rather than necessity was the order of the day. Scotus’s solution to this vexing problem was to view *indeterminacy* in positive rather than negative terms. Contingency does not represent nature falling short in some way. Rather, it represents the wide-ranging nature and creativity of God’s thought. At the moment of creation, God sees all the possibilities open to him, now and in the future. In a sense, the alternatives are all spelled out ahead of time. It is the function of God’s will, when the proper time comes, to determine which, if any, of the possibilities he actualizes.

Scotus’s decision to put possibility on the same continuum with necessity humbled intellect at the same time that it elevated will. It is will, at both the divine and the human level, that converts imperfectly understood possibilities into fully realized facts. Confused knowledge, grasped qualitatively (e.g., metaphorically), is the first step in the acquisition of more certain knowledge. The brilliance of Scotus’s solution was to allow for a type of knowing that could put the mind in direct relationship to the object or event the inquirer is attempting to know. Individual objects are an amalgam of particular and general attributes. The mind *discovers* generality; it does not, as Ockham would argue, *create* it. The discovery process is a joint one. Both “object and author,” to use Scotus’s language, play active roles. It surfaces as mere possibility and is grasped by the mind as a sign (e.g., called a “phantasm” by Scotus). Charles Sanders Peirce, who built on Scotus’s ideas in the nineteenth century, would liken this imaginative rendering of generality to that of a metaphor; a modern-day example might be seeing the plant as a “food factory.” When the object is viewed through the lens of the sign, it contributes to the discovery process by allowing certain features to emerge in sharp relief while blocking other, presumably irrelevant features.

The term Scotus used to describe this hybrid sign-object was, appropriately, that of the “physical universal.” Drawing on our modern-day example, this means that during the qualitative first stage of coming to understand, the individual can truly see the plant as a factory that produces food—see that there is a production process going on within the confines of the leaf, that these products are warehoused, that a waste product is given off, and so forth. Two points are worth noting here: Scotus’s scholastic realism allowed for the mind to mesh or interrelate with the world in the early stages of understanding; concepts are immediately obtained from objects. (This understanding, of course, must be reformulated as a proposition.) Second, Scotus’s view of God (and nature) is an intellectually friendly one. By building essence into being, God all but ensures that our experience with nature will be a conceptual as well as a sensory one. Furthermore, although God does not

tip his hand in advance, he does make choices that follow a logically consistent pattern. This is a direct outgrowth of the notion of possible worlds. God can decide, to use a non-middle-ages example, to allow or not to allow life forms to develop on earth; once that decision is made, other decisions, like what role to assign intelligence, follow from it.

Ockham rejected Scotus's view, and did it in a way that must be considered radical from our current-day perspective. Scotus's assumptions, Ockham argued, limit God's power and thus must be rejected. While Scotus sought a balance between will and intellect for both God and man, Ockham insisted that God's will must always reign supreme. The idea that God, in the exercise of that will, is somehow bound by the set of possibilities that he was initially willing to entertain, made no sense to Ockham. God need only please himself. With one stroke of his famous Razor, Ockham eliminated the notion that God set out to create an articulate world, one that man could grasp and appreciate. Gone with the same decisive blow was the ancient distinction between substance and accident, the particular and the universal. This last distinction was also viewed as an unnecessary obstacle to God's infinite power. Nothing "essential" to an object can preexist in God's mind because that also would serve as a constraint on God's power. God cannot be subordinate to either nature or reason.

God thus created a relation-less world, which is to say, a world filled with particular things. Those particular things may resemble one another in various ways, but that resemblance resides entirely in the things themselves, not in some third construct that might be termed a "relation" or a "commonality." This is a fine point but one that is extremely significant. It moved the all-important task of identifying regularity or pattern into the head—thus cutting off at the knees the promising notion, proposed by Scotus, that mind and object play reciprocal roles in the identification of lawfulness. Furthermore, because nominalism prevailed over scholastic realism, Ockham's encasement of mind in head (or in language in the present, postmodern era) set the tone in philosophy for virtually its entire existence. A logical consequence of this stance is that there is no way for individuals to *directly* (if qualitatively) test the validity of the regularity they create in their minds. According to nominalism, we have no direct access to objects—to "things in themselves"; we have access only to our representations of those objects.

In Ockham's theory, this problem was compounded by the fact that he ruled *out* the possibility that the concepts—the "names"—that result from identifying similarity can be represented by composite images (i.e., a general dog image). Concepts are represented by individual things in keeping with his notion that there are no generals or universals in either the world or in thought. This is the opening wedge in the nominalist distinction between input and output, content and process. The nominalist wedge between content and process was widened further by Ockham's insistence that concepts are, at best, intermediate products. The final products of knowledge are the propositions that relate one or more concepts to another. The important point to keep in mind is that Ockham introduced a clear demarcation between the senses and the intellect. Scotus, on the other hand, argued that sense and intellect are on a continuum. The midpoint on this continuum is marked by a construct, the "concrete universal," that he (and Peirce much later in the nineteenth century) defined as a hybrid of the physical and the mental (i.e., a metaphor, schematized and applied to the object).

Descartes, the first of the modern philosophers, was to widen the sense–intellect divide even further. As a number of recent scholars have pointed out, Descartes picked up on Ockham's notion that an all-powerful God is under no compulsion to play it straight with man. God has the power to deceive as well as to illuminate. He can, if he chooses, make one see things that do not exist or overlook things that really are present. The lesson that Descartes was to draw from this is that the senses are not to be trusted. With or without God's help, Descartes decided, sense is an unreliable partner in the process of knowledge acquisition: the stick that appears to be bent in water, the sun that seems small in comparison with objects on earth are two instances that

testify to this fact. Descartes' skepticism called into question the whole idea of knowledge, as he himself understood. The notion that the senses can deceive gave rise to the profound doubt that led Descartes to search for the one thing about which he could be absolutely certain. That turned out to be, to Descartes' satisfaction at least, his famous principle, "I think, therefore I am." The soul searching that resulted in the discovery of this fundamental principle led to the discovery of another, which, while implicit in Ockham's theory, was to be made explicit by Descartes: Trust the power of the intellect to overcome the shortcomings of the senses. The key to true knowledge lies in the inner sanctum of the human mind. This notion was to become a staple of all rationalist thinking in the future. Richard Rorty describes the rationalist approach as that of turning the "Eye of Mind" away from the confused representations derived from sense to the clear and distinct ones created by intuition and logic.

Descartes argued that intuition is the starting point in the creation of certain knowledge. Mathematics points the way in this regard. One can mentally intuit the fact that triangles are bounded by three lines; that spheres are bounded by a single surface; or that one can, through the power of indefinite addition, create infinity large numbers. Simple, necessary truths like these become the basis for deductive reasoning. The way to arrive at certain truth as regards *particular* instances (e.g., "I think therefore I am"; "This square is a rectangle"), Descartes insisted, is to start with a *general* principle about which there can be no doubt (e.g., "Whatever thinks is," "All squares are rectangles"). The particular instance is always deduced from the more general principle in the process known as analytic reasoning. Descartes allowed for two other ways of knowing: impulse, which is where we take information provided by the senses at face value (e.g., agreeing that the stick in the water is bent), and conjecture, which is based on general principles that we believe to be true but about which we lack certainty. Propositions like the notion that we have a body and that various other bodies exist in the vicinity of that body are included in this second category. The highest honor, though, goes to analytic thinking.

John Locke, who was born in 1632, eighteen years before Descartes' death, took issue with two of the latter's key ideas and did so in a way that tied them together. In so doing, he laid the groundwork for empiricism, a variant on nominalist philosophy that served as the intellectual rationale for seventeenth-century inductionist science. Whether or not the senses are untrustworthy is a moot point, Locke argued; the senses are our *only* source of knowledge. Even mathematical or fantastic objects (e.g., leprechauns) that cannot be directly experienced are constructed from concepts derived from experience. As the last statement implies, Locke also rejects Descartes' notion of innate ideas. Locke's approach more clearly hued to the nominalist line laid down 300 years earlier by William of Ockham, with some important exceptions.

According to Locke, we process sensory input in a two-stage fashion. The first stage, if that is the correct term, is composed of what Locke terms "simple" sensory ideas (Locke used the term "idea" in a generic way to refer to the mental contents of both perceptions and thoughts). Some simple sensory ideas "resemble" their objects (e.g., size, shape, number). Others, like sound, do not. (We do not hear the vibration that produces sound; we detect its *effect* on our hearing apparatus.) Simple ideas, according to Locke, are the building blocks of sensory experience. The mind draws on these to construct "complex" sensory ideas that capture the richness of objects like dogs and trees, a process that invariably involves selection. One cannot possibly include all of the sensory elements associated with a pet dog, for example; one must home in on those—a distinctive sound, smell, type of movement—that offer the greatest opportunity of identifying the dog as one's own.

The act of "compounding" simple ideas to construct complex ones sets the stage for the act of abstraction, a process that yields the "collection of common sensations" known as concepts. Fortunately, nature colludes in this. There is a relationship between attributes that prove useful in identifying particular objects (e.g., a distinctive type of bark in the case of my pet dog) and

those that prove useful in identifying a category of objects (e.g., barking as opposed to meowing sounds). Because Locke is more explicit than Ockham about how sense connects to concept, it is not surprising that he is also more explicit about the role that words play in the process. Words do not stand for things; they stand for our ideas about things. Most of the words we use in communication are general terms. The ideas that they stand for must therefore also be general. His compositional approach to complex sensory ideas—which accepts the premise that they are never as complete as they could be—allows for the creation of abstract ideas that nevertheless consist of concrete content. This is achieved by simply stripping away irrelevant particular attributes.

The problem with this approach, which the other great eighteenth-century empiricist, David Hume, was to build on, is that it involves an enormous amount of compounding or “synthesis.” Furthermore, despite nature’s help in bundling sensory elements, the process seems extraordinarily burdensome from a mental processing perspective. This was Kant’s concern. Immanuel Kant is the third great modern philosopher who deserves some brief discussion. Before delving into his solution to the problems raised by the two groups of nominalist philosophers, the rationalists and the empiricists, it might be helpful to once again pick up the threads of the initial argument about the location of the mind. Both rationalists and empiricists, it should be obvious, locate mind in the head. Furthermore, because both draw a sharp distinction between the sensory input that constitutes the raw material for knowledge, and the intellectual output—concepts and propositions—that represents the content of knowledge, they share a common problem: How does one test the validity of knowledge created in the recesses of an individual’s mind? The only answer either can provide is to say, “Closely monitor the internal process.”

Rationalists like Descartes, who put their faith in deductive logic, use internal coherence as the test of the rightness or truthfulness of one’s beliefs. True beliefs hang together; they “fit” or cohere. Empiricists face a tougher task. The two aspects over which they have some influence are sensory input and language output. Thus, early empiricists like Locke emphasized the importance of reforming language. He complained that “vague and insignificant” forms of language pass for the “mysteries of science.” Francis Bacon, one of the pioneers of empiricism, called for a special kind of language in science that more closely approximates the “primitive purity” of things. Prior to Bacon and Locke, rhetoric—the art of persuasion—was the process of choice in the attempt to separate truth from falsehood. The problem with rhetoric, the empiricists thought, is that it is as much an art as a science. In skillful hands, even a bad argument can be made persuasive (the core of the word “suadere” shares a root with “suavis,” which means “sweet” in Latin). Science needs to cultivate discourse that stays as close as possible to its experiential roots.

As indicated, early empiricists also emphasized how important it is to carefully monitor the sensory input. This meant one thing: adhering to method. Method is everything. At the core of method was what might best be termed “disciplined seeing.” The would-be scientist had to train his (or, less the norm, her) eyes to make sure that the sensory input represented, as far as possible, genuine, “indubitable” fact. All things come to us in the particular but that must not be taken to mean that they come to us in a muddle; aspects of the particular can be noted and referred back to during the pattern finding and naming stage (in the process known as induction). It soon became evident to the empiricists that one need not rely on nature to present its particulars—it is possible to “tweak” these particulars in a more controlled way in the effort to discern pattern, especially a cause-and-effect pattern, which is science’s highest ambition. These experimental manipulations, the prime example of which is Boyle’s famous seventeenth-century air pump demonstrations, were taken to stand for how things actually work in nature.

As suggested above, one can map truth conditions developed by the early rationalists and early empiricists directly onto those developed 300 years later by their psychological counterparts—the so-called radical constructivists (neo-Piagetians), and the information processors. Radical constructivists like Ernst von Glasersfeld have adopted the internal coherence criterion developed by

Rene Descartes in his famous “structures of thought” argument. Similarly, information processors seek to track the flow of data from input, through abstraction, to propositional knowledge. A machine unimaginable in Locke’s time, the high-speed computer, has been appropriated for this task. The argument goes like this: When a computer program, designed to mimic processes used by humans, produces behavior that parallels that observed in a real-life situation, the result is said to constitute a “sufficiency proof,” which validates the information processing model.

The other two learning theories talked about earlier—the sociocultural and social constructivist approaches—might appear to have an advantage over the head encased views just described when it comes to knowledge validation because the processes they emphasize are overt rather than covert. This is possible, I submit, because socioculturalists and social constructivists have made a virtue out of what Scotus and Peirce would consider a great weakness in current approaches to learning: This is the distinction, nominalist in origin, between content and process. As has been shown, this distinction is a key feature of rationalism, empiricism, and even of Kant’s valiant attempt to meld the two (see below). Thus, sociocultural theorists argue that mental activity, like the physical activity involved in tailoring or weaving, can be externalized and modeled because it is content free. The comprehension-monitoring activity taught during reciprocal teaching, activities such as summarizing and question asking, while intended for reading, can be applied to oral-language situations as well. Social constructivists make a similar point about “language-ing.” They reject what they consider to be the outdated, modernist view of language as a container or holder of knowledge and meaning. The function of language is to manage or coordinate human relationships. Both sets of theorists, then, build on the notion that there is process without content.

History, including intellectual history, is filled with “what ifs.” One of the major what ifs relates to Peirce’s effort in the late nineteenth century to resurrect Scotus’s unique version of what, from the present-day perspective, could only be called “realist constructivism.” Peirce argued forcefully that Scotus’s view did not get a fair hearing in the fourteenth century. It lost out to Ockham’s nominalism on political and not philosophical grounds. Scotus’s belief that generals or universals actually exist in individuals was viewed with suspicion by the humanists, who joined forces with the nominalists to defeat this notion. They equated this idea with a more conservative stance toward authority, the subtext for them apparently being that it takes extraordinary expertise to tease out the regularity posited by Scotus. In that sense, the aversion nominalists and humanists felt toward Scotus’s realism is not unlike the aversion social constructivists feel toward scientific realists—a major factor in the ongoing “science wars.”

Peirce did not just base his realist constructivism on Scotus’s five centuries old work. He had a more recent model, Immanuel Kant, who Peirce termed “his revered master.” Kant is best known for his attempt in the late eighteenth century to reconcile the dramatically different stances taken by rationalists and empiricists. In the first approach, reason runs roughshod over the senses, while in the second the converse often appears to be the case. Kant’s well-known solution to these problems was twofold: he argued that our perceptual apparatus is structured in such a way as to compel us to compound or synthesize sensory input to produce “bundles” of spatially located and temporally ordered sensation. Similarly, our cognitive apparatus all but mandates that we conceptualize experience in certain predetermined ways. Thus, we always attend to the number of objects in the experience, the intensity or “realness” of the experience, the scope of time of the experience—whether, for example, we are dealing with things that are happening now or that will happen in the future. Finally, we take note, again in a general sense, of the nature of the relation we are coming to terms with—whether, for example, it is an object–attribute or cause–effect relationship.

Less well known but of equal importance to Peirce was Kant’s insistence that what we come to know about objects is their form or essence. Kant was the first modern philosopher to resurrect the notion that both commonness (i.e., universals) and particularity coexist in individual things.

Like Scotus, he believed that the former tells us more about the object than the latter. Cognition requires concepts, Kant insisted, and concepts are always universals that take the form of rules. The rules, not surprisingly, are constructed by the mind but—and it is this “but” that causes several recent interpreters of Kant to label him a “realist”—they are based on *real* universals. In Kant’s theory, these universals are not experienced directly, as they are in Scotus’s approach. The universals are embedded in sensory experience and pulled out, in the form of “schemas,” by the imagination. The mind then represents this generality in the form of a rule.

Peirce used Kant’s theory as a starting point for his own version of Scotus’s realism. After many false starts, Peirce rejected the Kantian approach—where the universal is grounded in fact but made by the mind—as too weak. He opted for a much stronger version of realist constructivism. Like Scotus, Peirce argued that, through a process of creative perception facilitated by metaphor (e.g., seeing the regularity known as photosynthesis as akin to manufacturing a product), we directly and reciprocally interact with the regularity or universality that we are trying to understand.

The important point to ponder, especially by those interested in reconceptualizing educational psychology, is what would happen if psychologists and educators suddenly adopted a nonnominalist version of constructivism, one that does not assume that process and content are distinct, or that the test of knowledge is always instrumental. More to the point, what would happen if we adopted what, for a lack of a better term, might be labeled “realist constructivism.” The set of advocates for this approach, giants of philosophy like Duns Scotus, Immanuel Kant, Charles Sanders Peirce, and, somewhat arguably, John Dewey in the second half of his life, is every bit as impressive as that belonging to the nominalist camp. To this illustrious group one must add the voices of virtually all current scientists and philosophers of science who agree that induction pales in comparison with the role that insight or illumination plays in teasing out important regularities in science like atomism (the metaphor for which was a tiny solar system), or natural selection (the metaphor for which was man selecting to create new animal species). This last fact alone has huge implications for teachers and students, suggesting an approach that differs dramatically from that described earlier.

Teachers in the realist constructivist classroom certainly would not play the traditional “sage on the stage” role. Nor, interestingly enough, would they assume the more passive “guide on the side” stance described earlier. Teachers in the realist constructivist classroom would adopt a role that differs in important ways from these other two roles. They would function like expert tour guides—those at least who manage not to upstage the phenomena it is their responsibility to bring to their charges. The expression that best captures this third role is that of “sage on the side,” a person who works hard to get his or her students to see the wondrous regularity that those in the disciplines have worked so hard to turn up—not just in science but in mathematics, if that is the teacher’s subject, or history or literature. The teachers, in this approach, would embrace the insight provided by Scotus and Peirce: All understanding has its roots in qualitative thought. The implication of this notion for teaching is that teachers must rely on tools like metaphor, physical enactment, technology-mediated simulation, and the like, to tease out and concretize the most salient aspects of the important regularities they are trying to get their students to understand.

TERMS FOR READERS

Empiricism—A “trust your senses” philosophical theory that played a pivotal role in the development of experimentally based science.

Nominalism—The theory that holds that generality is created in the human mind from particular sensory experiences.

Postmodernism—This theory takes the nominalist content–process distinction to a new level, downplaying the role of language as a carrier of content in favor of the notion of language as a tool.

Rationalism—An approach to knowledge that equates truth with the mental integrativeness or coherence that results when one applies logic to fact

Realist constructivism—The philosophical view that maintains that human beings, through a creative act of intelligence, can directly access the regularity or lawfulness present *in* the world.

FURTHER READING

- Haack, S. (1998). “We pragmatists. . .”: Peirce and Rorty in conversation. In S. Haack (Ed.), *Manifesto of a Passionate Moderate* (pp. 31–47). Chicago: University of Chicago Press.
- Miller, A. I. (2000). *Insights of Genius. Imagery and Creativity in Science and Art*. Cambridge, MA: MIT Press.
- Prawat, R. S. (1999). Cognitive theory at the crossroads: Head fitting, head splitting, or somewhere in between? *Human Development* 42, 59–77.

CHAPTER 72

Neuropolitics: Neuroscience and the Struggles over the Brain

JOHN WEAVER

Neuroscience is the latest interdisciplinary field that is producing impressive results in the quest to understand and map the brain. It combines cognitive psychology, neurophilosophy, computer programming, and medicine. Neuroscience also is a sign of the times as it seeks to unveil and reduce the mysteries of the brain to a principle of transparency. Transparency is a hallmark characteristic of our postmodern world as the Visible Human Project in anatomy and Physiology, “reality” television, online shopping, virtual architecture, and surveillance cameras suggest. In our transparent world, we work from the assumption that everything can and should be opened in front of our eyes so we can peruse, investigate, lurk, and pry into the interworkings of all facets of life. Neuroscience is no different than voyeuristic television in this regard. Neuroscience offers us fresh insights into such issues as the mind/body dichotomy, the stale nature/nurture debate, diversity, and creativity. Yet, it also threatens to open up frightful issues dealing with the minds of criminals, unborn fetuses, and life or death issues. In spite of what many of the advocates of neuroscience proclaim, this new field of study has ushered in a new era of neuropolitics in which the mind/brain is a new site of political struggles. In this essay, I want to explain the basics of neuroscience, delve into some of the interesting issues neuroscience reinvigorates, and remind my readers that neuroscience has the dangerous potential to become a new form of eugenics where purist’s nightmares are put into action.

NEUROSCIENCE BASICS

Neuroscientists estimate that there are one hundred billion neurons in the brain with each neuron containing thousands of synaptic connections. Each synaptic connection symbolizes a weight or a strength that the neuron can use to connect to other neurons to create a network for sight, taste, touch, smell, or the many other functions the brain performs. The potential strengths and weaknesses of the connections are virtually infinite given that the potential neuron networks can choose from scenarios that contain one hundred billion neurons connected to one hundred trillion synapses. For example with sight, the neuron connections can range from legal blindness (poor neuron connections) to a life time of 20/20 vision or better (very strong connections) with millions of possible levels of strengths in between this continuum.

This land of infinite possibilities is only the beginning of the neuro-odyssey into the brain. Given these possibilities for connections each brain is unique with different neural connections shaping each brain differently even for identical twins who might experience the same things throughout their lives. There should be little wonder why the brain has remained a mystery for centuries. How could anyone draw generalizations about the brain when every brain is different in terms of neural networks and synaptic connections? To make the understanding of the potential connections more daunting is the reality that the brain is always active, losing neurons here and making new connections there.

These staggering numbers have not stopped neuroscientists from understanding the brain because like so many other fields in science, neuroscience has benefited greatly from the development of computers. Specifically, neuroscientists have learned to utilize parallel processing computers to understand the brain. Whereas Descartes, Leibniz and other early speculators of the mind and brain did not have the benefit of computers, neuroscientists do, and they are using it to their advantage to advance numerous theories about the brain.

The use of parallel computers is called Parallel Distribution Processing. It works from the assumption that the brain with its one hundred trillion synaptic connections has different layers of neuron networks with each neuron and its synaptic connection aiding in a function of the brain. For example, the neuro-philosopher Paul Churchland points out that humans have only four taste receptors in their mouth. Yet, of course, there are more than four types of tastes. Our taste receptors overcome this simple problem by having different levels of activation for each kind of taste. As Churchland points out if there were only ten activation levels on our four receptors that would still mean we could distinguish between 10,000 different kinds of tastes. We remember these tastes by moving through different layers of neurons creating different paths within the brain in which each neuron in the path represents a small part of the experience and remembrance of taste. Like a parallel processing computer, if we were to lose a few of the neurons within our connections to recognize say the taste of a lemon, we would not lose that ability to recognize a lemon nor would we have to relearn the taste of a lemon each time we tasted one. The same holds for parallel computers. If there is a glitch in one or two areas of a program, a parallel computer would not lose its ability to process a program. It would only find a new way around the program error. Given that the brain works on a parallel distribution process, it is able to continue to function with a loss of 10 percent of its neurons without major damage to our ability to function. This does not mean that the brain's ability to function on a parallel distribution basis prevents any permanent loss of function. When the brain loses too many of the neuron layers as a result of a lesion that disrupts the normal network pathways we lose that function and the result can be major long-term brain dysfunction.

This ability to create neuron patterns permits neuroscientists to speculate how the brain creates its own concepts and categories to remember and house different experiences such as specific tastes, the recognition of faces, or the recognition of similar words. Humans are able to remember different tastes, faces, or words because the neuron pathways not only work in a forward moving motion from the world to the sensory-motor apparatuses of our bodies to the numerous neuron layers within our brain, they also work backward. This ability is called feedbackward or recurrent pathways. Recurrent pathways permit the brain to remember experiences such as tastes, faces, or words that are similar and the brain is able to construct prototypes or categories in which similar experiences or concepts can be placed, remembered, and stored until they are needed the next time the brain experiences the taste of a lemon, sees a familiar face, or reads/hears a new word. This ability to create and maintain recurrent pathways permit the brain to work in an efficient manner so it need not create new neural pathways each time it comes upon something that is similar but slightly different from something else.

If this was all that neuroscientists knew about the brain it would not be much. The key to this theory about neural pathways is the ability to know what part of the brain is activated when say the

brain is creating neural pathways to categorize and create a prototype to remember what a lemon tastes like. It is here that parallel processing computers along with Magnetic Resonance Imagings (MRI) and Positron Emission Tomography (PET) scans have been vital. What neuroscientists have discovered/created is a Baudrillardian example of a simulation creating an understanding of reality. Through the use of parallel processing computers, neuroscientists have been able to create artificial neural networks that provide clues as to how actual neural networks function. For example, neuroscientists have created computer programs using activation patterns, parallel distribution processing, and a method called backpropagation (a method to discover the various weights of synaptic connections) to produce a computer program that can recognize faces in a manner just as effective as humans. This program created by Garrison Cottrell and his laboratory group with its backpropagated synaptic connections acted similar to the way the human brain does. It created prototypes of male and female faces and from this was able to recognize familiar faces introduced to it in a training set.

Taking this knowledge of how parallel processing and activation patterns function in computers, neuroscientists with the assistance of MRI and PET scans are trying to understand what part of the brain performs what functions when dealing with activities such as recognizing familiar faces. PET scans provide neuroscientists with the ability to watch which part of the brain and which neurons are activated causing an increase of blood to that area of the brain. MRIs provide the computer images of the brain that can be dissected and exposed to the cubic millimeter. The output from these three computer-generated images—artificial neural networks, PET scans, and the images of the brain garnered from MRIs—have given neuroscientists much to speculate about.

THE HOPE OF NEUROSCIENCE

The successes of neuroscience in the last twenty years have lead to the rethinking of basic psychological debates that have existed since the inception of the discipline in the late 1800s. One of those debates is the stale nature/nurture debate. This debate is prominent in the debate over the intelligence of a child: is the child born intelligent or is the child a product of its environment? The debate has become a dreadful way to justify inequalities in places such as United States and England where political officials and policy makers pay lip service to notions of equality. Neuroscience weighs in on this debate and suggests that when it comes to the development of the brain it is both nature and nurture but once the child is born it is nurturing that is most important. Each neuron is “predisposed” to perform a certain function within the brain (nature), however, when a child is born all neurons are fair game and can be used to perform any function no matter what its destiny was. After a child is born and neural networks are constructed, the first networks to be created are not the last. The human continues to develop neural networks that help them understand the world around them. The old adage one cannot teach an old dog new tricks fits perfectly in a world where certain ideological policy makers want to limit the support governments give to certain social groups. However, the reality of the brain is that all brains from those of a child to that of a senior citizen are constantly growing, and if given a chance all brains can be nurtured to accomplish things psychologists thought impossible.

This ability to create new neural networks in the lifespan of the brain leads us into the issue of multiculturalism. The neurophilosopher Paul Churchland believes that those people who are able to create numerous neural pathways in order to see and understand moral dilemmas in the world will be those people who are better adapted for a diverse world. Given this assumption about the need and ability to create more than one neural pathway for moral reasoning, and given the growth of diverse cultures within the United States and other nations, it is an imperative that schools begin to nurture in the minds of children alternative ways to see the world. Those children

who are sheltered from alternative views of the world and alternative approaches to moral issues will find their brains have stopped growing and as a result their conflicts with the world around them have grown.

We can take the same notion of promoting neural pathways to understand creativity as well. If the solution to various problems depends on how well we create alternative neural pathways to see and understand the world around us, then we can use this same reasoning in regards to creativity. In order to promote the creativity of young people schools need to provide students alternatives to approach a problem or subject from as many different angles as possible. The creative student will be the person who can see that there is a humanities solution to a scientific problem or understand that there are numerous ways to represent the world without proclaiming one has the Truth. Unfortunately, while neuroscience is taking us in these interesting directions, schools are moving toward standardization and the stifling of the creative mind. Even more tragic is when schools are not trying to stifle the creativity of students through standardization, they are trying to normalize and pacify students through psychoactive drugs in the name of classroom management and high performing (test taking) schools.

Neuro-philosophers such as Patricia Churchland are suggesting that the research in neuroscience is providing new insights into the centuries old debate about the mind and body. Patricia Churchland along with her colleagues Antonia Damasio and Paul Churchland have argued that neural networks and their abilities to represent the world and induce moral reasoning within human brains demonstrates that there is no dichotomy between the mind and the brain. The brain is the mind and the mind is part of the body. There is no mysterious substance or even a spirit. Take away the brain and one takes away the mind. Neither one can function without the other. Such an approach obviously opens up not only philosophical questions but questions about deeply embedded theological questions that are the hallmark of many dimensions of Western civilization.

IS FRANKENSTEIN'S CREATION AROUND THE CORNER?

The notion that the mind is the physical brain not only broaches serious theological issues but also raises potentially dangerous cultural and social concerns that neuro-philosophers seem to be either ignorant of or ambivalent toward. It is the answers (or the neural networks we create) to these moral debates that will determine the type of society we will live in and whether Frankenstein's monster is just around the corner.

It is the neuro-philosopher Paul Churchland who broaches many of these issues in his path-breaking book *The Engine of Reason, the Seat of the Soul: A Philosophical Journey into the Brain*. He offers suggestions and insights into many of the social issues that concern us. For instance in regards to the death penalty, Churchland implies that there is an alternative. One of the things Churchland suggests is that we could learn many things using a comparative brain approach. He advocates the pooling of all the PET and CAT scans and MRIs into one system so we can compare all the brains within the system. Imagine you have been experiencing a persistent tingling in your limbs and some times a loss of feeling in your digits. You go to your doctor, she scans your brain, places your brain images into a database, the database compares it with all the people who have suffered strokes and the program prints out a diagnosis that suggests you are on course for a stroke. How relieved would you be to know that you just averted a major health crisis? This is the potential of Churchland's suggestions.

Unfortunately he does not stop at helping doctors with diagnoses. Churchland suggests that this database can be used to see what it is within the brains of some to be recidivist criminals. If doctors could locate a commonality in the brains of recidivists would society be tempted to use it to "control" criminals? Would this be our version of a frontal lobotomy? Here everything that

we have gained in the name of nurturing from neuroscientists, society will lose if Churchland's scheme is adopted. To suggest that there is a neural pathway within repeat criminals ignores all the environmental dimensions such as poverty and free market Darwinian social policies that reward wealthy corporations and punish poor individuals. Such schemes and ideas cannot be left up to drifting neuro-philosophers who fail to see any problem with their visions of utopia constructed through the lens of a MRI computer screen. There needs to be a vigorous public debate and vigorous standards protecting the minds of individuals no matter how dangerous the people may be. It is only public debate, public action, and public vigilance that will prevent neuropolitics from becoming Mary Shelley's nightmare.

The politics do not end with criminals. Churchland offers insights into other social matters. If we work from the premise that neuroscience has demonstrated that everything we have contributed to such nonmaterial things as the mind or the spirit is actually the physical brain at work, then we can conclude that the brain is the meaning and the source of life. If the brain is dead, then so is the rest of the body. This has major implications for the whole life cycle. If the brain is the determining characteristic for what is a living thing, then the abortion standards of the United States need to be changed. The brain in a fetus is not developed until the third trimester; therefore the fetus is not a human being conceived at birth and abortion is legal up to the full development of the brain. Anything before full development is not a taking of a life. No matter where one stands on the issue of abortion, this matter has to meet the same standard as that of the treatment of recidivists. If there is no public debate over these issues and only scientific proclamation, then we have abandoned our dreams of a democracy and ceded our rights to a handful of scientists.

This matter concerns the elderly too. Should individuals who have suffered a mild or even extreme loss in their brainpower be allowed to end their life because their quality of brain activity and function has decreased? The Neuro-reduction of life to the brain suggests yes. What about the adults who have been in an accident and are labeled brain dead but their heart, lungs, and other vital organs are still functioning? Are these persons dead, should they be permitted to die, and should we be able to "harvest" their organs to give to someone who might have a failing heart but a sound brain? Neuro-philosophers would suggest yes to these issues. However you might respond to these questions is a matter of your conscience or how many neural networks you have developed to understand these moral dilemmas. But respond we must. Our responses will dictate the directions neuroscience research will go and how it will be used in our society. Our democracy depends on how we respond to these issues, and we can rest uncomfortably knowing that pharmaceuticals, medical companies, and other high-stake groups are hoping we abdicate our democratic rights and responsibilities because there are billions of dollars to be made in this new research.

A final dimension of neuropolitics is the manner in which science is conceptualized within the realm of neuroscience. Neuro-philosophers such as Paul and Patricia Churchland construct an image of science that is based more in the ideals of science—fantasies of science—and less in the reality and politics of science. The Churchlands often construct science as a fallible endeavor but always self-correcting. Their works are filled with pre-Kuhnian ideals that treat science as a rational endeavor, and free of any interpolitical maneuvers. If emotions enter into neuroscience, they are held in check with the sound principles of science. The construction of science as something above human endeavors is a centuries old strategy to place acts of scientists above critical questioning. The Churchlands continue this tradition.

The work of sociologists, anthropologists, and philosophers of science such as Bruno Latour, Peter Galison, N. Katherine Hayles, Arkady Plotnitsky, Alan Gross, Steve Shapin, and Evelyn Fox Keller have demonstrated that science cannot avoid politics, and neuroscience is no different. No matter what neuroscience accomplishes, it will be caught up in the political struggles of representing data, competing for funding, constructing myths of who discovered what, and

controlling the flow of knowledge to determine what will enjoy the label of truth. When developing theories of the brain and how neuroscience can assist us in developing public policy, it is dangerous to stake out such a naïve claim of science that one finds in the work of the Churchlands. To work from the assumption that science is self-correcting, rationale, and apolitical will set the stage for the creation of public policy that will eventually do more harm than good.

A more fruitful approach to science is found in the work of Martin Heidegger, Giles Deleuze, and Felix Guattari. These philosophers have established the principle that it is philosophy not science that is the most important endeavor when thinking and creating. Science enframes, observes, and categorizes the real, thereby limiting and unsuccessfully trying to control it. Philosophy on the other hand creates concepts to think about the real, which includes science. Rather than enclosing debate over matters of the real, philosophy opens up possibilities to think about it. Neuroscience in all its brilliance will serve the needs of the world best if science is not idealized so as to make it immune from critical questioning. Debating the politics of this new field is the place to start in order to make sure we as citizens of the world have an opportunity to shape the course of neuroscience and how the discoveries/ theories of this new field will be utilized in our name.

FURTHER READING

On Neuroscience

- Churchland, Patricia (2001). *Brian-Wise: Studies in Neuro-philosophy*. Cambridge, MA: MIT.
- Churchland, Paul (1996). *The Engine of Reason, the Seat of the Soul: A Philosophical Journey into the Brain*. Cambridge, MA: MIT.
- Damasio, Antonio (1994). *Descartes' Error: Emotion, Reason, and the Human Brain*. New York: Quill.
- . (1999). *The Feeling of What Happens: Body and Emotion in the Making of Consciousness*. San Diego: Harcourt.
- . (2003). *Looking for Spinoza: Joy, Sorrow, and the Feeling Brain*. San Diego: Harcourt.
- Ramachandran, V. S., and Blakeslee, Sandra (1998). *Phantoms in the Brain*. New York: Quill.

On the Philosophy and Critique of Science

- Connelly, William (2002). *Neuropolitics: Thinking, Culture, Speed*. Minneapolis, MN: Minnesota.
- Deleuze, Gilles, and Guattari, Felix (1994). *What is Philosophy?* New York: Columbia.
- Galison, Peter (1997). *Image and Logic: A Material Culture of Microphysics*. Cambridge, MA: Harvard.
- Gross, Alan (1996). *The Rhetoric of Science*. Cambridge, MA: Harvard.
- Hayles, N. Katherine (1999). *HowWe Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: Chicago.
- Heidegger, Martin. (1977). *The Question Concerning Technology and Other Essays*. New York: Harper Torchbooks.
- Keller, Evelyn Fox (2002). *Making Sense of Life: Explaining Biological Development with Models, Metaphors, and Machines*. Cambridge, MA: Harvard.
- Latour, Bruno (1988). *Science in Action: How to follow Scientists and Engineers through Society*. Cambridge, MA: Harvard.
- Plotnitsky, Arkady (2002). *The Knowable and Unknowable: Modern Science, Non-Classical thought, and the "Two Cultures."* Ann Arbor, MI: Michigan.
- Shapin, Steve (1994). *A Social History of Truth: Civility and Science in the Seventeenth Century*. Chicago: Chicago.

CHAPTER 73

Desperately Seeking Psyche I: The Lost Soul of Psychology and Mental Disorder of Education

MOLLY QUINN

What lies behind us and what lies before us are tiny matters compared to what lies within us.
Emerson

A mind too active is no mind at all.
Roethke

Long ago, in a kingdom far away, there lived a king and queen who had three daughters. The royal couple was most fortunate in that the gods had endowed each maiden with the gift of beauty. Still, while the eldest two possessed wit and charm and intelligence, it was the third and youngest daughter who was by far the fairest of them all. The light of her countenance, her gentle radiance, her ethereal beauty, inspired all who met her. Her name was Psyche . . .

Introductory Re-telling, Myth of Psyche

The study of educational psychology rarely, if ever, incites the inspiration of poets, introduces the insight of philosophers, or includes the illumination of myths. Yet, such is at the heart of understanding what it means to be human, of gleaning knowledge of the human mind, of glimpsing the nature of the human condition—and through such, grasping truths about human growth and action, and how these might be most fruitfully fostered in this work we call education. But why, then, doesn't this field of study reach, more than not, this heart of things? And must it—is that its proper work and address? If not, what is? And what does it, in fact, or what should it, incite? Herein we raise questions both about the problems and possibilities inherent to this enterprise we call educational psychology. Here, let us seek its promise of insight and illumination by first exploring and addressing some of its fundamental problems.

EDUCATIONAL PSYCHOLOGY

The term is rigid and dry, cerebral and serious, its work subject to and structured by legitimization but principally through the cold calibrations of a hard science in what appears to be its most linear, logical, empirical, and positive (or instrumental) sense. At least, we think, its contributions are sound; we can rely upon them. The hard, objective, unengaging edges of this field of inquiry

constitute, in fact, its strength, its rigor, and its virtue—the very ground of our confidence in it and its discoveries. Still, that which educational psychology connotes hardly inspires us to contemplate or marvel at the profound human mysteries and motivations subsumed in its study, as the subject—and object—of its study, and referenced in its very name. At best, it seems, we call to mind Piaget and his insights into different developmental stages for learning, Montessori and the implications of her work for a child-centered pedagogy, or Gardner and his theory of multiple intelligences capable of broadening in some measure our concept of intelligence, and mind. Or practically speaking, we enjoy, perhaps, the validity of scientific research to support certain beliefs—even if often somewhat obvious—and practices issuing from them, such as: students learn more effectively with support and encouragement, hungry children have difficulty concentrating in school, or reading with children at home positively impacts academic learning. And we attend, in the name of this science and its findings about human learning, to things like time-on-task, wait-time, positive feedback, and scope and sequence in instruction. Conceivably at worst, we model our educational practices after Skinner’s discoveries about manipulating human behavior, approach learning through the reductive lens of Bloom’s taxonomy of knowledge, or initiate teaching in some formulaic presentation of Tyler’s Rationale or “Teacher Effectiveness.” However, in most of these cases, we build, however unwittingly, on the history of predictive and prescriptive education, bolstered by educational psychology, that turns texts into tests and students into statistics—all too often in the service of educational inequality, of social regulation and reproduction—by IQ testing and ability grouping, via psychological labels and deficit models. In addition, this kind of education, and the psychological study that supports it, with its dehumanizing effects, escapes scrutiny because it is cloaked in the guise of scientific objectivity, the language of neutrality. It also undermines and diminishes the powers of the human mind, often trivializing and de-intellectualizing the work of education, paradoxically at odds with the aim of educational excellence. Alas, this portrait appears to paint, as well, the dominant and enduring legacy of educational psychology. This legacy, and the problems it perpetuates, is certainly, of course, something we need to investigate further—hopefully toward transforming it in ways that cultivate our humanity, rather than diminish it, through the work of this field of study and the work of education itself.

“DESPERATELY SEEKING PSYCHE”

The problems that plague the field of educational psychology have indeed seriously hindered the realization of its immense potential for understanding the human mind and assisting the realization of its highest powers. In fact, the field has been “troubled” from the beginning, it seems, and the target of criticism, with its predecessor psychology since its inception as a discipline of study in the latter part of the nineteenth century. The judgment to which it has been subjected, however, has not abated its power—making it all the more critical to address what is at issue in its work. In truth, educational psychology is laden with the concerns with which the fields of education and psychology themselves are laden, especially given their histories. We can further posit that our very selves and our very societies—how we conceive of and construct them, are essentially fraught with these problems, as well. Basically, educational psychology—largely symptomatic of the ills of modern times—looks enthusiastic and [rigorously], at that which lies behind us and before us and about us, and fixated upon externals, misses the all-important “within” us—fails to genuinely see *us*. With its overly active mind, inquiring into mind, the field misses *mind* itself, having lost *its* mind, we could say. Desperately seeking Psyche, educational psychology does so in all the wrong places; or worse, it seems to have forgotten exactly who it is that it seeks to find, and to know.

According to the philosopher John Locke, the images and ideas within our minds are the invisible forces that govern us, that to these we ever readily—and mostly unconsciously—submit.

The “mind”—paradigm, worldview, and framework—of educational psychology remains largely itself unexamined, and thus there is little realization that it suffers from an unacknowledged and unaddressed impoverishment of the imagination. The images and ideas directing the work of the field have let Psyche herself slip from view. What this means is that a central problem facing the field of educational psychology at present is its focus, and view—its conception of the object of its study, and thus of itself as well. Its psyche—including her education—lacks depth, fullness, and its essential humanness—as merely seen through the ideas of the self or the subject or the conscious mind. Absent is Psyche—a metaphor for the human mind in all its mystery from ancient Greece, an image of the soul in search of the divine from medieval times—etymologically defined in relation to the principle of life, the spirit or breath of life, the mind, the soul and source of consciousness. Absent is her story, as well, her journey of transformation, her ephemeral beauty, her discovery of love. Instead, with respect to educational thought, Psyche is imprisoned in corseted constructs like intelligence, cognition, and learning. Yet, how, why, has educational psychology forgotten so much of Psyche in its quest for her? We need to understand, perhaps, this failure of the imagination in a more substantial way in order to overcome it.

The academic psychologist Couze Venn (1984) raises important questions about what has been the dominant project of psychology, and thus also operative in educational psychology, from its beginnings—calibrating the human subject: Does psychology have this measure? And what of its instruments, that which is regulated by them? What does psychology actually construct, and undertake? In the name of what, and to what effect? Venn relates a history defined by charting pathologies, drawing up taxonomies, and setting norms of human conduct that are inscribed in institutional practices. As a social science, psychology, it seems, has understood its part in the complex of activities constituting society, yet has failed to appreciate how such a context has directed its own discourse and activity. Mapping out a preliminary genealogy of psychology as a discipline, he establishes not only the historical character of psychology’s “subject” but also critiques this very subject—which is, in fact, the object of psychology’s study. In short, this thinker has offered us a provocative interpretation of the problems we must address with respect to the work of educational psychology through a historical look at the field upon which it is founded—psychology, critically analyzing its central images and ideas.

From its development in the nineteenth and twentieth centuries, psychology first defines itself against philosophy, seeking answers to the mysteries of the Psyche primarily through the model of science. In this way, at its conception the field itself significantly limits not only its ability to question its own assumptions, to inquire into the ground of its own work, but also its view of Psyche—the subject of its work. Venn highlights for us two unexamined, and troubling, constructs upon which psychology is founded: (1) the notion of the human subject and (2) the science of positivism. Who/What is the subject? The subject is a historically mediated synonym or substitute for Psyche—psyche. A product of seventeenth century thought, this notion sets forth an understanding of humanity via the image of the unitary, rational individual. Psychology, thus, positions itself as the science of the individual, the human subject taken up as its specific scientific object of study. The new discipline of study, built on the foundation of positivism, supports the development of a positive science of society—the idea conceived in the early 1800s that society concedes to scientific analysis, is subject to the rules of natural science—and affirms the possibility of its rational planning. Its contribution in this endeavor is then this science of the mind wherein the mind—materialized, naturalized, and constrained within the rational—is viewed as an object of science whose processes can be empirically identified, observed, measured, predicted, and thus ultimately acted upon as well.

Many, and yet somewhat monological in effect, have been the historical influences brought to bear in psychology's birth and development as a discipline—built largely upon ideas established in the seventeenth century. From Descartes' philosophical certainty—"I think, therefore I am"—the individual comes not only to be taken as primary, but also to be conceived abstractly and empirically as the human subject—both of law and politics, as well as of science and reason. From the Copernican Revolution, and its mechanical metaphors grounded in mathematics, science is embraced as the most solid foundation for understanding the world, and human conduct therein—with an emphasis on the material and measurable. Reason, in fact, particularly as directed via science, is deemed to be the source of truth—knowledge gleaned through it superior to any other competing knowledge claims. From Bacon, by the conceptual split between mind and body and the primacy afforded the human subject, knowledge is increasingly viewed as power to dominate, to act upon or discipline nature (and the body) technically and practically to serve human ends. Once psychology addresses its subject, the mind—given material status with the body—has lost much of its grandeur as seen through ancient tradition. Rather, trapped in images like the logical machine or information processor, the mind—Psyche—is also easily subjected to this rule by the power of knowledge.

From the Enlightenment project, the triumph of the new explanatory structure of science and reason over myth and religion, nature is desocialized and the world disenchanted. The centrality of the human subject is strengthened, to which Psyche and her mythological depths are reduced. Despite its marks of progress, the Enlightenment, in absorbing the whole of human imagination under the rubric of reason—featuring science and the individual, cultivates, in fact, its impoverishment. Myth is discredited, and all the realms of meaning not subsumed by science. From this view, madness, once inextricably linked to genius, suddenly endangers the whole of reason—and thus also the whole of humanity, increasingly defined by the principle of reason. The most-dreaded disease, a threat to the social order, madness is that which must be silenced, isolated, tamed, eradicated. This "dark side" of reason, by which reason itself is almost exclusively measured, is contained then, and "mad" individuals possessed of it, via institutionalization or some other established technology of control. The medical model is brought to bear on matters of the mind. Such ideas clearly find expression in psychology's origins, as a field, its foundational concerns with pathology and prescription, its concerted efforts at mental measurement, its clinical underpinnings.

From Darwin and evolutionary theory, the idea of a science of the mind actually becomes possible, reason naturalized and subject to empirical study, and the focus on deviations and norms fortified as well. Reflecting Darwin's classification of biological organisms and his idea of the fixity of types, Piaget positions psychology as a science of cognition, the biological model taking on greater importance, through scientific child study and the establishment of developmental stages of learning. The historical notions of rationality and normality are made natural, assumed as a given by the field. In addition, from the mid-nineteenth century ideal of utility, psychology, as the science of the mind, further aims excessively at its behavioral manifestations. In concert with the utilitarian principle that makes "the good" defined as "useful" natural law, the field of study—motivated by disciplining and amplifying the powers of the human mind, maximizing its utility—instrumentalizes the mind, subjecting it to these growing social technologies of control.

Clearly, Psyche cannot be captured by cognition alone, nor reduced solely to reason—even the human "subject" is not ever wholly subject to technological control. Yet, work in the field focusing on the mind's powers of intuition and self-reflection, for example, is marginalized nonetheless. Freud—and those that follow him—works to articulate a science for Psyche that attends also to her secret, even unconscious, desires—her ways of resistance that defy reason and sense. Yet, Freud seeks still the systematization of science, insufficient before Psyche's dark mysteries. In addition, born as psychoanalysis, his work presents itself as a competing science that is met with

disdain by psychology proper. In the conceptual omission of feelings and desires from reason, psychology separates itself almost wholly from psychoanalysis, which is relegated to unreason's realm. The "subject" of psychology is partial, in this way, neither complete nor whole. And this is the subject educational psychology takes up, as well.

In analyzing the historical ideas and images at work in psychology's birth as a field, Venn indicts psychology of a certain ahistoricism: conceived through the birth of "modern man" and his new rationality in the idea of the human subject, psychology ignores the historical character of its object of study. As the science of the mind, postulating its rational and objective foundation apart from philosophy, the psyche it seeks is not exactly worthy of the name. This subject of psychology as the subject-of-science conforms well to strategies of administrative regulation as generated by research in the social sciences. Absent the impact of social context, consistent with positivistic science, this psyche, he suggests, is the rationalizing subject of capitalist economic exchange. An implicit individualism upon which it is built, that even humanistic perspectives in psychology—critical of scientism and positivism—usually assume, further undermines the power of culture, context, and community in Psyche's constitution.

An ongoing issue for psychology, and educational psychology in turn, is then that its central focus, the taken-for-granted, normative idea of the human subject, is still largely unquestioned, neither seen through its historicity nor in its exclusivity—despite abounding criticism aimed at this very concern. Not only has contemporary scholarship raised questions about the possibility of understanding the subject apart from social context, but also about the subject itself, as the object of psychology's study—positing rather *subjectivities* (in the plural), shifting identities that are culturally constituted without center or certainty. A constitutional feature of modern society, it seems, while we may not be able to exceed the limited idea of the individual, it is clear that we need, at least, to recognize that it is neither natural nor normal. As we interrogate this idea and ground of psychology, and individualism—the worldview which is its friend, we realize that the subject, the individual, is in fact male, rational, middle-class, white, of European descent: an unexamined norm that works socially to reproduce the status quo, and its inequities; to silence the psyches of the excluded others. Such work, as well, within the framework of positivistic science is legitimated in claims of neutrality and objectivity.

In this way, educational psychology, especially as drawn upon via the work of education, has provided instruments and mechanisms for perpetuating social norms, and pathologizing psyches who do not embody them. The philosopher Michel Foucault has posited further that such institutional practices have power in constituting individuals, actually shaping our own identities and self-perceptions, according to norms that benefit the economic order and well-being of the state. How, for example, are children from more communally based or less achievement-oriented—even less consumer-driven—cultures than that assumed by educational psychology assessed and addressed by it? The conclusion is: not well. Educational psychology, grounded in these central constructs of psychology, is additionally, in large measure, the brainchild of behavioral psychology specifically—with its tendencies to reduce Psyche even further and sometimes nearly fully to behavior—the external activity of the human subject ("I do/I act, therefore I am.") its primary concern. Such practices, of course, reflect a larger worldview—particularly Western—that is inordinately oriented around the extroverted, material, scientific, and individual, at the expense of the inner life—that which is immaterial, interpretive, poetic, (inter)connected, and whole—Psyche's very substance.

In *The Lure of the Transcendent* (1999), the educational scholar Dwayne Huebner articulates this concern further in pointing out that the practices we engage, as well as the language we use, are drawn from the images in which we have chosen to dwell. Thus, since in educational psychology, we have a troubled imagination, we also seem to have problems with the language we use to understand the Psyche and her education, as well as with the practices we advocate and initiate

through such study. His critique of the field of education, and the psychological research that informs it, is that the language of “learning,” of “student and teacher,” trivializes and simplifies the educational endeavor, the pedagogical relationship, and their part in the journey that is life. In fact, teacher and student share the human condition, constituted by possibilities beyond realization, in a world both infinite and mysterious. The framework educational psychology provides, defining also discourse and activity, hides, and in many ways denies, this truth. What we are striving to uncover here is the way in which educational psychology, via its history, tends to be totalizing (as its parent, psychology) in its view—it psychologizes human life, and the work of education, which is to say that it operates under the assumption that all can be reduced to psychological analysis and explanation. Nestled within the authority of science and research, it not only claims to articulate reality/what is real but also dismisses understandings of Psyche and her education provided through other ways of knowing like poetry, myth, and philosophy—or reinterprets them through its own narrow lens. The result, according to Bernie Neville (1992), is indeed a language for education, via educational psychology, which is without a soul—that is, Psyche (Psyche means “soul”) has actually been left out of the conversation. What this effectively means, as well, is that we have an education system that is without soul, as well—what we do in schools, based on the “research-based” recommendations educational psychology delivers, undermines the Psyche, and thus our humanity, and greatest human ideals, as well.

The inspiration to return to Psyche here in our thoughts about the work of educational psychology has come largely from the work of Neville. In his *Educating Psyche: Emotion, Imagination and the Unconscious in Learning* (1992), he returns to myth, that which historically predates philosophy and psychology in addressing the ultimate questions that concern human life and growth. He builds his examination of educational psychology and the schooling it supports upon the premises that the unconscious mind within us directs us far more powerfully than does the conscious, and that the image is still our original and preferred way of knowing—in fact perhaps its ground, abstract conceptualization a later evolutionary development in human thought. From this perspective, he looks at the problems of educational psychology through the images and stories of ancient mythology, and situates himself as an advocate for Psyche. Educational psychology, he suggests, has pledged allegiance to Apollo, the sun god. This divinity celebrates the clear light of consciousness in manifesting what is. In modern terms, grounded in the European ideals of the Enlightenment from the seventeenth century, the hero is logic, rationality, and science. This ruler has, as well, endured perpetual challenges from what he calls romantics in the field from the nineteenth century, who align themselves with the mythic figure of Dionysos, the god of ecstasy, impulse, and the irrational. Another mythic character more successfully, however, competes with Apollo: Prometheus. Known as the god of technology, Prometheus brought fire to humans for which he was severely punished. Gaining strength in the industrial age, this spirit allures via the force of action, as the engineer and instrumentalist. However, while consciousness is perhaps divine, and agency in the material world as powerful, the rule of either is one-sided, partial, and problematic. Neither is able to touch the life and depth of Psyche. Through her story, as well, we know that neither Apollo nor Prometheus does she love. Her kindred is another god: Eros—to whom we will turn in the next chapter in our attempts to re-mind our education, and its psychology, to embrace soul—Psyche herself—in its work.

What this portrait reveals, in addition to raising questions about how narrow and lifeless is the language educational psychology uses to articulate its subject, is that the educational practices this field sanctions are actually detrimental to the full and free growth of the human psyche. Education as informed by this discipline, particularly via schooling, in homage to Apollo and Prometheus, overlooks the depths of the learner, even in reducing the person to “learner,” obsessed rather with intellect and utility—compulsively caught up in the cerebral. Conventional teaching, as well, via its grounding in educational psychology, works diligently at, what Neville calls,

“cultivating incomplete people.” Psyche is little acknowledged—reduced to intellect alone. The disciplines of study, which in their truest embodiment are foundations for nourishing the mind and heart, are rather stripped of this power in an emphasis on things like outcomes, assessments, or performance indicators. Even study, once a soulful endeavor engaging the inner life, is reduced to the amassing of “factoids” or the finding of answers to questions students have not asked, nor about which they care. Subjects not readily subsumed under the rubric of science or subject to systematization tend to be undervalued in the educational system—increasingly so as students progress through their schooling. In addition, the important role of the imagination in science is unacknowledged, as well as the use of metaphor in the presentation of its findings. Left out of the equation in mathematics is its core, which involves the provocative and inspired search for a language to express the invisible and infinite, its part in the cosmic design. Science becomes facts, math becomes measures, and psyche becomes known solely through productions prescribed by others.

Educational psychology, in this way, cultivates educational thought and practice that is one-sided, narrow, and ultimately ineffectual. Having utterly lost sight of Psyche, it by in large sets forth a perspective and pedagogy that has very little to do with understanding or educating Psyche at all, that actively and unwittingly works to exclude her and hide her from view. In our heart of hearts, and mind of minds, however, we feel and know it might be otherwise, that Psyche may in fact be sought and actually found—a *fairest-of-all* treasure without measure. We must, then, remind ourselves thus, and turn to this promise and possibility, as well, in our seeking.

REFERENCES

- Huebner, D. (1999). *The Lure of the Transcendent*. Mahwah, NJ: Lawrence Erlbaum.
- Neville, B. (1992). *Educating Psyche: Emotion, Imagination and the Unconscious in Learning*. North Blackburn, Victoria: Collins Dove.
- Venn, C. (1984). The Subject of Psychology. In J. Henriques, W. Holloway, C. Ururin, C. Venn., and V. Walkerdine (Eds.), *Changing the Subject: Psychology, Social Regulation and Subjectivity*. London: Methuen.

CHAPTER 74

Desperately Seeking Psyche II: Re-Minding Ourselves, Our Societies, Our Psychologies, to Educate with Soul

MOLLY QUINN

What lies behind us and what lies before us are tiny matters compared to what lies within us.
Emerson

A mind too active is no mind at all.
Roethke

Long ago, in a kingdom far away, there lived a king and queen who had three daughters. The royal couple was most fortunate in that the gods had endowed each maiden with the gift of beauty. Still, while the eldest two possessed wit and charm and intelligence, it was the third and youngest daughter who was by far the fairest of them all. The light of her countenance, her gentle radiance, her ethereal beauty, inspired all who met her. Her name was Psyche . . .

Introductory Re-telling, Myth of Psyche

Educational Psychology—this field of study indeed does not generally summon adventures in exploring the great “within us” of human consciousness, or the great “beyond” transcending mind, or the dark albeit lovely journey of Psyche in her pursuit of love. We tend in this terrain to rough it through the rigid, dry, cerebral, and serious matter of “mind” rather than revel in the wisdom and wit of philosophy, poetry, or myth. In short, we fail in some fatal way to get to the heart of the human—mind, motivation, movement, and moment. Psyche, or some aspect of her, is perhaps sought—but in all the wrong places. And if we really seek in this inquiry to understand human growth and action, and how to foster their highest expressions via the work of education, we are at present somewhat desperate. But the formula we fall to in educational psychology is not final. Just as we can be transformed by the renewing of our minds, so too can the field be re-minded. For at the heart of educational psychology there is a heart for seeking Psyche—despite what it presently connotes, its foundational impulse denotes much that speaks of its promise and possibility for knowing this “fairest of them all” within us all and illuminating an education to cultivate her highest potential.

Let us also consider, then, what this formulation—*Educational Psychology*—denotes, for therein may lie its deeper signification, and animation, that which may draw us compellingly into its work, and even perhaps to a more fruitful employment of it for the purposes of education: its

possibilities. There we may find poetry, philosophy, and mythology, as well, and their revelations to be part and parcel of the study of educational psychology, and its understandings. *Psychology*, as literally defined, for example, undertakes the study of (-ology) the *psyche*—concerned with articulating, presenting, listening to, and understanding its *logos*: its reason, or word. Psyche is its subject; unearthing the word—*raison d’être*, reason for being, purpose and path, logic and way—of psyche, its task. Psychology is, in short, the science of the psyche. But how do we define *psyche*? What is the psyche? Psyche, as we generally think about it, refers essentially to that which is human: the self, the subject, or—more directly, perhaps, for the concerns of education—the mind. Even as defined thus, we get the sense that psychology—as the systematic study or science of the human subject or self, the intellectual endeavor that strives to understand the intellect itself—is an intrinsically enticing and profoundly important discipline of study. At its heart, it seeks the *heart* of “you” and of “me,” the innermost being of the individual, whether approached via the path of mind or emotion or will or behavior. The object of its inquiry is each of “us” at our most intimate, personal, and profound center.

Psychology seeks, in this way, the truth of the inner life that directs the outer one—whether viewed as “the ghost in the machine,” the immortal soul, the socially constructed self, or the “pinnacle” of biological evolution. Sometimes, admittedly, it primarily seeks this understanding in order to *redirect* human thought, emotion, and action to certain preestablished ends, toward particular social ideals—a practice that more often than not perhaps, ironically serves to diminish and distort the very knowledge of the psyche it seeks to uncover. Still, when the human “I” turns to inquire into itself, its very “I,” as psychology essentially aims to do, an awesome undertaking is at work, through which we all are made subjects of this study and implicated in its findings. We may have erred here, then, in asking “What is psyche?” instead of “Who is Psyche?”—indeed, for each of us, surely the “fairest of them all.” Psychology, as well, may have erred in its own identity construction and self-reflection: clearly, the question to which it addresses itself intersects powerfully with the work of philosophy, religion, art, and culture. Perhaps, instead of a separate discipline of study, it is in fact an inter-, multi-, trans-disciplinary field of inquiry—the most comprehensive and truest portrait of Psyche, its aim.

If this aspiration were not grand enough in scope and purpose, educational psychology takes on an even grander challenge still: it strives to engage the work of psychology *educationally*, to draw upon this truest understanding of Psyche in order to cultivate—or at least gain insight into—her highest education. But what does this mean exactly—to educate Psyche, through a knowledge of her nature and way? Educational psychology, in fact, seeks to address this very question. And if we but consider some of the origins of our notions of education, we begin to get a glimpse of the enormous promise the field of educational psychology holds for us in understanding, and in cultivating, our humanity. For, education—the word itself drawn from the Latin *educere* meaning “to bring forth” or “to draw out” and *educare* meaning “to rear” or “to nurture”—is fundamentally concerned with the “bringing forth” of human life, with drawing out “the fairest of them all” in us, with nurturing *Psyche*’s growth and vitality. This is no small task, nor is such simply “cerebral and serious.” In fact, our opening descriptors—“dry” and “rigid”—are antithetical, it would seem, to the expressed aim and address of education, of psychology, and of educational psychology. For the sake of Psyche—and her word, for the sake of education—and its work, even for the sake of science itself perhaps, we must surely, then, continue to explore additional ways to rethink and reconceive educational psychology—as a source of inspiration, insight, and illumination—to mine its virtually infinite potential for embracing all that is true and good and beautiful in human life.

RE-MINDING OUR SELVES, OUR SOCIETIES, OUR PSYCHOLOGIES

Yet, educational psychology may indeed find Psyche in *re-minding* itself, or at least seek her more faithfully and educate her more fully in taking this way. What, though, does re-minding

educational psychology mean exactly? It concerns a great deal more than reconceptualizing a particular specialization in the academic field of psychology; it concerns embracing a new understanding of ourselves and our societies, as well as our psychologies—one that heeds the call to educate with soul, with Psyche in mind. This understanding does not take Psyche, or education, its own understanding even, for granted, but rather asks and asks again and continues to ask who Psyche—soul—is, how to truly know her, and what educating her actually means. Additionally, while this may appear to be a daunting—perhaps even impossible—task, though essential, to revive Psyche, to let her live again, to return her to her rightful place at the—as the—heart of psychological inquiry, it helps to realize that this transformation is already at work culturally, our very psyches as yet striving to be heard. This call to *re-mind*, as well, is also a call *reminding* us of our possibilities, the inherent albeit hidden treasure psychology and education offer in their deepest significations and foundational impulses.

In seeking change, indeed, we are returning—in society and culture at large—to our origins and roots, to the wisdom traditions from whence emerged the inquiry of science, the study of psyche, and the dream of education. In large measure, new age thought is attending old age philosophy and alternative medicine is grounded in ancient healing practice. In varied and sundry cultural domains and academic disciplines, we are working to integrate East and West, body and mind, past and present—even science, art and religion—in our ways of thinking and being, or at least benefit from making connections between them, and looking at intersections of what before had been seen as necessarily separate and even conflicting. The rise of philosophical counseling (as well as life coaching and wellness counseling) as an alternative to traditional psychotherapy or psychoanalysis speaks more directly with respect to the field of psychology in evidencing this shift at work. The idea, pithily expressed—*Plato, not prozac*, is that the clinical and medical model adopted by psychology, directed by notions of the normative and pathological, is insufficient—that its deficit/deficiency orientation is, in fact, misoriented, along with its tendency to reduce human being to human behavior. Philosophical counseling, and other offerings like it, intimates this return to Psyche as soul in that from this framework the challenges we face are seen as part and parcel of the human condition, addressed with an eye to the larger contexts in which we find ourselves; the insights of philosophy or other ways of knowing like spirituality and art, in addition to science and psychology proper, are drawn upon for understanding.

As is often the case, however, the very discipline of study initiated to learn of Psyche, psychology, has resisted this cultural and intellectual critique, and thus internal examination and transformation. Education, because institutionalized via schooling and strongly shaped by the field of educational psychology, also reflects this cultural lag in consciousness, as it were. Still, there are signs of openings in the educational and psychological imagination; still, educational psychology can be re-minded, and reminded of Psyche: her story and her word (logos)—that is, her way.

The story of Psyche comes to us through an ancient Greek legend. Bernie Neville (1992), in *Educating Psyche: Emotion, Imagination and the Unconscious in Learning*, relates how the Greeks, great respecters of reason, understood that reason itself is but a small light within a much grander surrounding darkness, and that to light upon it alone is to obscure our view of reality and of the human mind. From this perspective, the human mind, or soul, partakes in the mystery of creation; she—Psyche—walks in beauty, no doubt, but she also dwells much in darkness, living in the shadows perhaps even more than the light. This is part of the wisdom, in fact, that Psyche's story implicitly communicates to us. For, Carl Jung, James Hillman and other scholars of psychology have recognized the archetypal power of myths and metaphors like these in articulating truths about the human condition, and the cosmic design of which we are a part. Entertain us, they may, but these stories also set forth intriguing portraits of the world, nature, culture, society, and the “self” for us to contemplate, and from which to gain insight into ourselves—our own psyche's story, in this case. Let us look, then, a little closer at Psyche's story, what it speaks, and who it is educational psychology might more faithfully seek to know.

From ancient lore, we know that Psyche is the third and fairest daughter of an earthly king. This maiden is so honored for her beauty that Aphrodite (or Venus) herself, the goddess of beauty, grows jealous of her, and sends her son Eros (or Cupid) to cast his arrows at Psyche to have her fall in love with a monster. The king is compelled by Apollo, the god of light, to leave his daughter alone on the rocky mountaintop where her husband, a winged serpent, will come to her. Eros, smitten himself with love for Psyche, takes her instead through a grassy fragrant meadow where she finds rest beside shining waters. She is brought to dwell in a glorious mansion and Eros becomes her love, but only in darkness, coming to her by night. Psyche embraces this union with joy, and knows her kind mate can be no monster. Yet, she is filled with doubts when her jealous sisters raise questions about the man or monster she can never see. Finally, one night, she shines a lamp upon his sleeping form to find that he is indeed her handsome beloved. He awakes, though, and flees: Psyche loses her love for lack of trust. Tormented, she spends her life searching for him. She pleads with Aphrodite herself who, with no intention of honoring her promise to reunite Psyche and Eros, gives her many dark and humanly impossible tasks to perform. Yet, in each of them, Psyche is helped by nature's creatures. Returning from her journey to Hades (hell) to bring back the beauty of Persephone (death) for Aphrodite, she opens the box of Persephone's dark beauty in her curiosity and falls into a deep sleep. By now, Eros is healed of his heart wounds and is himself in search of Psyche. He awakens her and enlists the help of Jupiter against Aphrodite's fury. Psyche herself is given immortality and the pair are joyously reunited for all eternity.

What does this story say—about Psyche, about her education, her mind, and the way of knowledge? In concert with Socratic wisdom, this myth tells us that things are not as they appear to be, that insight is often realized in the experience of darkness, that the light of truth is but one facet of understanding. When we reach the limits of our own knowing, become aware of our own ignorance, it is then and there, perhaps, that we actually approach wisdom. Knowing itself is elusive and enigmatic, the process of learning nonlinear, even surprising and unpredictable—in the moment, unique, experiential. Education is constituted by irreplaceable “Aha” moments we are incapable of manipulating or regulating, and these are usually preceded by periods of intense questioning, difficult confusion, and rigorous inquiry. Genuine understanding, as well, emerges from authentic questions that involve the heart as well as the mind.

This story tells us, especially, that Eros is a central figure in understanding the path of Psyche, her passions and purposes. It is her heart for Eros that engenders her education and growth. Eros, also known as Cupid, is amour's messenger, the god of love. The son of Ares (or Mars) the god of war and Aphrodite (or Venus) the goddess of beauty and sexual love, he is known in lore also as one who often creates confusion, shooting arrows into the hearts of mortals and gods, compelling them to love. A handsome man in Psyche's myth, he is also the forerunner to the baroque baby angels of Christianity—guided as well by love for Psyche. In either case, the figure speaks of Psyche's binding relationship with the divine, that which is sacred and immortal. She must, perhaps, know him only in darkness, and through great difficulty, but her journey with him—and unbreakable union—is ultimately one of great joy and blessing. In traversing this path, she also comes into her own fullness—of beauty, love, and glory. Knowledge is achieved via marriage with experience in the fullness of love. And confusion is not an enemy but a precursor to new understanding.

Freud, realizing the power of *eros* for psychological understanding, uses the term, in fact, to signify what he identified as the source of all human action—sexual energy or desire. Even here, he reduces the power of this image, for Eros is the life impulse itself—complex and even paradoxical. Psyche is drawn by all Eros embodies: creativity, evolution, process, passion, and transcendence. Eros is the man who leaves his mother, goddess of sex, to know love with another—to unite with Psyche, the soul—mutually, in relationship. In so doing, he smites himself, moves beyond himself, with his own arrow of love. Since there really is no story of Psyche without Eros, Freud

is at least wise as a student of the psyche in seeking Psyche to keep in mind that which she herself seeks. Education is, then, a kind of lovemaking, as it were, in the realm of unknowing, wherein the psyche ventures beyond itself/herself to know the Other, experientially, relationally, dialogically—if even that strange and unknown other is a text or discourse or discipline of study. Through such, she also comes to know herself in a new way, changed, in fact, by the encounter. Psyche, the knower, ever seeks union with the “known”—that which she seeks to know.

Neville, in fact, concludes that knowing is like a religion for the psyche—it binds us to the god. Psyche’s search of love takes her to the discovery of Love itself, in herself. The story sets forth an image of becoming, an image central to our depth psychologies, to humanistic and existentialist psychologies in and out of education. In this sense, there is a legacy contemporary educational psychology may look at and into, study seriously, for better understanding Psyche and her educational way, at least redress the present imbalance in its view. Neville highlights, for example, a few scholarly resources for such: Assagioli’s concept of psychosynthesis involving integration and growth through thought and reflection, traversing the unconscious, personal, and transpersonal aspects of mind; Maslow’s evolutionary idea that the psyche is compelled to move by design beyond itself, to transcend itself in working toward self-actualization; Jung’s notion of the way of individuation engaging a collective unconscious; Rogers’s tenet that a key dynamic in psyche’s development is an actualizing propensity; Proffoff’s proposition of the organic psyche, inherently progressive, aimed at integrating the personality, and helped through archetypal images; and the work of Adler and Rank who suggest that the psyche is drawn by meaning inherent within its unique existence, forces neither wholly conscious nor unconscious, by a will-to-integration. This is, in a way, education as lovemaking directed ultimately at union with oneself, as well as the Other, and perhaps all that is. It calls to mind the work of Viktor Frankl, philosopher and psychologist—as well as holocaust survivor, and his critique of Freud. Frankl (1946/1992), in *Man’s Search For Meaning*, contends that the quest for meaning is what draws Psyche in the final analysis, and effectually compels her education. Indeed, this quest engages questions of ultimate concern—desire and pleasure, or love and *eros*, integral to this search, and yet the objects of such passion and what constitutes this meaning are unique to each person, and central to his or her own educational way—albeit not without socially and culturally directed aspects.

Psyche’s story is indeed a myth of transformation, engaging heart as well as mind, impacting her identity and efficacy in the world. Educational psychology may do well to ground itself in this image of becoming and change that is education’s work, one that powerfully impacts the whole person in a particular context, one that reaches beyond itself, humanity itself, in complex ways via society, culture, history, and such. As such, there may be posited rather educational psychologies in the plural; for, the myth of psyche teaches us, in fact, that no one field or theory can lay claim to reality—representing or manifesting it, that all understandings of Psyche in this case, are also metaphors, lights in a larger surrounding darkness. Neville calls them “fashionable lamps” the field of educational psychology has provided—whether constructivist or behaviorist or humanistic, each provide but a picture postulated as master portrait, the definitive view of Psyche’s education. Psyche’s tale speaks of monsters and gods, of darkness and death, of mystery and marriage, and more. If the field would seek Psyche indeed, it might attend the metaphorical, multiperspectival, multivocal, rather than the monolithic.

Seeking psyche, then, means listening to her, as well, and giving voice to her words. We remind ourselves, indeed, through language. Acknowledging the partial and insufficient language used in educational psychology to understand and articulate the subject of its inquiry, we might open our minds to the power of language in speaking and seeking Psyche anew.

Psyche, for instance, literally means “soul,” yet such is a term with which we are generally uncomfortable—academically and educationally. Soul is not only referential of that which we conceive of as “unscientific” but actively “religious.” It speaks of inexplicability, the possibility

that there is a certain something that is ever and always mysterious at the heart of what is truly human, inescapably ungraspable in Psyche and in the human condition. Soul suggests that our source is somehow eternal, immaterial, and spiritual—that beyond the body, biology, and behavior may lie Psyche in truth, the animating principle of life and consciousness. This is the soul or psyche of Plato: first and foremost whole, the source of the good, it corresponds to the *real* person or mind—above matter, self-directed and director of the body. In Aristotle’s language, the psyche is the functioning excellence, the form, of the living body; like vision to the eye is the soul to the body: we know psyche as embodied and inseparable from the body, through its rational and nonrational functions; that is, survival, sensation, volition, and reason. Heraclitus is reported to have said that no matter how far or deep one traveled, one could not reach the end of psyche’s logos or words, hidden and unfathomable. Scholars of intellectual history posit that the soul, thus Psyche in truth, was discarded in the seventeenth century with the rise of science and empiricism—once a kind of bridge between body and spirit, and the source of feeling, imagination, sensitivity to beauty, and love from medieval times. It is interesting, as well, that later in the nineteenth century Freud, attempting a systematic study of Psyche, not only met Eros but found in the science and psychology of his day no language to speak of her, to truly conceptualize the mind. Despite his devotion to science and the light of Apollo, he is compelled to return to myth, metaphor and poetry in order to seek and speak Psyche.

Here is, then, something with which educational psychology might wrestle—its discomfort with the meaning and history of Psyche—her very name, its object of study—and work to stop excluding it from its voice and view. Even the sciences, which the field so faithfully seeks to imitate, acknowledge the mysterious and infinite in their contemporary work and way. Einstein, with other exemplars of scientific and mathematical genius in history, has explicitly suggested that being alive to his work requires being moved and enchanted by the awe-inspiring mysteries he explores, involving the heart and soul in contemplation. A dialogue between the languages of the sciences and humanities and analysis of their elucidations and limitations, common insights and points of contention, then, is important for the work of education and progress of psychology—to genuinely seek a more inclusive language(s) to explore and articulate Psyche and her education. The etymological histories of related concepts—that is, mind, education—are also sure to uncover rich linguistic terrain for more faithfully addressing the labyrinthian journey of Psyche that educational psychology seeks to know. Attentiveness to language might well mean reviving our listening capacities, as well—in the field, perhaps via a return to genuine “child study” (Van Manen, 1990) in cultivating a greater receptiveness to the heart and mind of Psyche herself. Additionally, conversing and collaborating with those in curriculum studies particularly working to explore the experience of education (i.e., via autobiography or phenomenological analysis), interrogate the language of education (i.e., via postcolonial theory or poststructuralism), and elaborate an education of liberation (i.e., via feminism or critical pedagogy) may elucidate new directions of promise for educational psychology to pursue. For, such scholarship, aimed at reconceptualizing education itself, implicitly if not explicitly seeks Psyche whom the project of education claims to serve, to offer her freedom of voice and fulfillment of agency—to understand and embrace her, her word, her way.

We may be so bold as to posit that education, in its native tongue, is indeed the way of Psyche. The human “self” or “subject” inherently seeks to know herself, “to draw out” or “bring forth” (from the etymological root of *to educate*) herself in all her vitality and truth—expressing, manifesting, and actualizing her extraordinary potentials, possibilities, powers, in the world in which she participates and finds herself, and of which she is part and parcel. In kinship with Keat’s definition of life as the *vale of soul-making*, Psyche’s way is constituted by this creative work—education, shepherding her “coming out,” her debut. This is the education that attends and assists in the effort of the soul’s nascence/ renaissance, making/remaking, minding/re-minding—as

there is much the soul encounters in living that thwarts this call. From this perspective, we are all “teachers”—Socrates’s midwives to birthing soul knowledge, and “learners” engaged in our own rebirthings; education is the way of re-minding ourselves, our societies, and our psychologies.

Educational psychology—attending its problematic ground and unearthing its rich promise, in remembering, and remembering itself, stands in a most powerful position to be that scholarship most intimately engaged in exploring Psyche and recommending an education that nurtures “the fairest of them all” within us all. Returning to the *heart* of its inquiry, the field—drawing upon the insights of the arts and sciences (philosophy and myth and math and art all gifts of psyche’s making) and dialoging across its own internal disagreements (i.e., humanistic, behavioristic, psychoanalytic)—may then be one that *aesthetizes* rather than anaesthetizes, wakes us up to ourselves and to our educational possibilities in the world. Through this discipline of study, Psyche, in fact, may formally and fully think and rethink herself and her highest education, the call of the human condition in a living cosmos of immense mystery and beauty.

REFERENCES

- Frankl, V. (1992). *Man’s Search for Meaning*. Boston: Beacon. (Original work published 1946)
- Neville, B. (1992). *Educating Psyche: Emotion, Imagination and the Unconscious in Learning*. North Blackburn, Victoria: Collins Dove.
- Van Manen, M. (1990). *Researching Lived Experience: Human Science for an Action Sensitive Pedagogy*. Ontario, Canada: The Althouse Press, University of Western Ontario.

Psychoanalysis

CHAPTER 75

What Educational Psychology Can Learn from Psychoanalysis

MARLA MORRIS

Psychoanalysis is the study of the psyche in the context of social relations. Founder Sigmund Freud argued that psychoanalysis could help one uncover repressed emotions so as to free one of all sorts of psychological resistances that keep one from fully developing as a human being. Some of these resistances, further teased out by Freud's daughter Anna Freud (1966/1993), are these: reaction formation, reversal, turning against the self, introjection, projection, transference, regression undoing, and more. Educators might begin to better understand students who are resistant to learning if they understand the ways in which the psyche protects itself from what is new and threatening. If a student acts out in class, it usually has to do with some deeper repressed feeling the student transfers onto the teacher or the texts being studied.

Employing psychoanalysis educational psychologists are able to dig deeper into the most basic and primordial dimensions of the mind. Traditionally concerned with the forces of irrationality and the ways they shape thinking, consciousness, and one's everyday actions, psychoanalysis moves educational psychologists to explore new dimensions of the learning process. Any dynamic that shapes student action in a way that is contradictory to the manner in which traditional educational psychology frames the learning process is very important. Indeed, it is psychoanalysis that allows educational psychology to view the formation of identity from unique vistas not attainable in the mainstream of the discipline.

In such a process psychoanalysts often discern the unconscious processes that create resistance to progressive change and induce self-destructive student (and teacher) behavior. Psychoanalysis offers hope to progressive educational psychologists concerned with social justice and the related effort to transform the elitism of cognitive studies. When psychoanalysts take into account the Deweyan, Vygotskian, and more recently the poststructuralist rejection of Freud's separation of the psychic from the social realm, psychoanalysis becomes a powerful tool in educational psychology.

Psychoanalysis is helpful to teachers especially so that they do not project their prejudgments onto their students. If they work through their unconscious repressions with the help of an analyst, they probably would become better teachers because they become more aware of their psychic formations and tendencies toward projection. Psychoanalysis is particularly helpful in the face of conflict in the classroom. How to psychologically manage students' outburst or refusals to learn

are issues with which psychoanalysis grapples. For example, if a student acts out by throwing paper airplanes or falling asleep in class, or says negative things to the teacher, more than likely these forms of acting out have little to do with the material at hand or with the teacher. The student may be reminded, perhaps unconsciously, of his or her father or mother with whom she has a difficult relation and simply transfers those negative feelings onto the teacher. If the teacher has undergone analysis and understands the complexity of students' resistances, she might be more understanding of student misbehavior and even perhaps more forgiving.

Sigmund Freud suggested that the psyche is made up of three overlapping parts. These parts are metaphors, not literal places in the brain. Freud suggested that the id, ego, and superego are all interrelated and yet serve different purposes in psychic life. The ego is what Freud called the reality principle. The purpose of the ego is to allow the psyche to be in touch with reality. That is, one is aware of the world via the ego. The ego allows one to function, to make distinctions between this and that, to understand differences between the self and the world. The superego is one's conscience. The conscience, Freud tells us, is what we inherit from our parents. We internalize the commands, the "oughts and shoulds" we hear from our parents into our psyche and integrate these into our personalities. Morality is the superego. The superego tells us when something is wrong, when not to do things. The id, on the other hand, is related to one's sexuality. The id is also the site of the unconscious, where repressed memories are housed and where dreams occur. Again, in Freud's later thinking all three of these cites are interrelated and metaphorical. The goal of psychoanalysis is, according to Freud, to make one's unconscious repressed conscious. The goal is to get rid of repressed materials so that one can live more freely with less transference. The goal is to act out (acting without remembering why one is doing what one is doing) less and make more free choices.

In order to become more free to act in the public world, one must, however, pay close attention to one's psychic life. Here, Freud especially focuses on the dream life and inner reality. In fact, one of Freud's well-known books is devoted to dreaming (*The Dream Book* 1900). However, even if one pays attention to the messages in dreams there will still be left over content with which to deal. Dreams do not clarify, but they point to certain clues that might help one better understand why one acts in certain ways. Freud, therefore, did not think that psychoanalysis could get at the truth of one's being; in fact, toward the end of his career he felt that psychoanalysis was limited in what it could do. Freud felt that because of repression (memories which are buried), one only touches on the iceberg of psychic life. Here, like cognitive science, Freud would agree that very little can be known about the ways in which humans operate psychically. But unlike cognitive science, Freud argued that the reason for this is primarily due to repression. The notion of repression does not play much if any role in cognitive science.

Freud was mainly interested in intrapsychic phenomena. One of the main themes of Freudian psychoanalysis is what he termed the Oedipus Complex. Here the child at around the age of five, struggles with at least one of his parents. The child feels drawn toward one parent and repulsed by the other. Freud believes that male children are drawn sexually toward their mothers and want to kill their fathers. These ideas Freud takes from the Greek myth of Oedipus Rex. The child has to work through these struggles in order to realize that he cannot be sexually drawn to his mother nor can he commit patricide. Once he resolves this complex he can then grow into a fully mature human being. If the child, on the other hand, gets stuck inside the Oedipus conflict and acts this conflict out in life, he will transfer these feelings onto others and marry someone who reminds him of his mother, while avoiding persons who remind him of his father. Some analysts claim that the Oedipus conflict can be enacted by girls as well as boys and call this the Electra Complex. Here, the girl child will want to marry her father and kill her mother (figuratively). Thus, in later life, if she hasn't worked through this and resolved it, she will marry someone who is like her father and avoid people who are like her mother. All these later life experiences are guided by the

psychological term *transference*. Freud argues that the more one acts out of transference the less one has resolved repressed memories. Again, the point of psychoanalysis is to come to terms with these struggles so that one may be free NOT to marry one's parents, as it were. Freud believed that negative transferences were driven by what he called the death instinct or *thanatos*. *Thanatos*, he suggests, is older than *Eros*, or the life instinct or love. Both of these instincts operated in our psyches throughout our entire lifetime. Some people have more death instinct tendencies and therefore are more self-destructive, others have more life instinct and tend to grow psychically. Toward the end of Freud's life he began to incorporate more and more discussion around the death drive in his work against the backdrop of the Nazi accession to power in Austria.

Psychoanalysis as a movement began to split apart and grow with the development of what is termed object relations theory. The founder of this movement was Melanie Klein. Klein, unlike Freud, argued that the Oedipus conflict occurs much earlier than Freud did and that the superego is well developed in young infants, something to which Freud disagreed. Klein, like Freud, thought that there is a death instinct that drives the child toward destructive impulses. Freud is thought to focus mostly on the phallus and the relation of the male to his own psychic workings, even though the majority of Freud's patients were women. Without Freud's women, there would be no psychoanalysis. Many of his patients went on to become well-known analysts themselves.

Klein's contribution to psychoanalysis revolves around several themes. One of them is the term *phantasy*. Here "ph" designates phantasy that is unconscious. Children at the preverbal stage, according to Klein, engage in wild phantasies about their mother. Primarily these phantasies are sadistic. The child fears for his life. He fears that the mother will annihilate him. In what Klein called the paranoid-schizoid position, the child phantasizes biting, sucking, and robbing the mother of her inner contents so as to control her. If the child can move toward the next phase, called the depressive position, he can begin to feel guilty about feeling such negative things about his mother and start the process of reparation with the mother. If the child cannot do this, if he becomes fixated at the level of the paranoid-schizoid position in later life he might develop paranoid schizophrenia or other mental illnesses. Unlike Piaget, Klein's two positions are not stages, but rather movements that one goes through, throughout one's lifetime. Klein believed that children's play reflected inner psychic worlds of phantasy and she was perturbed by the violence of these phantasies. She concluded that children make up bad things about their mothers, whether or not the mother really does something bad to the child. She believed, in other words, that evil comes from within. Children tend to polarize thinking into good and bad, what Klein called the good and bad breast. Polarized thinking, then, for Klein is considered childish. The mechanism that causes one to see in black and white is called splitting. Klein believed that mental health could be gained by limiting splitting tendencies and integrating the personality. Here Freud's aims were the same. The more integrated a personality, the healthier that person would be mentally. Klein's main focus is, therefore, on the relations between the child and her mother. Her focus is also mainly on the preverbal, or pre-Oedipal.

Other object relations theorists include W. D. Winnicott, W. R. Bion, R. D. Fairbairn, and Michael Eigen. Not all these theorists wholeheartedly agree with Klein's position. In fact, Fairbairn (1954) and Winnicott believed, unlike Klein, that children become bad because they were treated badly by their mothers. Thus, environmental harm makes people bad. Klein, on the contrary, felt exactly opposite. Fairbairn's name even means, fair child, or innocent child. He believed that children are innocent until their mothers destroy them in some way. According to Psychoanalyst Naomi Rucker (1998), there are many ways to destroy children: kill their self-esteem, kill their ambitions, destroy their dreams, and destroy their abilities. The thrust of object relations is to intrapsychic. That is, object relations theorists feel that it is not enough to simply talk about interpsychic phenomena as Sigmund Freud did. Rather, object relations theorists talk about the child's psychic relation to her mother and her world. Now here, the difficulty

is that psychic relations are mostly unconscious. And so, object relations is mainly about how one unconscious relates to another. Object relations theorists argue that children develop internal objects, which are impressions and phantasies of their mothers and other important people. These ghostly representations housed in the unconscious then get projected onto the real mother and others. So what is real and what is psychically created gets confused. The idea for object relations theorists is mostly that one untangles these internal objects so that one can relate more freely with others, and not get trapped in the tangles of transferred objects.

The gist of these main schools of psychoanalysis suggests that what is important in our lives is thinking about what is unthinkable, what is unconscious. One can only do this with an analyst because it is difficult to undo repressed memories and internal objects. One tends to be blind to one's inner workings. Psychoanalysis is very helpful in the educative realm for the reasons I have mentioned previously. But it is also helpful to the scholar who tries to figure out what to write about and what to think about. Autobiography in educative sites, then, becomes important both for teachers and students. The main lesson of psychoanalysis is to know thyself.

Educational psychology could be reconceptualized if it turned back to the work of Sigmund Freud. Most educational psychologists, however, dismiss Freud as a fraud. I think this dismissal comes out of a certain resistance to Freud's work on dreams and the unconscious because these are NOT quantifiable. But what child is quantifiable? What life is reducible to numbers, to prediction and control? Psychoanalysis is hardly about prediction and control, those old ideas that drive behaviorism. The goal of psychoanalysis is to foster free expression in children and adults via uncovered repressions, which fixate persons in traumas of their youth. School violence could be greatly reduced if teachers would pay more attention to the psychic life of children. Students would not act out as much as do violently if they could talk through their problems with analysts. In fact, psychoanalysis has been called the "talking cure" because through talking one finds out about oneself. But until our psyches are decolonized by buried memories and repressed feeling, we can never be free to act as we choose. We will always be slaves to the masters of our unconscious and the Oedipal drama.

SUGGESTED READINGS

- Fairbairn, R. D. (1954). *An Object-Relations Theory of Personality*. New York: Basic.
- Freud, A. (1966/1993). *The Ego and the Mechanisms of Defense*. New York: International Universities Press.
- Freud, S. (1900). *The Interpretation of Dreams*. (J. Strachey, trans.). London: Hogarth.
- . (1914–1916). *Instincts and Their Vicissitudes*. (J. Strachey, trans.) London: Hogarth.
- . (1915/2005). *The Unconscious*. (J. Strachey, trans.) New York: Penguin Books.
- . (1930/1961). *Civilization and Its Discontents*. New York: Norton.
- Klein, M. (1940/1975). *Love, Guilt and Reparation*. New York: Delacourte Press.
- . (1950/1975). *Envy, Gratitude and Other Works*. New York: The Free Press.
- Rucker, N. and Lombardi, K. (1998). *Subject Relations*. New York: Routledge.

Race, Class, and Gender

CHAPTER 76

Using Critical Thinking to Understand a Black Woman's Identity: Expanding Consciousness in an Urban Education Classroom

ROCHELLE BROCK

Rochelle: Oshun is my alter ego. She is the power of my African past and my African American present that I call forth when I am attempting to write myself into understanding. For me Oshun is the manifestation of critical thinking. She provides educational psychology with a taste of non-Western cognition—a dimension sorely lacking in contemporary manifestations of the discipline. This chapter moves us to think about what Black women's ways of seeing (understanding there is diversity within the category) might offer psychologists working in the educational domain.

Many subjects touched my soul, many inspired thought, anger, concern for the future and growth. Looking back, the discussions and readings about language, oppression, interracial dating, the American Indian, the Chicana woman and the “place” of the African American woman influenced my being the most. My mood of the day was determined by how well our discussion went in class. If the discussion was frustrating, I was frustrated all day long. If I was enlightened by the class discussion, all day I felt a glow of newly discovered knowledge (*Racism and Sexism*, p. 103).

Oshun: What to you is critical thinking?

Rochelle: The ability to deconstruct and reconstruct your world?

Oshun: How is it accomplished?

Rochelle: It's never completely accomplished. It's really more of a process, something to be constantly worked at. Accomplished denotes an end point or finished product and critical thought is a constantly changing entity.

Oshun: How does it relate to you as a teacher?

Rochelle: I begin and end with it. It's central to my being and therefore my pedagogy.

Oshun: How does that centrality manifest itself in your teaching?

Rochelle: It means that the most important thing I can give my students is the skill to critically analyze all and everything in their life. If, in my pedagogy, I provide my students with the tools to politicize their world, then I'm happy.

Oshun: Politicize?

Rochelle: Yes, understand the social, historical, political, and economic realities of a situation. I want to instill in them a new way of thinking, a new mode of cognition—the knowledge to both read the

word and the world. I want to bring them to a “consciousness of self.” And, the knowledge that all human interaction is politically inscribed should and must inform that consciousness of self. For example, when I deconstruct my existence as a Black woman it both informs my understanding of self and reframes my pedagogy. I am Black, female, and a teacher. Those three identities are intricately connected; it is impossible to separate them from each other.

Oshun: Separating them is not an option if you want to become/remain a complete person. Tell me, how do you negotiate between your identity as Black and as a woman? Do you feel torn as to which struggle you align yourself with? And what is the connection between Rochelle as teacher and Rochelle as Black woman?

Rochelle: Wow, too many questions at once. Haven’t you heard about the correct method of inquiry for a teacher?

Oshun: Girl, I don’t pay much attention to the traditional “best practices” methodology. See, I want you to struggle with articulating an answer that simultaneously addresses all the questions. Remember you are writing about critical thinking, educational psychology, and teaching and you don’t want to create false binaries. Use your critical thinking skills to figure it out.

Rochelle: Okay, let me situate myself in history: in my story. Critical thinking forces me to contextualize my existence. As such, I need to view myself through the lens of race, class, and gender. It’s difficult as hell to negotiate all my identities, especially race and gender. I understand the need to fight in the war against racism as well as sexism and at the same time I also realize we are often forced to choose between the two. Black women’s struggles have been framed within a false dichotomy of race and sex. Often forced to choose between the fight against race or gender oppression, we have to constantly reassert the need for a combined struggle. Black women encounter a triple jeopardy where they must constantly negotiate the intersection of race, class, and gender oppression which has forced us into a desperate struggle for existence and the search for a “space” where the freedom to exhale is possible.

We are talking about power. Picture three boxes, each distinctively smaller than the one it is within. The box which consumes and encapsulates the others is the large space of power where White men, and to a lesser degree White women, experience varying degrees of domination and control and is seen in the systems and structures of society. Sexism, an integral ingredient in understanding relations of power and privilege in America, determines that although White women function within this power discourse of men they are seen as powerless because of gender which becomes the bind of sexism. Within this space is a significantly smaller box; the place where Black people experience pain and isolation. But it is also the place where Black men live, and although controlled by racism, it still offers a degree of control and provides Black men with the tools to oppress Black women. Denied the power and the privileges of White women, White men, and Black men, Black women are imprisoned in a still smaller box that represents the narrow space of race and a dark enclosure of sex which has engendered a web of pain where Black women strive for the right to *be*. Of course the binds of class exists in the three boxes and its effects are experienced differently depending on race and gender. (Gloria Wade-Gayles, 1984)

It is difficult to separate race from class from sex oppression because in our lives they are most often experienced simultaneously. For example, I am not poor today, a woman tomorrow, and Black the following day, but a poor Black woman everyday I breathe. It would be foolish for me to think that all Black women are poor, and that’s not what I mean to imply. Instead, I assert that regardless of class a Black woman’s existence—how she understands her life—is framed within those three critical domains and to ignore one is to mystify all the others. That’s what you meant about creating false binaries. In order to understand my existence as a Black woman I need to be aware of the myriad forms of power. The skills of critical thinking, of a critical form of cognition force me to constantly analyze my existence through the lens of race, class, and gender. And when I use this example in my classroom it provides a visual representation for students. I frame the entire discussion of Black women through the box analogy, which gives the student a picture to hold onto. I try to open the lid on that tiny box, expose and make sense of the realities of Black women. My consciousness as a teacher is framed by my consciousness as

a Black woman. And my ability at critical thought forces my students and me to reflect on and delve deeper into an issue.

Oshun: Yes, but it's important to remember that critical thought is not some type of crystal ball, mystically providing the "right" answers to every question. Its magic is that it provides the space to deconstruct your world. It is in this space that we can begin to imagine and then develop strategies, which rupture all that we think we know. We question the nature of our own thinking and importantly that of others. We become conscious beings.

As conscious beings Black women realize that they are engulfed in a constant struggle between the structures of race, gender, and class causing us as Black women to wage an eternal war against a racist, capitalist, and patriarchal society. Clearly, groups are given or denied power based on race, sex, and class in America. Hence, Black women experience triple jeopardy in a white capitalist patriarchal society which requires racial oppression alongside sexual and class oppression. So, where does your critical consciousness lead you?

Rochelle: The trajectory of my life leads to self-awareness. Critical thinking allows us to see the multiplicity of oppressions. And through it we demystify the layers of oppression and begin to ask the questions that will lead to enlightenment. A critical consciousness of the forms of Black women's oppression is infused in my teaching, in my view of what is deemed higher-order cognition. They construct me as an educator . . . my pedagogy and the content of all my classes. I have come to realize that the ability to think critically about our existence is paramount to our survival. As an African American woman in a society that devalues us at every turn, survival is often the main goal. From negative depictions on television to negative depictions in the ideology of America, African American women are under a constant siege, battling for survival. As a critical teacher, I try to force my students to understand the anger and also the pride I feel in my Black womanism. More importantly, I lead them to an understanding of the "culture of survival" that Black women have historically possessed. Because of this I frame my teaching within a Black feminist discourse, which fosters students' understandings of the forms ideology has assumed so as to construct the identity of Black women through images/stereotypes that work to control a Black woman's identity. One of those ideological forms emerges in educational psychology's testing industry that consistently fails to validate our ways of making sense of the world as cognitively worthy. Lives are devastated everyday because of this ideological sorting tool.

Oshun: Let me ask you a question to make your use of critical thinking a little clearer. I know that all human interaction is politically inscribed and earlier you spoke of situating yourself in history. Isn't the connection between politics and history commonly understood?

Rochelle: Unfortunately no. Noncritical education decontextualizes history and our positions in it. We are seldom taught how to critically view our place in history—how it has constructed our identity. The circuitousness of political discourse assumes a godlike, patriarchal position of "hide-and-seek" information whereas the "politics of history" necessitates critical insight into that which seems obvious.

Oshun: "Politics of history" or "politics of representation"?

Rochelle: The "politics of history" allows us to better understand the "politics of representation." For example, consider the sinister names we are called: bitch, ho, unwed mother, matriarch, emasculator of all men but especially Black men, slut, ugly, aggressive, strong/weak, and low-aptitude students. I could continue but why bother; we all know the names used to define Black femaleness I'm about to go to church here! You know people are always trying to define me even though they know nothing about my reality. I ask, no I demand, that my students unpack the names used to describe and explain Black women. The political "justifications" for those names are as sinister as the names themselves and through a critical understanding of the "politics of history" they (the students) begin to accept that these names are not innocent and trouble-free.

Oshun: Yes, but are we being too deterministic? Don't we, as Black women, have the choice to accept or reject their definitions?

Rochelle: Good questions. When I talk about the "politics of representation" my words are not meant to take the power of individual Black women away. I don't mean to trivialize or essentialize Black women's reality but the triple oppression of race, class, and gender intersect under the umbrella

of patriarchy, which defines, shapes and constructs the forms of domination used against African Americans. There are powerful ideological justifications for the existence of those definitions that manifest themselves as stereotypical controlling images. Hegemony's ideological control has manifested itself in various forms including—but not limited to—images which chisel a Black woman's identity as mammy, matriarch, sapphire, Jezebel, and the welfare mother. These are the archetypes of Black female misrepresentation, impersonating an outside-imposed identity and are shaped by dominant society so as to make racism, sexism, and poverty appear as a natural, inevitable part of life.

Schooling has historically hidden this knowledge. Students may understand these stereotypes on a subconscious level, but seldom will they be able to articulate the reasons for their existence. Because critical thinking is a central piece of my pedagogy, students constantly challenge their prior assumptions leading them to a new way of thinking.

Oshun: Yes, and challenging those assumptions “helps” in the development of a liberated mind. Shouldn't that be the purpose of education?

Rochelle: I have devoted my life to destroying those assumptions in the minds of my students. Stereotypes of Black women are interrelated, socially constructed, controlling images, each reflecting the dominant group's interest in maintaining Black women's subordination. These cultural stereotypes are designed to legitimize the causes of and reasons for Black women's oppression. They help to maintain interlocking systems of race, class, and gender oppression and are tools that serve to mystify societal structures and psychological categories created to achieve the legitimization of oppression. Utilizing critical thinking, the ability to deconstruct, we can analyze these various ideologies and their many manifestations.

Oshun: Speak my sister! When Black women go through life not understanding or knowing the stereotypes exist they run the risk of becoming the image.

Rochelle: When we don't see what's there, when the vision is blurred or hidden, our choices become limited or nonexistent—we remain truncated beings. Instead, when we are *conscious beings*, we are not aware of what is “out” there and as such we at the very least possess the knowledge to seek further where the stereotypes of Black women live. This knowledge leads to an understanding of the ideological forces that play upon a Black women's identity.

Consider the representation of Black women in popular culture. The four areas through which ideology occurs—legitimization, reification, mystification, and acquiescence—can be seen in the object and subject relations of the various controlling images.

Oshun: Every time I watch a music video my spirit cries.

Rochelle: I know. To be attractive or sexy in many of those videos means a scantily clad Black women must degrade herself, shaking derriere and gyrating hips, in front of a (usually) fully clothed Black male. Black women are objectified and the more the viewing audience sees the objectification the more it becomes reified or “real.” Of course in order for this objectification of Black women to work it must happen on numerous fronts—the multiplicity of oppression. The objectivity of Black women is therefore reinforced. The identities of Black women are shaped, in part, by and through these negative images of who they say they are. When I use critical thought as the goal in my class students begin to see where these depictions originate. They see the power behind their constructed definitions of self. I am pleased to say that they see the political forces that shaped and shape those constructions. They not only make superficial connections with historical stereotypes of Black womanhood they also are able to understand the social, political, and economic forces which acted upon the creation of those very images.

Oshun: Once when you were teaching a class on *The African American Woman*. I was there; did you feel me?

Rochelle: Yes, your presence was everywhere—guiding me to understand. All that we have been speaking of was a central part of the class. My main purpose was to demystify those influences on Black women's identity. Twice a week, in *The African American Woman 102*, my students and I discussed the insidious ways Black women are constructed. The social, historical, political, and economic realities of being Black and female in this society were addressed. Many of the students entered class thinking it was going to be a simple history class and that the knowledge

they would leave with were names, achievements, and dates—decontextualized “useless” information on Black women. Instead, I informed them that the class was grounded in understanding the construction of Black womanhood and that we would employ the concepts of ideology, epistemology, the *Other*, deconstruction, hegemony, devaluation, dichotomy, binary opposition, subjugated knowledge, and stereotypes to accomplish this very difficult feat. Through an understanding of these concepts they would begin to partially open the door in their realization of Black women. I provided a list of new words and concepts and insisted students struggle to understand the new. I dared them to whine! In other words, I asked them to use every critical thinking skill they could find!

I compelled my students to take their knowledge to the next level through a critical analysis of assigned and suggested readings. We spent time looking at the social constructions of the other, oppression, domination, the politics of epistemology, dichotomies between Black and White women, ideology, media representations, etc.

Through readings, documentaries, films, and class discussions we dissected the life/existence of African American women. This dissection allowed the students (Black and White, male and female) to understand the various ways ideology has historically attempted to control and dominate African American women. In addition, an understanding of Black womanist thought allowed the students to see the ways Black women not only deconstruct the race, class, and gender oppression, but also the connections between Black female activism and empowerment.

Oshun: That was one thing I loved about your class. You did not just set Black women up as victims. You told our real story and a large part of that story is activism. I always enjoyed your class discussions on the archetypes of Black female subjugation. As I said earlier, you know, how unaware most students are regarding the stereotypes. It was interesting how every semester most of the students were not aware of the stereotypes, but once they learned of them they begin to point them out in media today.

Rochelle: When we teach students to stop and really look closely at what surrounds them, they typically become angry about all the things they never noticed before. We begin this conversation with a journal entry from one of my students who wrote about the joy and pain of new knowledge. To this day, I think the best and most creative midterm I have ever given was when I had my students critically deconstruct the cover from a “gangsta rap” CD. *Girl*, the cover offended every feminist piece of my being. It was, in animated form, a modern version of Black women portrayed as Sapphire. When I close my eyes I can still see it—a street corner scene in the projects, Black women dressed as hoochies, hanging out of windows, wearing lots of gold, exaggerated features, big red lips, blonde hair, and huge breasts. The cover was bad enough, but when the Black fraternities and sororities used a version of it to advertise a party, it truly became a teachable moment.

Oshun: So what did you do?

Rochelle: Girl, I marched down to the record store, flipped through the rap CDs till I found the right one, made a color overhead and then started the hard part—the actual test.

Oshun: And . . .

Rochelle: For the last hour we have been talking about Black women, critical thinking, critical educational psychology, and identity—how they all come together. I wanted my students to use their knowledge to critically deconstruct the picture—how it all came together. The “artist” who created the picture did not just wake up one morning and say, “Hey, the perfect way to sell this compact disk is to have Black women dressed like whores.” There is a long, painful history behind their decision: forces acting in society on that person to make the picture the obvious choice. I needed the students to understand that and importantly to recognize their place in allowing the picture to be used as advertisement. I wanted to show the student that we discussed in class was not something removed from their everyday life but instead constructed that very life. I wanted them to be aware.

Oshun: The midterm represented the intersection of your critical understanding of Black women and your pedagogy. But there is so much that went into the class and the picture—how did you narrow it to a three-hour midterm?

Rochelle: I asked the students to deconstruct the picture from a Black womanist perspective describing the picture in agonizing detail. They then needed to discuss the historical relationship of Black women's representations from a *social*, *political*, and *economic* standpoint, specifically utilizing the theories of key thinkers in Black Feminist thought. Importantly they needed to explain Black women's oppression, devaluation, and strength. Finally, they had to analytically discuss why the picture was allowed to be used, why its "negativity" went unnoticed and accepted, and why a Black organization used the image to promote a party.

Oshun: How did it turn out? Did you get the answers you were looking for?

Rochelle: It all came together. I mean I felt like a mother giving birth. They got it and they articulated what they got. Critical thinking allowed them to make the connections between Black women's oppression of the past and Black women's oppression today. They connected the historical controlling images with images used today of Black women. They understood their own acquiescence and collusion in the maintenance and manifestation of those images and I am glad to say they were angry—at society and themselves.

Oshun: It's getting late and I'm being called back to the queendom. Is there anything else you need?

Rochelle: Did I answer your question about my three identities and what I want to give my students? Did I make you see how interconnected those four things are? Did you feel my passion and anger when I spoke of Black women? Did you sense the anger my students felt once they acquired the critical thinking skills to deconstruct their world? Through my words, could you hear the screams of my Black female students once they realized the many injustices that were placed on them? Did you also hear their sounds of completeness once they finally realized what ideology has hidden from them for so long? Do you now understand that the greatest thing I can give my students and myself is the ability to question? Did I make it clear that we (Black women who teach) must learn to weave our own future, to create a tapestry of hope and teach students to utilize critical thinking skills as the seam to hold the tapestry together?

Oshun: Yes, you did my sister!

FURTHER READING

Hills-Collins, P. (1991). *Black Feminist Thought: Knowledge, Consciousness and the Politics of Empowerment*. New York: Routledge.

hooks, b. (1989). *Talking Back: Thinking Feminist, Thinking Black*. Boston: South End Press.

Wade-Gayles, G. (1984). *No Crystal Stair: Visions of Race and Sex in Black Women's Fiction*. New York: The Pilgrim Press.

CHAPTER 77

Pedagogies and Politics: Shifting Agendas within the Gendering of Childhood

ERICA BURMAN

This chapter aims to substantiate four claims. Firstly, dominant models of child development are inscribed with implicit norms that reflect (among others) particular gendered attributes. Secondly, these gendered attributes “fit” or coincide with particular forms of political subjectivity. Thirdly, contemporary shifts in the engendering of models of child development and education are indicative of broader changes of models of the subjects that correspond to current economic-political agendas. It follows from this that, fourthly, as with claims to childhood generally, we should be wary of the ways gender is deployed within educational and psychological debates since these are both informed by and in their turn culturally inform the wider political arena. I finish by indicating how and why critical educationalists and psychologists should be wary of new feminised models of the educational or psychological subject by suggesting that these may be pursuing old oppressive agendas in cuddlier forms, or even elaborating new equally insidious varieties.

Having identified these claims, a word here about their status. I am deliberately using rather indirect descriptions of influence or effect, such as “reflect,” “inform,” “inscribed within” etc., that rather blur the direction of causality and location of responsibility. This is because I am concerned here with relationships between patterns of cultural norms in circulation about gender and childhood and broader political-economic contexts, rather than with mapping the directionality of links between specific politicians or policies and shifts in models of childhood. This is not to say that such links cannot sometimes be made, and indeed I will offer some indicative examples as I go along. I leave exploration of more specific elaborations of relationships for another time, or another researcher, bearing in mind also the complexities of such an enterprise—that needs to steer a careful course between conspiracy theory on the one hand, and on the other a voluntarism that abstracts theorists from the historical, political, and cultural contexts that both enable their influence and structures the reception of their ideas. (Denise Riley’s 1983 evaluation of the role of the psychoanalysts Bowlby and Winnicott within the trajectories of state-funded day care provision for children does just this kind of detailed historically located and conceptually elaborated work). Rather my concern here is focused on exploring a discernable cultural shift within the gendering of models of childhood. As should become clear, I see ambiguities and complexities around the shifting locus of “development” as precisely what obscures an easy answer to the question of determination.

Before I really begin, let me clarify some methodological presuppositions for this analysis. Firstly, I am going to be dealing with representations of childhood, or qualities accorded an ideal-typical model of the developing child. But this does not mean I am only discussing models of childhood. I am drawing on a broadly Foucauldian understanding of the structuring of cultural-political discourse such that—although I do not have space to say much about this here—every model of the child implies equivalent subject positions for others around him or her: for parents, teachers, other welfare professionals and, as I will endeavour to indicate, even the nation state. Some of these positions are more clearly specified than others. Prescribed positions for teachers and mothers, for example, are usually pretty unambiguously identifiable from any specific pedagogical approach (usually either as negligent or intrusive), while that for fathers is often more variable in the sense of discretionary (though ultimately also amenable to pathologization). It is the murky character of the role of the state and transnational economic-political processes that demands further analysis.

In pursuit of this theme, the discussion that follows traverses territory that may seem far from education. I will be juxtaposing economic and psychological models of development and making claims that connect political and psychodynamic notions of “investment.” While such disciplinary border crossings may appear tenuous, my arguments precisely concern links between allocations of financial and emotional resources. Moreover, the cultural connections between children and emotionality speak to a set of culturally contingent but potent relations.

THE STATUS OF CHILDHOOD

The Western world is currently witnessing an explosion of concern about children—abused children, delinquent children, children as victims, and children as aggressors. These wildly contradictory concerns (with protecting children and protecting people *from* children) indicate the cultural burden carried by children and young people as the repository of identification for the human subject more generally. Steedman’s (1995) historical analysis traces the emergence of the motif of the child as the personification of interiority, of a sense of unique selfhood or individuality that lies inside the body. The economic and cultural conditions for this motif alongside modernity implicate this model of childhood within the consolidation of the nation state and its imperialist/colonialist projects.

From this moment the bifurcation of childhood is confirmed. And these cultural motifs still circulate. Vulnerability, innocence, nostalgia for times past, or even nostalgia for times denied or withheld by the actual conditions of our past childhoods—all these qualities inform contemporary representations of childhood. In this way childhood becomes our past, beyond merely being a period of life that all adults have gone through, but rather this comes to be filled with imaginary investments that probably say more about the dissatisfactions with and insults of our current adult lives under late capitalism than any childhood we actually had, or wished for as children. “Remember that feeling of total control?” goes a car advertisement of the mid-1990s, interpellating the subjectivity of the owner-driver to that of a little boy depicted playing with his toy car. In this sense, there is danger in the sentimentality that surrounds representations of childhood. For it is so replete with adult emotional investment that we threaten to overlook the actual conditions and positions of contemporary embodied, acting children and young people.

Where these do impinge, the shattering of such ideal-typical representations can instigate bitter vengeance. Children who transgress models of childhood suffer stigmatisation and vilification to a degree that must tell us something about societal investments. Children who have sex, who work, who are violent—that is, children who behave like many adults—far from being included into the adult world are ejected from it. In Britain the public and policy response to the two child

killers of two-year-old Jamie Bulger in 1993 was to render them monstrous, as outside humanity, rather than as departing from cultural norms of childhood.

There is now a significant literature on the history of childhood as largely a modern invention, with the contrasting modalities of modernity informing early educational philosophies. The romance of the child as natural, closer to nature, gives rise to particular problems when children act “unnaturally.” Clearly an ideological notion of “nature” is at work that covers over the violence of its domestication and exploitation. And this is where educational and psychological models fit well with broader discourses of “development.” For the discourse of development relies for its benign mask upon a model of the developing subject as passive, compliant, and grateful for its needs being attended to. While post-development theorists have amply highlighted how this model warrants the oppression and exploitation meted out by international aid and development policies, child activists have shown how Euro-US models of childhood at best fail to engage with the key issues facing most of the world’s children and young people, and often in this process simply pathologize them further.

The naturalised, and so presumed universalised, status of childhood plays an important role within this dynamic, while such moves effect a harmonization between individual and national interest and well-being, as in the Human Development Index formulated by the United Nations Development Project in 1992 and used in its subsequent annual reports to measure disparities between more and less “developed” countries.

The concept of human development . . . is a form of investment, not just a means of distributing income. Healthy and educated people can, through productive employment, contribute more to economic growth. (UNDP, 1992, p. 12)

This device not only commodifies individual development as a condition of national development, but also how this abstracts specific national economic trajectories from the ravages of the international and multinational market, thereby eschewing the latter’s responsibilities for “underdevelopment” or impoverishment.

EDUCATING THE CHILD

So the abstraction structured into the call to, or for, childhood is inevitably disingenuous. It functions potently: to distract or displace attention from the actual child or children under scrutiny to some distant other, (mis)remembered place, and through this, to designate the current challenges surrounding children and childhood as deviations from this thereby naturalized condition. Indeed it has been claimed that the introduction of compulsory primary level education—occurring in the late nineteenth century across Europe—owed much to public concerns over threats to social order because of the rise of an economically active and politically engaged generation of working class young people. This is not of course to romanticise the kind of work (including its conditions and level of remuneration) that children and young people were (and are) engaged in, but rather to point to other motivations for the call to educate children. Indeed the very flexibility and in some respects social irrelevance of the definition of childhood has contributed to the difficulty of being able to interpret historical records for children and young people’s political involvements, in the early factory strikes for example.

This is where we see the link between childhood as an origin state—whether of innocence or sin—and childhood as a signifier of process and potential. Pedagogies, theories of teaching and learning, subscribe to specific models of the student (and correspondingly also of the teacher). The schooled child, unlike the working child, was positioned as without knowledge (and so in need of teaching). The educational project then erased or pathologized the knowledge that

children already possessed. Clearly behaviorist approaches epitomize this, but the other more nativist theories in circulation around the early twentieth century put forward equivalent projects to classify, and control by (at best) segregation and surveillance, potentially unruly or undesirable elements. (I say “at best” since the links between the early psychologists—especially those who developed the statistical apparatus of psychometric testing—and eugenics are now widely documented.

Here we see the convergence of political and educational projects. “Catching them young” clarifies the policing and custodial as well as social engineering agendas that have informed educational initiatives of all varieties. The modelling of the ideal citizen through educational practices was there from the inception of modern state-sponsored schooling, and given only a new liberal twist in the post-World-War II period with the emphasis on building democratic subjects through appropriate familial and schooling interventions. The rational unitary subject of the modern nation state was explicitly prefigured within educational philosophies. Piaget and Dewey were prepared to link their philosophies with their politics, and both saw in education a way of improving society. As the slogan goes, “our children are our future.” By this we pin our fantasy of the future onto children as signifiers of futurity, of the world to come or what it could become, as well as of what is now lost—so highlighting the multiple and mobile character of the temporal significations effected by childhood. Either way, in so doing we run the risk of justifying deficits within children’s present for a model of the future (or past)—whether national or environmental—that they have played no part in formulating, and may not ever be in a position to enjoy.

Now let me reiterate that I am not implying we should dispense with such agendas. Rather I am arguing precisely the reverse: that we cannot. Representations of childhood as we know them—and “we” here extends from Euro-U.S. contexts to all over the world through globalization and through international aid and development (especially child development) policies—are shot through with normative assumptions that tie individual to social development. It may well currently be impossible to disentangle them. But at least we can attend to *how* they are entangled, and with what effects. In particular we can look at how the state is configured within such subject formations—to counter the ways the abstraction of the child works to bolster the privatisation of the family and so occlude states’ responsibility for constituting the very problems they then claim to address.

ENGENDERING THE DEVELOPING CHILD

So far I have been talking of “the child” and children in a gender-neutral way. Yet—withstanding the ways childhood functions precisely a warrant for abstraction from the social-gender and (all other aspects too—class, culture, attributed or assumed sexuality) infuse representations of childhood. This is not only a matter of grammatical pronoun attribution (although this is of course indicative not only of how the masculine pronoun “he” is taken as representative of humanity, but also of how this secures the mother/child “couple” safely and prefiguratively within the domain of heterosexual relations), but also less directly of cultural qualities that have gendered associations.

The rational unitary subject of psychology, like the model of the rational, autonomous, self-regulating, responsible citizen is—culturally speaking—masculine. Piaget’s model of the child as mini-scientist, information-processing models of cognition and the like all reiterate the culturally dominant project of modernity: mastery. Learning as an individual, self-sustained process bolsters a gendered model of the rational, self-sufficient, autonomous, problem-solving subject. Various commentators have highlighted the covert as well as explicit ways in which educational and

psychological models of the developing child privilege cultural masculinity (which in practice do not necessarily benefit boys any more than girls).

So, in terms of the dualisms surrounding childhood, these map onto a gendered division. The state of childhood seems a needy place: associated with dependency, irrationality, and vulnerability. These are of course qualities associated with femininity, and indeed this culturally sanctioned elision between women and children has many profound effects. These go beyond claims to special treatment or protection, alongside diminished responsibility and secondary civil status, to usher in a general infantilization of the condition of being a woman. Here it is useful to recall how such representations of femininity are not only profoundly classed but are also part of the ideology of colonialism, with claims to women's emancipation figuring within the rationale for imperialist ventures, as indicated also recently in the recent war against Afghanistan. Drawing on the wider influence of evolutionary theory, models of development were recapitulationist: ontogeny was understood to recapitulate phylogeny, with the child in its individual developmental trajectory recapitulating evolutionary process. In terms of early psychological theories, the child, the woman, and the native/savage (along with other rejects from the modern development project of productivity—the mental defective and degenerate) were all positioned at the bottom of progress' ladder. At the top was rational, white, Western, middle-class man, and the task of individual—as now international—development was to expedite the ascent. Thus prevailing models in their portrayal of development, as linear and singular, reproduce the gender and cultural chauvinisms of their times and places.

Further problems arise when considering the position of girls who encounter a double dose of this set of inscriptions—as both child and incipient woman. The invention of the new development category the “girl child” speaks to this conundrum, since she is neither quite a prototypical child nor woman; but invites further intervention precisely owing to her liminal position to both positions. The slogan “Educate a girl and you educate a nation” in circulation around the time of the launch of the UN Convention of the Rights of the Child has been taken up by many countries. Here we see how gendered agendas surrounding the connection between women and nation, with women as responsible for cultural as well as biological reproduction and so subject to particular social and sexual regulation become expressed through the intensification of intervention on (behalf of) girls and young women. Indeed “Education is the best contraception” was the slogan of the World Bank Poverty Report in 1986. The elision between woman as mother and girl as pupil effects a double move: not only are women primarily considered in terms of reproductive activities but childhood is so thoroughly gendered that “the girl child” is regarded as an incipient woman, and thus a future mother. On one hand within dominant Western psychological models the *invisibility* of gender, and correspondingly implicit celebration of culturally masculine qualities has worked to marginalize or pathologize girls. But outside this context, the *visibility* of gender functions to combine the oppressions of being a child and a woman for “the girl child.” In contrast to the gender-free discourses of childhood and adolescence that have characterized Western literatures, and have offered some scope for maneuver for girls and young women, it seems that “girl children” of the (political as well as geographical) South are scarcely children: they are girls. Helpful as some of the measures for girls may be, putting gender on the agenda is not always or in all respects emancipatory.

FEMINIZING DEVELOPMENT?

So if the rational, autonomous problem-solving child fitted with the modern development project, what shifts attend postmodern (or late capitalist) shifts in labor and production processes? Alongside the general crisis of credibility of the project of social improvement, we have witnessed a general backlash against educational approaches that emphasized individual self-expression and

exploration. Like many other modern aspirations, the liberal project of education as the route to social mobility has not delivered—in the sense that social stratifications have widened within and between nations. Worldwide and within each country the rich get richer while the poor get poorer. From the mid-1980s economic recession started to impact on educational horizons, with instrumentalist agendas coming to the fore, as well as general crises over “standards.” There were of course continuities underlying these apparent shifts. For example, Avis (1991) analyses how the individualism of child-centered approaches was part of what made possible the apparent reversal of British educational agendas from progressive education to “back to basics” vocationalism.

Yet this changing context seems to have produced a new set of beneficiaries. Amid claims of falling standards, or perhaps as a response to this, girls are apparently doing well at school. Over the past five years British girls have achieved higher school-leaving examination results overall, and in almost all subject areas except Physics. Are we witnessing a change, even a reversal, in educational philosophy or models? Walkerdine and others (1990) had earlier documented how girls were “counted out” by teachers, with their diligence and good behavior working merely to confirm their status as “plodders” rather than as possessors of the “natural flair” that marked true cleverness (exhibited by the more unruly boys). In their follow-up study the trends indicated earlier are now exacerbated with those girls marked as succeeding continuing to succeed, while the others had “failed” further.

The educational “overachievement” of girls has generated much public and policy discussion in the United Kingdom, and the very terms of this discussion of course deny the ways girls were explicitly disadvantaged within the previous assessment system (with multiple-choice tests discriminating against girls, and even then the original test scores subject to alteration because of girls’ better performance in order to ensure an equal balance in educational selection processes). Now with the move toward more, and more continuous, assessment girls’ stereotypical qualities of docility and conscientiousness appear to be advantaging them (and boys’ qualities of indifference and last minute flurries no longer delivering). The extension of the skills wrought in the domestic sphere to schooling seems to be paying off.

How does this shift mesh with more widespread societal changes? We are told that we live in a postfeminist era, with struggles for women’s rights now fulfilled. It may be true that some women have benefited from the widespread cultural move away from traditional hard-nosed patriarchal approaches to management and business and the rise of a psychotherapeutically informed culture that emphasizes “people skills,” including “emotional literacy” and “emotional intelligence”—all qualities associated with femininity. With the decline of manufacturing industries in most developed societies and the rise of the service sector as the major source of employment “emotional labor” has assumed an unprecedented significance (Hochschild, 1983). Certainly girls and women form an increasing target for such initiatives, and worldwide women have never before been so enlisted into development projects, while women form the ideal-typical labor force within the information technology sector as new cottage industry (giving rise to Haraway’s, 1991, famous analysis in terms of cyborg subjectivity). But just as getting women through the “glass ceiling” does not necessarily change anything about the disproportionate dimensions and distributions of the institution (including even gender inequalities), so the recruitment of women and girls to the education and development process may be less in their interests than first appears.

Indeed when the public focus on gender in relation to educational achievement is displaced to attend to class and “race” we get a very different picture, while even those middle-class girls who appear to be succeeding in these times of increased pressure and competition are doing so at major personal cost to their mental health. So while the feminisation of development is in part illusory, insofar as such claims have some purchase we need to look again at how they work.

GENDER AND NEOLIBERALISM

There is something very powerful about current shifts in gendered imagery, even if these images are spurious. Current economic conditions seem to have detached processes of feminization from women, to extend them to men as well. So now men suffer conditions of part-time, casualised, and low-paid labor that were formerly associated only with women. The very notion of a continuous “career” that unfolds with one’s own unique developmental trajectory as the apotheosis of cultural masculinity under modernity has suffered irreparable change. Within the public eye men now figure within public and mental health targets, as sufferers of undiagnosed depressions and as potential candidates for suicide or self-harm. In my locality (Manchester, UK) there are now special internet counselling services (such as CALM—the Campaign Against Living Miserably) specifically set up to address young white men who are considered likely to feel unable to access suitable support services in part because doing so would transgress their—now maladaptive—gender norms.

The current cultural preoccupation with men as vulnerable, rather than hegemonic, not only coincides with other narcissistic insults to the modern gendered arrangement of man-as-breadwinner, but also with broader curtailments of the grandiosity of Western expansionism (the current invasion and occupation of Iraq being a reactive overcompensation for, rather than contradiction of, this). Androgyny, hailed since the 1970s as mentally healthy, now fits the flexibility required of the new world order.

It is in this context that a new model of the human subject could be said to have emerged. This model, recalls Steedman’s (1995) discussion, in that it is gendered as female. But, as with her account, its very femininity does some significant additional work not possible with a culturally masculine model. A cultural example comes to mind as an illustration. The film *Amelie* (dir. J. P. Jeanet, France 2001) concerns a gamine young woman who finds gratification in helping others, and in so doing finds love. This film was a huge success (generating a uniform wave of “it’s lovely” responses even from monolingual Anglophone audiences usually resistant to reading subtitles) and has been said to have revitalized the French film industry. Yet notwithstanding her good intentions (and how “good” are they really? For the film does interrogate her motivations. . .), she can be seen to impose developmental agendas upon the recipients of her good deeds, rather than engaging in consultation with them about what it is that they want (the blind man and the Moroccan men being significant examples here). This is exactly the problem of development policy and practice—whereby the beneficiaries are required to tailor their needs and desires to the agendas of their benefactors (and usually they have to pay for it too in loan guarantees and interest rates). Yet this recapitulation of old imperialist themes within the film’s narrative escapes notice precisely because it is performed by a lovely, vulnerable young woman, whose neediness and beauty seductively distract us from this.

Are we now witnessing a feminisation of the neoliberal subject who can better realise traditional globalizing aims? Do shifts in models of gender indicate genuine changes in gendered power relations, or are they merely surface displacements whose novel aspects obscure the continuity of preexisting agendas? Jenson and Saint-Martin (2002) in their cross-national analysis of shifts in social policy, claim to have identified a new model of the subject that they call LEGOTM after the children’s educational building blocks. This new social policy takes education and development as the key route to economic prosperity, aiming to maximize individual productivity through participation within the paid-labor force. Like the children’s toy its key tenets focus, firstly, on “learning through play” (as a self-motivated, nongoal directed activity), with play becoming a practice that can become instrumentalized into a form of legitimized “work” through a commitment to “lifelong learning.” Secondly, there is a future orientation to this approach, emphasizing activation of human potential for later benefit as the mode of social inclusion and

protection from marginalization, rather than focusing on corrections to existing social inequities of distributions of goods and access to services. Thirdly, it links initiatives supporting individual development to community and national development. Lifelong learning becomes the route for individual protection and security from the instabilities of national economies and international labor market fluctuations.

Critical educationalists have long critiqued this idealisation of play, so in this context of the rise of the knowledge-based society it is interesting to see its reemergence. Its links with individualized, psychologized notions of skill development that have a long history coinciding with industrial development. The focus on individual activity and familial context is cast explicitly in terms of maximizing human capital, warranting policies of cutbacks in state support for the unemployed—including (the usually female) lone parents who are now to be offered increasing incentives to enter the labor market (and suffer increasing penalties and pressures if they do not). Parental employment becomes the route for solving child poverty, while there is an assumption that full employment is both possible and desirable—something that flies in the face of the structural unemployment that has been part and parcel of postindustrialization. The “activity” on which such measures rely therefore is generated by individuals, not the state.

The two ideas—that work is the route to maximizing individuals’ well-being; and social cohesion that is the well-being of the collectivity, depends on such activity—lies at the heart of notions of activation as a social policy, and an “active society” as a policy goal. (Jenson and Saint-Martin, 2002, pp. 15–16)

Further, within this activity/activation model, individual and collective good collapse into each other, importing all the political problems of a voluntarism that makes individuals responsible for their social position. But now this is a feminised form of social participation, that exudes “family-friendliness” and “emotional literacy”—for the “activity” of this form of learning is not only rational problem-solving but now includes care—at home and at work. This is where neoliberalism meets pedagogy: and perhaps where, with the generalization of the condition of play and celebration of child-like qualities within contemporary culture, the longstanding infantilization of women through their association with—and with the status of—children has been extended into a more comprehensive strategy that enjoins us all as active learners.

How might educational practice attend to and respond to such analyses? Clearly there are few easy answers but some intermediate analytical and practical strategies can be indicated. Firstly, an interpretive vigilance is needed toward the interwoven and mutually legitimising models of individual and economic development. These typically enter educational discourse through a set of statements about societal needs and character. Some of these statements are presumed obvious; others indicate explicit shifts in social policy gaze. As Jenson and Saint-Martin indicate, currently there is attention to state investment in childcare and early education as a way of countering not only contemporary child poverty and disadvantage but also of warding off future sectors of social exclusion of marginalization. But these apparently benign measures function within a neoliberal model of the marketization of human potential that ties responsibilities for welfare and well-being to the economically productive individual and family.

Secondly, it is important to attend to the slipperiness of gender within educational discourses, both in terms of evaluating the new possibilities this presents and old problems this covers over. Current initiatives to mobilize women within the paid-labor market form a key priority for many advanced as well as developing countries. The extent to which this is emancipatory for women is debatable. Women and children’s (low-paid and unpaid) labor have long been a key reserve resource for familial survival, and they are now undergoing ruthless exploitation across the world, albeit in different ways in richer and poorer countries. This explicit mobilization of women’s labor potential and the focus on the active model of individual development that is epitomized by the

educational dictum of “play as work” coincides with unprecedented retraction of state welfare provision, and therefore threatens to intensify women’s responsibilities for both economic and child development.

Finally, we need to look to counter-examples that disrupt the kinds of mutual relationship or determination that I have highlighted here, to document how pedagogies can revolutionize rather than confirm the political arrangements they work within. In their analysis Jenson and Saint-Martin take pains to emphasize that identifying policy convergences, or even the emergence of new policy “blueprints,” does not mean uniformity either of implementation. Feminist and postdevelopment critiques now argue that attending to the different agendas and interests of the various stakeholders or actors involved within any development intervention helps to identify the variety of its effects, including—at least potentially—counterhegemonic ones. So equipped, we may be able to notice if gendered fluctuations in and between models of the child, child carer, and worker give rise to any more useful pedagogical and political strategies.

SUGGESTED READING

- Broughton, J. (Ed.) (1987). *Critical Theories of Psychological Development*. New York: Plenum Press.
- Burman, E. (1994). *Deconstructing Developmental Psychology*. London and New York: Routledge.
- . (1995) Developing Differences: Gender, Childhood and Economic Development. *Children & Society*, 9(3), 121–141.
- . (1998). The Child, the Woman and the Cyborg: (Im)possibilities of Feminist Developmental Psychology. In K. Henwood, C. Griffin, and A. Phoenix (Eds.), *Standpoints and Differences: Essays in the Practice of Feminist Psychology*, pp. 210–232. London: Sage.
- Francis, B. and Skelton, C. (Eds.) (2001). *Investigating Gender: Contemporary Perspectives in Education*. Buckingham: Open University Press.
- Richards, G. (1997). ‘Race’, *Racism and Psychology*. London: Routledge.
- Sachs, W. (Ed.) (1992). *The Development Dictionary: A Guide to Knowledge As Power*. London: Zed.
- Schlemmer, B. (Ed.) (2002). *The Exploited Child*. London: Zed.
- Yuval-Davis, N. (1998). *Gender and Nation*. London: Sage.

REFERENCES

- Avis, J. (1991). The Strange Fate of Progressive Education. In Education Group II, Cultural Studies, University of Birmingham, *Education Limited: Schooling, Training and the New Right in England since 1979*, pp. 114–142. London: Unwin Hyman Ltd.
- Haraway, D. (1991). *Simians, Cyborgs and Women*. London: Verso.
- Hochschild, A. (1983). *The Managed Heart*. Berkeley, CA: University of California Press.
- Jenson, J. and Saint-Martin, D. (2002) Building blocks for a New Welfare Architecture: Is LEGO™ the Model for an Active Society? Paper prepared on August 20–September 1, 2002, from the delivery at the 2002 Annual Meeting of the American Political Science Association, Boston.
- Riley, D. (1983). *War in the Nursery: Theories of Mother and Child*. London: Virago.
- Steedman, C. (1995). *Strange Dislocations: Childhood and the Idea of Human Interiority 1789–1939*. London: Routledge.
- United Nations Development Programme (1992). *Human Development Report*. Oxford and New York: Oxford University Press.
- Walkerdine, V. and the Girls and Mathematics Unit (1990). *Counting Girls Out*. London: Virago.

CHAPTER 78

Knowledge or Multiple Knowings: Challenges and Possibilities of Indigenous Knowledges

GEORGE J. SEFA DEI AND STANLEY DOYLE-WOOD

We begin first by grounding our critique within the decolonizing space of the anticolonial framework. As pointed out elsewhere (Sefa Dei, 2000), the anticolonial discursive framework is an epistemology of the colonized, anchored in the indigenous sense of collective and the importance of developing a common colonial consciousness. Colonial in this sense is conceptualized not simply as foreign or alien but imposed and dominating (Sefa Dei and Asgharzadeh, 2001). The anticolonial framework allows us to engage educational problems through connections of knowledge, discourse, culture, and communicative practices of schooling. We understand education as realized within a historically developed and socially maintained space that is structured through interrelationships among the multiple sites of teaching/learning and the everyday practices of community and cultural life. To take into account these interrelationships means not only to understand how they shape the substance of schooling, but also how learning and pedagogy operate in our society on much broader levels to include critical decolonizing consciousness, agency, and spirituality. Our intellectual focus on indigeneity, local indigeness, and the power of knowledge to alter the encounter of the colonizer and the colonized (in ways that point to the instability and fluidity of the colonial relation), is to show the dynamic of the resistance inherent in colonial relations, as well as the ability of the colonized to manipulate the colonizer and his or her colonial practices. The ways in which local knowings confront colonizing practices that are continually reproduced and deeply embedded in everyday relations, represent powerful sources of knowledge that allow the daily resistance and the pursuit of effective political practice to subvert all forms of dominance to take place. We take the Euro-American school system and the experiences of different bodies within these schools as a means through which such relations can be examined. It is maintained that within schools there are material-structural, ideological-spiritual, and socio-cultural-political dynamic schooling practices that produce significant differential material consequences for both dominant and minoritized bodies. Smith (1999) has explored the relationship between knowledge, research, and imperialism, pointing to the ways such relations have come to structure our ways of knowing through the development of academic disciplines and through the education of colonial elites and indigenous/ "native" intellectuals. Critical education must therefore expose colonizing knowledges and social practices that have destroyed (and

continue to destroy) human creativity in the context of our relations with our social and natural environments.

In colonial relations of power, hegemonic knowledges have allowed colonizers to secure their dominance through a fictional creation of sameness and commonality at the expense of difference and heterogeneity. To discuss therefore, the possibilities of educational change in North America we must first understand the power of discursive interruptions to conventional practices of schooling that fail to account for difference in relation to ethnicity, gender, class, religion, language, and culture. Such identities are inextricably linked to schooling and to knowledge production. To understand the nature and extent of colonial/colonized discourse and practice at school we must interrogate and hear the voices of different subjects as they speak about their schooling experiences. Colonialism when read as imposing and dominating never ceased with the return of political sovereignty to colonized peoples or nation states. Indeed, today colonialism and recolonizing projects are (re)produced in variegated ways. For example, within schools the manifestation of this process takes place in the different ways knowledges get produced and receive validation, and the particular experiences of students who are counted as (in)valid in contrast to the identities of those that receive recognition and response from school authorities and discursive curricular practice. Through an examination of the power dynamics implicit in the evocation of culture, histories, knowledges, and experiences of the diverse bodies represented in the school system, we see how colonialism and colonial relations can be masked under the conventional processes of knowledge production and validation. In other words we are speaking of questions that seek answers to who counts, what counts, and why, in terms of different knowledges, multiple ways of knowing, identities, and experiences.

EDUCATIONAL PSYCHOLOGY CRITIQUE AND BRIEF HISTORICAL OVERVIEW

Historically, the field of mainstream educational psychology has viewed teaching and learning through a cultural lens that is predominantly Eurocentric in nature. Consequently, its conceptualization of how people learn, think, and develop ways of knowing in relation to their natural/social world, rests largely on post Enlightenment notions of deductive reasoning, cause and effect, stimulus/ response, and sensory/cognitive definitions and understandings of intelligence and knowledge acquisition. Hermann Ebbinghaus (1850–1909), for example, argued that the cognitive connections a person makes between particular concepts is correlative to the frequency with which they are encountered (Driscoll, 1994). So for example the mental response a person may make to the stimulus of bread with the mental idea of butter will be governed by the number of times the person has experienced these two concepts in association with each other. In other words, learning and remembering is contingent upon frequency and repetition. Edward Thorndike (1874–1949)—the “father of educational psychology”—in pursuing the theory of stimulus/reflexive response, asserted that when a mental connection is made between a given situation and a response, the strength of the connection is increased as it is further used, practiced, or exercised (Joncich, 1962). Thus, the child who says “apple” at every sight of the fruit increases (according to Thorndike) his or her tendency to *think* and say apple at its every future appearance.

The notion of stimulus and reflexive response with regard to learning became associated in turn with the idea that within all animal organisms a basic learning mechanism exists that can be conditioned by socio-environmental factors. The most notable example of this theory to be studied under experimental conditions can be found in the work undertaken by Ivan Pavlov (1849–1946). In his experiments with dogs Pavlov observed that after several experiences of hearing a tone just before food was placed in its mouth, the dog would begin to salivate in response to the tone even before it received any food (Driscoll, 1994). From then on the dog began to expect food when

it heard the tone and began watering at the mouth. These ideas of what came to be known as “classical conditioning” are still very much a part of schooling practices today. The school recess bell represents perhaps the most evocative contemporary example.

Basic learning mechanism theories have been particularly influential however, in studies related to infants. Possibly the most famous (or infamous) of all studies in this regard is that performed by Watson and Rayner (1920). Watson, an early member of the behaviorist school argued that if behavior is conditioned it could, as a consequence, be modified or changed by experience, either through punishment or rewards. In order to demonstrate their theory that children’s fears of animals were not innate but were in fact shaped by their environment, they exposed a nine-month-old boy to several white-colored animals such as a rat, a rabbit, a dog etc. The baby at first proceeded to play with the animals with no apparent sense of fright. They then hit a steel bar with a hammer just behind the baby’s head as he reached for the rabbit. The boy subsequently cried with fear at the loud noise. After several repetitions of the hammer hitting the bar, the baby proceeded to cry whenever he saw the rabbit. Watson and Rayner reported that the child’s fear of the white rabbit extended to the many white, fuzzy objects he was also shown, including a dog, a fur coat, and even a Santa Claus mask. Fear of white rabbits, fur coats, and Santa Claus masks is not inherited, they argued, it is learned.

Despite the profound ethical issues raised here, the overall idea that behavior can be conditioning through rewards and punishment has become a staple of Western concepts of teaching and learning. We see this in the hierarchical allocation of rewards and punishments in the schools and specifically the operation of merit badges. One of the main proponents associated with this area of educational psychology is that of B. F. Skinner (1904–1990). According to Skinner, the process known as “operant conditioning” (that is to say, learning through rewards and punishments) “shapes behavior as a sculpture shapes clay” (Cole and Cole, 1993, p. 16). The implication here is that all students enter the schools as disembodied lumps of clay. As such, the teacher’s role lies in shaping these mere lumps into a fixed, institutionally sanctioned, cultural entity of what counts as the norm. Where there is deviation from the norm it is to be hammered back into *normal* shape. But what does this mean for student subjectivities that do not conform to this preset (and pre-invented) cultural norm? What does this mean for students entering the schools and classrooms whose “shapes” are formed through the embodied knowledges of difference?

As Philip Corrigan (1990, p. 156) has rightly pointed out schools not only teach subjects they also teach, and *make* subjectivities. In this sense, hegemonic discourses of superiority/inferiority are invested and constituted in the racialized bodies of students through the epistemic and material violence of colonial knowledge and through the violent routines of normalization. Oppressive/repressive messages proclaiming what is culturally/racially legitimate and what is not are pervasive in discourses of normalization. They are structurally grounded in the hidden culture of the schooling institution itself. They become explicit/implicit in forms that project a “deep curriculum” (Sefa Dei et al., 1997, p. 144) that is to say, those formal and informal aspects of the school environment that intersect with both the cultural environment and the organizational life of the school. As a result White/Eurocentric neocolonial dominance is spoken loudly and unequivocally in the formations of normalizing routines that are institutionally supported. Minoritized students are constrained into disembodied silence and their capacities of expression and communication severely regulated by cultural/racially charged discourses of what is considered acceptable, appropriate, or what is approved and not approved. It is the educator and more accurately the “deep curriculum” that determines which bodies should speak and which should not. What is considered speech and what is not. What should be spoken, for how long, in what form, and in what language. As Corrigan (1990, p. 160) has noted, it is through this process that “we can begin to see how schooling hurts.” We begin to see how normalizing routines are productive of “active wounds,” that is to say wounds that are seared into the struggles of students

who are institutionally discounted as “(ab)normal.” Such wounds become active in their accumulative capacity to despiritualize, disempower, disengage, and shut out minoritized students from their schooling environment and community. Moreover, in their disregard for the asymmetrical power relations that shape the lives of students, Cartesian-Newtonian teaching approaches based on cause and effect, Western empiricism, and deductive reasoning sustain and (re)produce the epistemic and material violence that minoritized students face daily in their engagements with dominant systems of power. In *Rethinking Intelligence*, Joe Kincheloe has noted the dangerous implication of Western cognitive/educational psychology in schooling methodologies of this nature (Kincheloe, Steinberg, and Villaverde, 1999). Grounded on a culturally specific post Enlightenment theoretical foundation, Western educational psychology as a field “measures” and seeks out traits of intelligence with which it is culturally familiar. As a result “unknown attributes of intelligence” that cannot be measured by psychology are dismissed and ignored. Thus, the possibilities of engaging with the diversity of thought are stifled.

The “measuring” and testing of intelligence first emerged from the field of educational psychology in the late nineteenth century. Francis Galton initially attempted to measure the speed of human reactions and to devise psychological testing formats. G. Stanley Hall constructed questionnaires in his attempt to understand how children’s minds worked. In addition, James Mckeen Cattell created “mental tests for students at the universities of Pennsylvania and Columbia.” The individuals however, who have had the most impact are Alfred Binet and Theophile Simon. Originally the Binet scale that they created at the Sorbonne in Paris (first published in 1905–1908) was aimed at targeting mentally challenged children for specialized programming. The scale was later developed to produce the Stanford-Binet testing scheme from which emerged the use of IQ (intelligence quotient) testing. This testing format, which was adapted by Lewis M. Terman for use in America, is in common usage today in schools across North America in its purported capacity to measure intelligence and academic performance. The administering of such tests however, has engendered strong criticism in recent years (Brown et al., 2003; Cannella, 1999; Dei et al., 1997; McClendon and Weaver, 1999), particularly in terms of their propensity to only test certain fixed notions of intelligence, knowledge, and ways of knowing. Furthermore, as Kincheloe points out, in the political context of psychology’s legitimizing practices, “those who deviate from the accepted norms . . . fail to gain the power of psychological validation so needed in any effort to gain socioeconomic mobility and status in contemporary Western societies” (Kincheloe, Steinberg, and Villaverde, 1999).

Within the socio/historical discourse of Western schooling practices, standardized testing continues to produce and sustain a colonial system of power relations in which “valid” knowledge constitutes a hegemonic cultural language (re)producing the histories, experiences, aspirations, subjectivities, and ambitions of colonizing peoples to the erasure and negation of the colonized. Forced into viewing their pasts, histories and embodied knowledges as a lack or deficit, minoritized students are thus coerced into the violent process of amputation. Moreover, colonial and colonizing knowledges not only reduces indigenous experiences, histories, and ways of knowing to insignificance, it actually appropriates its own violent colonizing history in seductive/subtle ways that suggests to the student that colonial violence is (has been) necessary in order for “progress” (in the Western Enlightenment sense) to take place (Zine, 2003). Thus, student “proficiency,” “progress,” “excellence,” and “achievement” in this context are predicated on mastering uncritically the violent language/knowledge of colonial domination and oppression. Ngugi wa Thiong’o (1981), long ago noted the insidious power of colonial language in its knowledge productive form, citing it as the “most important vehicle through which . . . (European/colonial) power fascinated and held the soul prisoner. The bullet was the means of the physical subjugation, language was the means of the spiritual subjugation.”

A major component of the insidious nature of hegemonic knowledge and one of the significant means through which colonial knowledge (re)produces itself, is the conceptualization of

knowledge as racially neutral and apolitical. This in turn has strengthened the political ideology of merit or meritocracy that informs contemporary justification and support for standard achievement testing. Despite extensive evidence to the contrary, there is a persistent assumption that all students start from the same level playing field. Socioeconomic contexts, systemic social inequality, and social difference that afford some students with greater privilege and advantage over others are denied. As it has been argued elsewhere (Dei et al., 1997, p. 124), “meritocratic principles cannot be applied in a society where racial disparities exist, as they are in effect corrupted by social and cultural biases which can preclude the just determination of students abilities.”

The invocation and conceptualization of knowledge and learning as apolitical and neutral is exemplified in the cognitive learning theory of the Swiss developmental psychologist Jean Piaget (1896–1980). Arguably the most influential figure in the field of educational psychology, Piaget held that development arises from children’s own efforts to master their environment through a process he referred to as, “assimilation and accommodation” (Cole and Cole, 1993). *Assimilation* is defined by Piaget as a process in which the infant actively attempts to assimilate his or her existing experiences of his or her environment into what he or she already knows. If they are unable to do this they then must *accommodate* what they already know and assimilate it to the new information they have acquired. According to Piaget, when this is achieved they are said to be in a position of “equilibrium” or balance. However, in his perception of knowledge as neutral Piaget, eschews the notion that learning takes place within racial/cultural, social contexts of power relations. Knowledge, in Piaget’s framework is viewed as raceless, classless, genderless and thus “universal.” Moreover, the development of agency on the part of minoritized children in the face of dominant colonial discourses such as white privilege is ostensibly denied. This latter aspect becomes significant when we bear in mind that Piaget (1928, 1932) was also one of the first developmental theorists to look at the possibilities of teaching democratic and moral ideas through the vehicle of direct student participation. According to Piaget, if children are to understand the notion that people make rules to enable them to live with one another, they must then be able to participate in their own discussions and constructions of classroom rules. Rules become hegemonic however, when they arise from a knowledge base that not only negates the voices and experiences of marginalized peoples, but relies on that very negation to secure power and oppression. Consequently, the conceptualization of “moral teaching” within this paradigm is profoundly problematic.

Working within a similar paradigm and taking his cue from Piaget’s stage theories of cognitive development Lawrence Kohlberg (1984), pursued further research to find identifiable and regular stages of moral development in children and adolescents. Kohlberg hypothesized that just as learners in Piaget’s cognitive stages were seen to go through the same sequence of stages, the same could be applied for moral development. His theory saw moral development divided up into three main stages with two substages. The first main stage is that of the “pre-conventional” stage, characterized by a sense of morality that is based on adherence to rules backed up by rewards and punishment. In this stage children will display obedience to set rules simply to avoid punishment from the power of figures of authority. The second stage of “conventional” sees the child behaving in ways that conform to the expectations of his or her social world, that is, family, peer group, school etc., The final stage is that of the “post conventional” where the child judges his actions and those of others on the basis of reasoning other than simply abstract notions and morality. According to Kohlberg, the reason for doing “right” in this stage is the “rational belief and the validity of universal moral principles and a sense of personal commitment to them.”

Theories of this nature continue to have a great influence on contemporary mainstream educational psychology particularly as it applies to teacher training, teaching methods, and the institutionalized Eurocentric learning process of students within Euro-North American educational settings. Taking his cue from both Kohlberg and Piaget for example, Thomas Lickona

(1993) has looked at the process of fostering moral development in children. Following on from Piaget's idea that elementary school children become increasingly capable of "decentering," that is to say, keeping more than one idea or concept in mind at a given time, Lickona argues that elementary school children cognitively develop an increasing capacity for taking into account consequences and alternatives when attempting to solve moral problems. In other words, they are able to place themselves in the shoes of another thereby moving from a position that is self-centered and egocentric to one that begins to consider the needs of not only another individual but also that of the group.

According to Lickona, as the cognitive side of moral development takes place the "self consciously rational aspect of character development" can be nurtured in such a way as to foster a union of cognition and affect so that children come to feel deeply about what they think and value (p. 55). Following on from this, elementary teachers are urged to encourage their students to participate in classroom discussions involving issues of possible moral dilemmas that may emerge in their learning experience. As Lickona argues, children need practice "both as moral psychologists who understand wrong doing and as moral philosophers who declare what is right" (p. 56). In addition, students should be guided toward what Lickona refers to as, a "true norm," that is to say, an "operative moral standard, one which children will hold themselves and others accountable." Norms such as this, according to Lickona, "create a support system that helps students live up to their moral standards. Through this process of putting belief into practice, a value becomes a virtue." (p. 56).

The notion of a "true norm" however, is extremely problematic. Moreover, the question must be asked, whose "moral" and ethical standards are we referring to? The question is not posed; rather it is taken for granted that the knowledge emanating from the curriculum, institution, and teacher is sacrosanct and not open to contestation. And yet who are these bodies in the classroom? Most definitely they are not the raceless, genderless, classless, disembodied students that they are purported to be. What if the "moral standards" and "true norms" disseminated by the knowledge base of the curriculum and teacher are in themselves "immoral" in terms of their hegemonic and colonial assumptions and values? Serious problematics arise when students in the classrooms described by Lickona live their daily social lives outside of school impacted by what Molefi Kete Asante (2003) has referred to as "potholes of racial hostility" only to find that within the school itself such hostility is naturalized within the language and culture of a Eurocentric cognitive knowledge base. The major flaw in Lickona's thinking we would argue is reflective of the general problematics within mainstream educational psychology as a whole, both in historical and contemporary terms. With the exception of Lev Vygotski (1896–1934) who argued in the 1930s that learning takes place within social and cultural contexts, mainstream educational psychology and resulting teaching applications have failed to question the Eurocentric nature of the discipline (Vygotsky, 1978). Moreover (Ausubel, 1963; Bloom et al., 1956; Briggs, 1980; Gagne, 1968, 1985; Means and Knapp, 1993), they have failed to question the colonial dominance and racialized violence of what is taken for granted in dominant discourse as universal, "valid," "rational," or "legitimate" knowledge, and in doing so, they have become implicated in the asymmetrical power relations of colonial domination and student alienation as it relates to the academy.

INDIGENOUS KNOWLEDGE AS TRANSFORMATIVE PEDAGOGY

Our academic and political interest in writing this paper is to enunciate a counter-hegemonic, paradigm shift by placing the discussion in the broader context of rethinking the possibilities and limitations of schooling and education in pluralistic societies. In order to discuss the possibilities of indigenous knowledges we place our discursive politics within the anticolonial framework.

An anticolonial prism theorizes the nature and extent of social domination and particularly the multiple places power works to establish dominant-subordinate relations. This prism also scrutinizes and deconstructs dominant discourse and epistemologies while raising questions about its own. In our engagement of the anticolonial lens to assert indigenous knowledge therefore, our intellectual project is to highlight and analyze contexts and alternatives to colonial/imperial knowledges.

As argued elsewhere (Sefa Dei, 2004), anticolonial thought has its roots in the decolonizing movements of colonial states that fought for independence from European countries at the end of the Second World War. The revolutionary ideas of Frantz Fanon, Mohandas Gandhi, Albert Memmi, Aime Césaire, Kwame Nkrumah (1963, 1965), and Che Guevara (1997), to name a few, were instrumental in fermenting anticolonial struggles. Most of these scholars were avowed nationalists who sought political liberation for all colonized peoples and communities using the power of knowledge. In particular, the writings of Fanon (1952, 1963, 1988/2000) and Gandhi (1967) on the violence of colonialism and the necessity for open resistance, and Albert Memmi's (1957/1965) discursive on the relations between the colonized and the colonizer, helped instill in the minds of colonized peoples the importance of engaging in acts of resistance to resist the violence of colonialism. In later years, and speaking particularly in the contexts of Africa, other scholars including Aime Césaire (1972), Leopold Senghor (1996), and Cabral (1969, 1970) introduced questions of language, identity, and national culture into anticolonial debates for political and intellectual liberation.

Following independence a new body of "anticolonial" discourse emerged. This discourse appropriately labeled the postcolonial discursive framework, undeniably shows powerful links to ideas of earlier anticolonialists (Ashcroft et al., 1995; Gandhi, 1998). But the varying ideas of postcolonial theorists such as Suleri (1992), Shohat (1992), Slemon (1995), Bhabha (1990, 1994) and Spivak (1988, 1990, 1999) largely focused on the interconnections between imperial/colonial cultures, colonized cultural practices, and the constructions of hybridity and alterity. The strength of postcolonial theory lies in pointing to the complexities and disjunctures of colonial experiences and the aftermath of the colonial encounter. In fact, Bhabha (1990) has shown that the colonial encounter and discourse cannot be assumed to be unified and unidirectional. Spivak (1988) also emphasizes the possibility of counter knowledges that emerge or are constructed from marginal spaces and the power of such voices for the pursuit of resistance. As Shahjahan (2003) has further argued, in a more general sense, postcolonial theorizing demonstrates the shift of anticolonial thought from a focus on agency and nationalist/liberatory practice toward a discursive analysis and approach, that directs our attention to the intersection between "Western" knowledge production and the "Other," and Western colonial power (Shahjahan, 2003, p. 5).

But the world is about more than simply subjects and their identities. A contemporary emerging trend in understanding knowledge production is to focus on the interplay and exchange among and between cultures and communities, and, specifically, to look at how this process of interaction offers possibilities of understanding our world today. Our histories and cultures are interconnected and the politicized evocation of culture and history is useful if it allows for an interrogation of the asymmetrical power relations that characterize human interactions, as well as the ensuing contentions, contestations, and contradictions of everyday practices. Questions of politics, culture, identity, and materiality are intertwined. In this case schools become sites to understand how such contestations unfold daily in the lives of learners. It is within schools that one witnesses the complex, multiple, and intersecting social relations of learning and teaching in contemporary society and the possibilities of drawing on multiple knowledge forms.

There is a discursive, ethical, and political connection in the evocation of indigenous knowledge to affirm local history and cultural identities of indigenous peoples. Indeed, while culture may be negotiated, questions and issues of identity are not negotiable for indigenous peoples. It has

been argued that local indigeneity emerges from long-term occupancy of a place (Brokensha, Warren, and Werner, 1980; Fals Borda, 1980; Fals Borda and Rahman, 1991; Sefa Dei, 2000; Warren et al., 1995). This standpoint bears testimony to the power of culture, history, and tradition of indigenous peoples. For, while there may not be the unity of experience, nor uniform response to colonization among subjugated groups, there has been a consistent approach to the affirmation of local knowings through identity and cultural politics. In fact, studies of indigenous knowledges affirm cultural histories and identities through a politics of representation. As a consequence, such discursive approaches call for critical methods of inquiry in order to evaluate the potential of indigenous knowledge forms to bring about social and educational change.

In arguing for Western curriculums to open up space to indigenous knowledges we are not simply seeking the replacement of one center over another, nor are we seeking to (re)create and sustain false dichotomies of conventional/colonial/external knowledge as bad and non-Western/marginalized/indigenous knowledges as good. Rather, what we are calling for are diverse ways of knowing that are dynamic, continuous, and represent a multiplicity of centers. Moreover, we view indigenous knowledges not as romantic, static/fixed entities but rather as collaborative, liberating, and fluid. As argued elsewhere (Sefa Dei et al., 2002), our conceptualization of indigenous knowledge refers to a body of knowledge derived from the long-term occupancy by a people (not necessarily indigenous) of a specific locale or place. From this situatedness in depth understandings/knowledges encompassing particular norms, traditions, and values are accrued. Mental constructs born from lived/learned experiences serve as guides to regulate and organize ways in which people and communities live and make sense of their world. They become the means through which decisions are formed in the face of challenges that are familiar and unfamiliar (p. 6). We view indigenous knowledges as differing from conventional knowledges in the sense that colonial/imperial hegemonic impositions are absent.

In addition as noted elsewhere (Sefa Dei, 2000, forthcoming) speaking about indigenous knowledge does not, and should not necessarily commit one to a dichotomy between “indigenous” and “Western knowledge” (Agrawal, 1995a, pp. 413–439, 1995b). Indigenous knowledge does not reveal a conceptual divide with “Western knowledge,” that is to say, indigenous is not strictly in opposition to “Western.” “Indigenous” is to be thought of in relation to Western knowledge, and as a concept that simply alludes to the power relations within which local peoples struggle to define and assert their own representations of history, identity, culture, and place in the face of Western hegemonic ideologies. Implicit in the terminology of “indigenous(ness)” is a recognition of some philosophical, conceptual, and methodological differences between Western and non-Western knowledge systems. These differences are not absolutes but a matter of degree. The difference is seen more in terms of (cultural) logics and epistemologies, that is, differences in the making of sense (from an indigenous standpoint) as always dependent on context, history, politics, and place. There is however, a politics of affirmation of important differences that distinguish multiple knowledge forms by their unique philosophies and identities that must not be lost. The interactions of different cultures and cultural knowledges has always been part of human reality and existence and although what may emerge from an articulation of two or more disparate elements is often a new distinct form, it does not necessarily mean that the former disparate elements will not lose their character, logics, and identities. In a global context when dominant knowledge forms usually appropriate other knowings and claim universality in their interpretations of society, there is a politics of reclaiming the indigenous and local identities. This reclamation has a purpose in unmasking the process through which Western science knowledges, for example, become hegemonic ways of knowing by masquerading as universal knowledge.

We would argue therefore, that “indigeness” is central to power relations, global knowledge, and ways of acting, feeling, and knowing. Indigenous knowledge acknowledges the multiple, collective, collaborative origins and dimensions of knowledge, with the belief that the

interpretation or analysis of social reality is subject to different and oftentimes oppositional perspectives. We see indigenoussness therefore as emerging from an indigenous knowledge system that is based on cognitive interpretations and understandings of the social, political, and physical/spiritual worlds. Indigenous knowledges include beliefs, perceptions, concepts, and experiences of local environments, both natural and social. To speak of “indigenoussness” in African contexts for example, is to enunciate questions related to local culture and social identities (Sefa Dei et al., 2002, p. 72). It is to underscore the importance of decolonizing the “international development” project in Africa. Different forms of knowledge represent different points on a continuum. As such they are dynamic, building upon each other in accumulative forms that allow different ways for people to perceive and act upon their world. In the contexts of Western (mis)education systems, indigenous knowledges intersect with anticolonial agency to enable students to arrive at different ways of seeing and articulating both community and individual experiences of marginality and resistance within their space of learning.

The calling to mind of culture and indigenous knowledge as a form of classroom pedagogy is useful to the extent that it works with the power relations of knowledge as well as the social dynamics of change and the continuity of history. Culture is about ideas and practices. All ideas and social practices as forms of knowledge are constitutive of power relations. The ideational component of culture suggests the social relations of knowledge may include local myths, proverbs, songs, fables, and other forms of folkloric production as legitimate ways of knowing that have profound pedagogic, communicative, and instructional effects for learners. Leilani Holmes (2002) for example, in evoking Hawaiian indigenous philosophies of knowledge reveals a “grounded epistemology” in which the concept of *blood memory* plays a crucial and significant role. Within this indigenous framework Holmes is not referring to “blood quantum,” the code of eugenics that has been used by colonial systems of power to define (by U.S. standards) who is Hawaiian and who is not for the primary purpose of dispossessing indigenous peoples from their lands and entitlements. Rather, “blood memory” is conceptualized and evoked in ways that speak back and challenge the destructiveness of these very same colonial discourses through cultural and spiritual connections made between Hawaiians to each other. As one of the parent generations (*makua*) reveals in an interview with Holmes, “it does not matter where Hawaiians live. They can live all over the world . . . when you say that you are Hawaiian, we never say ‘how much Hawaiian do you have?’ which is a total . . . alien concept, but the fact that you are Hawaiian and you are ‘ohana’ (family) and that we eat out of the same . . . bowl . . . And that we come from the same roots. And that’s the connectedness that . . . brings all Hawaiians together, no matter how much Hawaiian they have by blood quantum” (Holmes, 2002, pp. 41–42).

Indigenous knowledge of this nature represents an immensely powerful and liberating source for spirituality and decolonizing agency. Where the sense of identity and of belonging is an experience of dislocation and alienation in marginalized bodies and communities, and where Western knowledge production reproduces and sustains such marginality and spiritual disconnect, indigenous knowledges of this nature speak to an anticolonial pedagogy that challenges the colonial hegemony of Western schooling practices and in doing so reveals possibilities for radical transformation (Sefa Dei, forthcoming). “Blood memory” points to a human connectedness that transcends Western notions of identity predicated on homogeneity and static/fixed racialized conceptions of culture and the nation-state. Caution however, should be exercised, when we speak of incorporating indigenous knowledges into the curriculum. Indigenous knowledges can never be evoked if they are simply to become part of an exotic tacked-on approach to an otherwise dominant colonial center. An understanding and respect of time, place, and political context is crucial. To decontextualize indigenous knowledges from issues of land, spirituality, cultural histories, and resistance to colonial hegemony serves only to reinscribe the colonial project.

The implications for the field of educational psychology that emerge from our discussion rest in part, we would argue, on two of the key tenets of indigenous knowledges and multiple knowings that consistently fail to be addressed to any significant extent in mainstream educational theorizing and practice. These are agency and spirituality. Both of these crucial elements represent a site of transformation which educational psychology can (and must) clearly benefit if it is to remain relevant to the lives of minoritized peoples and communities in their engagements with the academy.

Within the anticolonial discursive framework we conceptualize agency as a site of liberation and the practice/theorization of resistance by colonized and marginalized peoples to systemic oppression/repression. We view it as a site of empowerment and active resistance formed by the oppressed within specific social/spatial asymmetrical relations of political power. To borrow from Grossberg (1993) we define agency as the “articulation of subject positions into specific places (sites of investment) and spaces (fields of activity) on socially constructed territorialities. Agency is the empowerment enabled at particular sites and along particular vectors . . . it points to the existence of particular formations of practices as places on social maps, where such places are . . . potentially involved in the making of history. Agency as a site is . . . realized (when) specific investments are enabled and articulated.” To speak of anticolonial agency then is to know our political self. It is to resist, rupture, and renounce dominance and oppression in counter hegemonic ways. It is to refuse the violation and despiritualization of our collective minds, bodies, and souls. It is to know and see colonialism for what it is, not for what it *claims* (Eurocentrically/universally) to be. Anticolonial agency arising from an anticolonial discourse (Sefa Dei et al., 2002, p. 7) places stress on power held and sustained through practice in local/social spaces to survive colonial and colonizing encounters. It argues that power and discourse are not the exclusive terrain of the colonizer. The power of resistance and discursive agency reside in and among colonized and marginalized groups. As argued elsewhere (Sefa Dei et al., 2002, p. 7), subordinated/colonized peoples had a (theoretical and practical) understanding of the colonizer that “functioned as a platform for engaging in political/social practice and relations.” The notion of “colonial” is therefore grounded in power relations and inequities that are imposed and engendered by tradition, culture, history, and contact. Anticolonial agency/theorizing however, “rises out of alternative, oppositional paradigms, which are in turn based on indigenous concepts, analytical systems and cultural frames of reference” that are vital in reclaiming our sense of self and spirituality.

Our enunciation of anticolonial agency and indigenous knowledge as decolonizing educational practice constitutes, we would argue, a libratory form of spiritual resistance. When we speak of anticolonial agency and counter hegemonic epistemologies and practices as forms of spirituality however, we are speaking of an action-orientated, revolutionary spirituality and not simply one that is aesthetic. We are speaking of an inner spirituality that allows for the making of emotional and intellectual paradigmatic shifts. While recognizing that there are multiple articulations and readings of spirituality our understanding of spirituality here is not necessarily an ascription to a high religious/moral order, but rather an understanding of the self/personhood and culture as a starting point in our engagements with education and learning. As Dei has argued elsewhere (Sefa Dei, 2004), education is anchored in a broader definition that encompasses emotional/spiritual dimensions and cultural knowledge. An identification with the learning process that is personalized and subjective makes it possible for learners to become invested spiritually and emotionally in their education.

Spirituality and spiritual knowing can be pursued in schools as a valid body of knowledge to enhance learning outcomes. Spirituality encourages and engages in the sharing of collective and personal experiences of understanding and dealing with the self. A great deal of what is “universal” in spirituality is related to aspects of knowing and asserting who we are (in relation to dominant knowledges that tell us something else) what our cultures are, where we come from

and the connections of the self to the other. Research by Dei (2004) has shown that spiritual knowledge and spirituality have important implications for reconceptualizing African education, and the education of the learner. Critical educators within Africa today are teaching youth to be spiritually informed and to think of themselves as both Africans and global citizens. Learning proceeds through the development of the African self and identity. Critical teaching allows the learner to stake out a position as African, a position that is outside and oppositional to the identity that has been, and continues to be, constructed in Euro-American ideology (Sefa Dei, 2004).

Spirituality in this respect therefore is an implicit antithesis to the Western concept that the learning of curriculum is ever solely “universal,” where universal means neutral and common to all. We argue that spirituality as a form of resistance allows for identification with ourselves and the universal, which in turn provides an implicit means through which we can assert ourselves collectively and individually. In this form spirituality becomes a powerful tool for resisting mis-education, domination, and discriminatory forces. When spirituality is occluded in classrooms, school curriculums, and systems of education as a whole, the resulting assault can have destructive consequences, particularly for the development of self and identity in minoritized individual/community contexts. If nurtured and respected, spirituality can be utilized to involve and energize both schools and local communities. The ways in which people have understood, understand, and seek to further understand their world necessarily includes, place, time, and many other critical aspects that include, among others, the world of the material, of the social, of ideas, and of the spiritual. This is the case regardless of how individual groups may perceive or define “spiritual” (Sefa Dei, 2004). The spiritual development of the learner is therefore a crucial dimension of learning and of education as a whole.

CONCLUSION

The question then is why do we call for the centering of indigenous knowledges and what do we see as its fundamental role in the academy? The strength of indigenous knowledges lies in their application to the lived realities of people. The relevance of indigenous knowledges is that they speak to the practical and mundane issues of social existence. In the face of entrenched hegemonic relations and global economic and ecological threat, knowledge is relevant only if it strengthens a people’s capacity to live well. By being concerned first and foremost with questions of survival, indigenous knowledges offer insights into everyday lives and the challenges and desires that help shape human action and history. As others have noted indigenous knowledges are knowledges rested in “the livelihoods of people rather than with abstract ideas and philosophies” (Agrawal, 1995a, p. 422). But unlike Western science knowledge, indigenous knowledges cannot be simply understood in terms of its utilitarian purposes. Its existence signals the power of the intellectual agency of local peoples. It is symbolic (intellectually, politically, and emotionally) in the projection of others that local peoples can and do know about themselves and their societies. It is about culture, identity, and political survival. When articulated and positioned in the academy it gestures to the efficacy of local peoples’ understanding of their own world, and from their own perspectives, as a starting point from which to interrogate, challenge, and subvert the dominance of particular forms of knowing.

Educators and spaces of educational theorizing such as mainstream educational psychology, must therefore take “critical discourse” seriously in terms of broadening our knowledge of what it means to “transform” (through activism and creativity) knowledge from the mundane to a more spiritual engagement/connection with the discursive practices so that we can move away from a preoccupation with “limitation” to “possibilities” of pedagogy. The possibilities of pedagogy include educators being bold to acknowledge and respond to difference and diversity within the schooling population. This means ensuring curriculum, pedagogy and texts reflect

the diverse knowledges, experiences, and accounts of history, ideas, and lived experiences and struggles. Such possibilities require that the educator enacts and applies his or her agency in the classrooms. There must be accountability in terms of how educators can evoke power to address issues of minority schooling. In fact, in the contexts of schooling in North America there are multiple sites of power and accountability. Educators are urged to frame educational “praxis” in terms of agency and deliberation, as well as a constant confrontation of the varied forms of domination and subjugation in the schooling lives of youth. The implications of radical scholarship in Euro-American contexts today therefore are to theorize inclusive schooling work beyond the boundaries of adherence to the sacredness of educational activity. We must all develop an anticolonial awareness of how colonial relations are sustained and reproduced in schooling practices. To have a decolonized space requires a decolonized mind. Colonialism is situated in the psyche and we cannot create decolonized schools without decolonizing the minds that run them. We believe in political action for change. Consequently, there is power in working with resistant knowledge. Resistance starts by using received knowledges to ask critical questions about the nature of the social order. Resistance also means seeing “small acts” as cumulative and significant for social change (Abu-Lughod, 1990, pp. 41–55). It will for example require shifting away from Eurocentric/Western theorizing and discursive practices toward a radical lens that interrogates hegemonic discourses and centers the exigencies of the marginalized. It will mean embracing the epistemologies of anticolonial agency.

REFERENCE

- Abu-Lughod, L. (1990). The Romance of Resistance: Tracing Transformations of Power Through Bedouin Women. *American Ethnologists*, 17(1), 41–55.
- Agrawal, A. (1995a). Dismantling the Divide between Indigenous and Scientific Knowledge. *Development and Change*, 26, 413–439.
- . (1995b). Indigenous and Scientific Knowledge: Some Critical Comments. *Indigenous Knowledge and Development Monitor*, 3(3), 3–5.
- Asante, M. K. (2003). *The Survival of the American Nation: Erasing Racism*. New York: Prometheus Books.
- Ashcroft, B., Griffiths, G., and Tiffin, H., (Eds.). (1995). *The Post-colonial Reader*. New York: Routledge.
- Ausubel, D. P. (1963). *The Psychology of Meaningful Verbal Learning*. New York: Grune & Stratton.
- Bhabha, H. K. (Ed.). (1990). *Nation and Narration*. London: Routledge.
- . (1994). *The Location of Culture*. London: Routledge.
- Bloom, B. S., Engelhart, M. D., Furst, E. J., Hill, W. H., and Krathwohl, D. R. (1956). *Taxonomy of Educational Objectives, Handbook 1: Cognitive Domain*. New York: McKay.
- Briggs, L. J. (1980, February). Thirty Years of Instructional Design: One Man’s Experience. *Educational Technology*, 20, 45–50.
- Brokensha, D., Warren, D. M., and Werner, O. (Eds.). (1980). *Indigenous Knowledge Systems and Development*. Boston: University Press of America.
- Brown, M. K., Carnoy, M., Currie, E., Duster, T., Oppenheimer, D. B., Shultz, M. M., and Wellman, D. (2003). *White-Washing Race: The Myth of a Color-Blind Society*. Berkeley, CA: University of California Press.
- Cabral, A. (1969). *Revolution In Guinea*. New York: Monthly Review Press.
- . (1970). National Liberation and Culture. The 1970 Eduardo Mondlane Lecture, Program of Eastern African Studies of the Maxwell School of Citizenship and Public Affairs, Syracuse University, February 20.
- Cannella, G. (1999). Postformal Thought as Critique, Reconceptualization and Possibility for Teacher Education Reform. In J. L. Kincheloe, S. R. Steinberg, and L. E. Villaverde (Eds.), *Rethinking Intelligence: Confronting Psychological Assumptions about Teaching and Learning*. New York: Routledge.

- Cesaire, A. (1972). *Discourse on Colonialism*. New York: Monthly Review Press.
- Cole, M., and Cole, S. R. (1993). *The Development of Children* (Scientific America Books). New York: W. H. Freeman and Co.
- Corrigan, P. (1990). *Social Forms/Human Capacities* (p. 156). London: Routledge.
- Driscoll, M. P. (1994). *Psychology of Learning for Instruction*. Allyn and Bacon.
- Fals Borda, O. (1980). *Science and the Common People*. Yugoslavia.
- Fals Borda, O., and Rahman, A. M. (Eds.). (1991). *Action and Knowledge: Breaking the Monopoly with Participatory Action Research*. New York: Apex.
- Fanon, F. (1952, translated 1967). *Black Skin, White Masks*. New York: Grove Press.
- . (1963). *The Wretched of the Earth*. New York: Grove Press.
- . (1988/2000). Racism and Culture. In C. Eze (Ed.), *African Philosophy* (pp. 305–311). London: Blackwell Publishers.
- Gagné, R. M. (1968). Learning Hierarchies. *Educational Psychologist*, 6, 1–9.
- . (1985). *The Conditions of Learning* (4th ed.). New York: Holt, Rinehart & Winston.
- Gandhi, M. (1967). *Political and National Life and Affairs*. Ahmedabad: Navijivan Press.
- Gandhi, L. (1998). *Postcolonial Theory: A Critical Introduction*. New York and Chichester, West Sussex: Columbia University Press.
- Grossberg, L. (1993). Cultural Studies and/in New Worlds. In Cameron McCarthy and Warren Crichlow (Eds.), *Race Identity and Representation in Education* (pp. 100–101). Routledge.
- Guevara, C. (1997). The Essence of Guerrilla Struggle. In David Deutchmann (Ed.), *Che Guevara Reader* (pp. 66–72). New York: Ocean Press.
- Holmes, L. (2002). Heart Knowledge, Blood Memory, and the Voice of the Land: Implications of Research among Hawaiian Elders. In George J. Sefa Dei, Budd L. Hall, and Dorothy Goldin Rosenberg, (Ed.), *Indigenous Knowledges in Global Contexts: Multiple Readings of Our World*. Toronto, ON: University of Toronto Press.
- Joncich, G. M. (1962). *Psychology and the Science of Education: Selected Writings of Edward L. Thorndike* (p. 14). New York: Teachers College-Columbia University.
- Kincheloe, J. L., Steinberg, S. R., and Villaverde, L. E. (1999). *Rethinking Intelligence* (p. 2). London: Routledge.
- Kohlberg, L. (1984). *The Psychology of Moral Development: The Nature and Validity of Moral Stages* (Vol. 2, p. 87). New York: Harper & Row.
- Lickona, T. (1993). Four Strategies for Fostering Character Development in Children. In A. E. Woolfolk (Ed.), *Readings & Cases in Educational Psychology*. Allyn and Bacon.
- McClendon, R. C., and Weaver J. A. (1999). Informally Speaking: A Continuing Dialogue on Postformal Thinking. In J. L. Kincheloe, S. R. Steinberg and L. E. Villaverde (Eds.), *Rethinking Intelligence: Confronting Psychological Assumptions about Teaching and Learning*. New York: Routledge.
- Means, B. and Knapp, M. S. (1993). Cognitive Approaches to Teaching Advanced Skills to Educationally Disadvantaged Students. In A. E. Woolfolk, *Readings & Cases in Educational Psychology* (p. 214). Allyn and Bacon.
- Memmi, A. (1957/1965). *The Colonizer and the Colonized*. Boston: Beacon Press.
- Nkrumah, K. (1963). *Africa Must Unite* (pp. 9–49). London: Heinemann.
- . (1965). *Neo-colonialism: the Last Stage of Imperialism*. Edinburgh, England: Thomas Nelson and Sons.
- Piaget, J. (1928). *Judgment and Reasoning in the Child*. London: Routledge & Kegan Paul.
- . (1932). *The Moral Judgment of the Child*. New York: Free Press 1965.
- Sefa Dei, G. J., Mazzuca, J., McLissac, E., and Zine, J. (1997). *Reconstructing Dropout: A Critical Ethnography of The Dynamics of Black Students' Disengagement From School*. Toronto, ON: University of Toronto Press.
- Sefa Dei, G. J. (2000). Recasting Anti-Racism and the Axis of Difference: Beyond the Question of Theory. *Race, Gender, Class*, 7(2), 39–56.
- . (2000). Rethinking the Role of Indigenous Knowledges in the Academy. *International Journal of Inclusive Education*, 4(2), 111–132.

- Sefa Dei, G. J. and Asgharzadeh, A. (2001). The Power of Social Theory: the Anti-colonial Discursive Framework. *Journal of Educational Thought*, 35(3), 4.
- Sefa Dei, G. J., Hall, Budd L., and Rosenberg, D. G. (Ed.) (2002). *Indigenous Knowledges in Global Contexts: Multiple Readings of Our World*. Toronto, ON: University of Toronto Press.
- Sefa Dei, G. J. (2004). The Challenge of Inclusive Schooling in Africa: A Ghanaian Case Study. *Comparative Education*, Lawrenceville, NJ: Africa World Press.
- Sefa Dei, G. J., and Doyle-Wood, S. ("in Press") . Is We Who Haffi Ride Di Staam: Critical Knowledge/Multiple Knowings: Possibilities, Challenges and Resistance in Curriculum/Cultural Contexts. In Yatta Kanu (Ed.), *Curriculum as Cultural Practice: Postcolonial Imaginations*.
- Sefa Dei, G. J. (2004). *Schooling and Education in Africa: The Case of Ghana*. Trenton, NJ: Africa World Press.
- Senghor, L. S. (1996). African Socialism. In Molefe Kete Asante and Abu S. Abarry (Eds.), *African Intellectual Heritage* (pp. 342–354). Philadelphia, PA: Temple University Press.
- Shahjahan, R. (2003, May 28–30). Mapping the Field of Anti-colonial Discourse to Understand Issues of Indigenous Knowledges. Paper presented at the congress meeting of the Canadian Sociology and Anthropology Association. Dalhousie University, Halifax.
- Shohat, E. (1992). Notes on the 'Post-Colonial'. *Social Text* 31/32, 99–113.
- Slemon, S. (1995). The Scramble for Post-Colonialism. In B. Ashcroft, G. Griffiths, and H. Tiffin (Eds.), *The Post-colonial Reader*. New York: Routledge.
- Smith, L. (1999). *Decolonizing Methodologies*. London: Zed Publishers.
- Spivak, G. C. (1988). Can the Subaltern Speak? In C. Nelson, and L. Grossberg (Eds.), *Marxism and the Interpretation of Culture*. Basingstoke, Hampshire: Macmillan Education.
- . (1990). *The Post-Colonial Critic: Interviews, Strategies, Dialogues*, Sarah Harasym (Ed.). New York and London: Routledge.
- . (1999). *A Critique of Postcolonial Reason: Toward a History of the Vanishing Present*. Cambridge, MA and London: Harvard University Press.
- Suleri, S. (1992). *The Rhetoric of English India*. Chicago: The University of Chicago Press.
- Thiong'O, N. (2006). The language of African literature. In Ashcroft, B., Griffiths, G., and Tiffin, H. (Eds.), *The Post-colonial Studies Reader* (pp. 285–290). New York: Routledge.
- Vygotsky, L. S. (1978). *Mind in Society*. Cambridge, MA: Harvard University Press.
- Warren, D. M., Slikkerveer, L. J., and Brokensha, D. (Eds.). (1995). *The Cultural Dimension of Development: Indigenous Knowledge Systems*. Exeter, UK: Intermediate Technology Publications.
- Watson, J. B., and Rayner, R. (1920). Conditioned Emotional Reactions. *Journal of Experimental Psychology*, 3, 1–14
- Zine, H. (2003). *A People's History of the United States, 1492-Present* (p. 8). New York: Harper Collins.

CHAPTER 79

Making the “Familiar” Strange: Exploring Social Meaning in Context

DELIA D. DOUGLAS

The Everyday

Where are You from? . . .
I’m Not a racist, but . . .
 I can’t believe that there are Still People who Think like that. . . .
. . . Perhaps You misunderstood?
 Well, it is kind of hard for People not to be racist. . . .
. . . We are all racist aren’t we?

CANADA ON MY MIND

Too often the increased visibility or success of a handful of racially diverse people in society is regarded as evidence of “social change” since it is assumed that a numerical shift signals the absence of racial hostility. We are far more familiar (and indeed comfortable) with allegations of racism that involve white supremacist and extremist groups. There has been far less attention given to the ways in which our daily lives are crucial sites through which practices and beliefs regarding white racial superiority/power/ domination are produced. Indeed, part of the persistence and pervasiveness of racism lies in its very definition. That elements of the “everyday” are not seen as linked to the process and practice of racism is part of the prevailing racial logic which seeks to undermine all but the most overt, and hence well known, symbols and manifestations of racial animosity.

In the past two decades, critical race scholars from a variety of disciplines have furthered our understanding of the dynamic nature of racial meanings and their interconnectedness to other formations such as gender, sexuality, and geographic location. Much of this work argues that race is a social concept that is given meaning according to the historical, political, and social context in which it is located. Furthermore, these writings challenged the notion that race is only relevant to those typically deemed racial subjects, namely non-whites by identifying “whiteness” as a racial identity that shapes the lives of people within various systems of privilege and power. Additionally, some of this work has focused on the ways in which racial meanings,

racial identities and expressions of racism are conveyed through “everyday” practices such as gesture, tone, thought, feeling, and gaze (Essed, 2002).

This essay draws upon this work by examining a number of social situations to explore the subtle, dynamic, and sophisticated ways in which social power is conceived and reproduced to maintain prevailing structures and relations of race and gender, power and inequality. In this sense the discussion seeks to disrupt dominant assumptions that have organized educational psychology by challenging the ways in which the discipline has conceived of race, processes of racism, and the social formation of the learner. I address a variety of social settings in order to illustrate the continuing significance of race and the persistence of racism at this historical juncture. The vignettes also reveal how manifestations of racism in one setting are linked to other settings; there is a pattern to the ways in which black Canadians are marginalized and socially excluded in their daily lives. The diverse situations also exemplify how individuals are part of larger contexts by suggesting how social events, and broader discourses of race and gender shape how we think and feel. In this regard they highlight the importance of taking into account the multidimensional nature of racial identity and expressions of racism. In this sense the paper challenges traditional curricula in educational psychology that has neglected or trivialized the complex ways in which the social formation of the learner is profoundly influenced by broader social processes. Our lives outside of the classroom inform our ways of thinking and being in the classroom. In addition, I am using these anecdotes as empirical examples that challenge a discourse of whiteness that has traditionally organized the field of educational psychology. The dominant theoretical frameworks in the discipline have tended to address race as though it were only relevant to non-whites. Building upon the insights of critical race scholars this discussion explores the ways in which race shapes all of our lives; whiteness is also a racial category and an ideology. Finally, the essay seeks to make visible the ways in which the key concepts and cultural values associated with educational psychology, embedded in terms like objectivity, neutrality, and universality are in fact part of the reproduction of a discourse of whiteness. That is the privileging of whiteness is achieved when those who are in positions of authority ignore the complex ways in which the lives of students and teachers are structured by sociocultural processes and relations of power that inform the way they interact in the classroom.

In sum, this discussion operates from and speaks to different levels of experience, interpretation, and analysis. On the one hand it offers illustrations of the importance of the *everyday*, to make explicit the often intangible but ever-present sociocultural meanings that are lived and felt in various social settings. In this regard taking these experiences of daily life into account offers an alternative conceptual and analytical model that challenges dominant frameworks in the discipline by placing sociocultural processes and systems at the center of inquiries involving educational practices and the social formation of the learner. The series of vignettes is meant to illustrate how our lives outside the classroom inform our interpretations and understanding of race and gender difference in the classroom environment. In pointing to the political and social struggles associated with blackness and whiteness it is my hope that we can advance our understanding of the relevance of cultural and social processes to the ways in which we think, learn, and teach about race and racism (as they interact with gender) in educational psychology.

WHO IS/CAN BE CANADIAN?

In this next section I offer a brief sketch of the historical and cultural background of Canada to introduce the context in which black Canadians conduct their daily lives. My interest in issues of identity, the everyday, and social meaning in context are borne out of my particular history as a black Canadian woman, born in Britain, raised in central Canada, and educated in both Canada and the United States. Canada is one of the locations to, and from which I write and

speak. In Canada, blacks live in and through the shadow of the productivity and visibility of black American and black British scholars, writers, and cultural practitioners. The ensuing outline is meant to draw attention to the fact that students and teachers alike encounter and negotiate beliefs and representations about race (in addition to nation and gender) from a variety of sources (e.g., visual and print media, family, friends, school), which influence their sense of self and other. These varied perspectives regarding difference and identity are significant because they affect educational practices; they influence students' construction of their own identities and they structure their interaction in the classroom.

The meaning(s) of racial and ethnic identities in Canada as well as questions about belonging, are integrally tied to the cultural symbols, in addition to the economic and political formations that exist within the country. Thus, in order to understand Canadian configurations of black racial identity, it is necessary to identify some of this nation's distinct characteristics. Canada, the largest country in the Western Hemisphere, consists of ten provinces and three territories (i.e., the Yukon, Northwest, and Nunavut). The diverse terrain of the land (e.g., prairies, wilderness, arctic, Maritimes) constitutes unique geographic, economic, cultural, and political regions. Correspondingly, the structure and organization of this country is shaped by competing and contradictory ideologies about unity and our national identity. Here I am referring to the legacies of the history of European settlement which produced Canada, such as the indentured labor of Chinese workers who built the railroad and the enslavement and displacement of aboriginal peoples from their land. Moreover, in 1988 the federal government instituted the Multiculturalism Act as a way of acknowledging and embracing the diverse population of the nation. Accordingly, this policy says that all citizens have the right to equal participation in the building of the Canadian nation. In addition, the ongoing struggles between the competing voices of the two "founding" colonial powers, Britain and France, are key sources of national/regional/provincial/local tension. The fact that Canada is officially a multicultural and bilingual country also influences the manner in which racism is interpreted and lived.

The racial and ethnic composition of Canada also varies by region: the majority of the population lives in the eastern provinces of Quebec and Ontario. Although the genealogy of black settlement in Canada is diverse, extending from the west to the east coast, and dates back several centuries, the details of this history are largely absent from national discourses and curricula. The historical privileging of white ethnicities over other racial groups has contributed to the invisibility and silencing of the Canadian component of the African diaspora in both curricula and in the public imaginary. For example, few are aware of the fact that slavery and segregation were also practiced within the borders of Canada. The legacy that is oft repeated is that blacks who reside in Canada are the descendants of former slaves who traveled north to escape slavery. Part of the reason this particular connection between American and Canadian blacks is embraced is due to our geographical proximity to the United States and our susceptibility to American racial discourses. However, this narrative is troubling because it implies that Canadian blacks are ultimately a derivative of American blacks and the United States readily becomes the "home" of all things "black." Consequently, this narrative also strengthens the extant belief that racism in Canada is not as odious as that which is practiced in the United States. Depending upon the character of the experience that is being described one might hear "Well you would expect that in the United States, not here." In Canada, we engage in a kinder and gentler version of racism than that which is practiced south of border.

Furthermore, the ubiquity of black American culture suppresses our knowledge of the experiences of black Canadians who have emerged from different circumstances. For example, as a result of the end of World War II, and a change in Canadian immigration laws, the black population grew as many West Indians migrated to Canada. Nevertheless, despite their length of stay, black West Indians are still seen as "recent arrivals." One of the consequences of the lack of

information regarding the diverse history of black settlement and participation in the building of Canada is the belief that black Canadians are from “elsewhere” (i.e., America or the West Indies). For example, the descendants of those who came in the 1950s are continually asked, “where are you from?” In sum, the lives and images of black Canadians are formed and understood in relation to broader historical, cultural conditions, and political frameworks. Specifically, issues of belonging and racial authenticity (i.e., “black is . . . black ain’t”) shapes attitudes regarding black entitlement, participation, and belonging to the Canadian nation. For example, if you are not seen as a member of society then your concerns and interests are deemed irrelevant.

The next section considers a number of empirical examples to make explicit the link between belief systems, lived experience, and social structures in order to reveal how the nature of the daily lives of black Canadians creates ways of thinking and being, which has consequences for how we think about and teach about race in educational psychology.

VIGNETTES

I: Forget me . . . Not!

Ben Johnson and the Social Production of “Blackness”

Given that one of the themes of this paper involves examining how meanings of race and gender are shaped by the sociocultural context in which they are located, the figure of Ben Johnson is instructive. Fifteen years on and the legacy of “black Ben” continues. . . . Seoul Korea, 1988: it was a September to remember . . . With his arm raised signaling number one as he crossed the finish line, Canadian Ben Johnson finished well ahead of his American rival Carl Lewis in the men’s 100-meter Olympic final. Ben Johnson’s moment of triumph was portrayed as significant because it “proved” that Canada could compete on the world stage with the athletic strongholds (most notably our neighbor, the United States). It was later revealed, however, that Ben Johnson had taken a banned substance and he became the first athlete to be stripped of a gold medal due to steroid use.

No longer a national hero, black Ben became a “Jamaican born” Canadian citizen who had brought shame upon the nation. The truth is, he was always “black Ben.” Raised in a single parent home, the white media had previously played upon the familiar imagery of a young black male of humble beginnings who came to Canada hoping for a better life. Once he fell from grace he was re-racialized by the very racial ideology which tried to use him as the emblem of a multicultural Canada, and turned on him by identifying him as a *recent* Jamaican immigrant. When he was “good” he was Canadian, but when he was “bad” he was from “from foreign.”

The impact of this “scandal” is noteworthy because it extends beyond the realm of sport to incorporate beliefs about West Indian immigrants, citizenship, and belonging. Particular racial and national ideologies were mobilized to undermine Ben Johnson’s ties to Canada. Unable to drive him out of his “home,” he has been symbolically expelled from membership in the Canadian nation. The continual evocation of the stereotypical figure of “black Ben” as a Jamaican man who disgraced “the nation,” reinforces public discourses about “black” (i.e., Jamaican) men as the source of illegal immigration and crime in Canada. Thus, black Ben remains part of gender, racial, and national narratives about citizenship and belonging to the Canadian nation. Other positive tests come and go, but Ben’s ignominy is forever. He endures his punishment in perpetuity. A pariah, his public marking serves a purpose; it reminds us that for many, belonging to the Canadian nation is conditional. Consider the pervasive drug use in predominantly white countries such as the former East Germany, and the former Soviet Union, competitors in the Tour de France, (along with black Americans Carl Lewis, CJ Hunter), and the hundreds of others worldwide who have yielded positive drugs tests since September 1988. Steroids, only in Canada, eh? Pity.

... Lest we forget ... Ben ... Black Ben. May he never rest in peace ...

II: In/Visibility Blues

... But you don't LOOK Canadian ... Where are you from?

Recollections ...

Are you from Kenya? My wife and I traveled there some time ago and you remind me of the “people” we met there ...

When out alone or with another black girlfriend, this question inevitably appears: WHERE are you from? I/we say that I/we are Canadian. If my girlfriend happens to say that she was born and raised here in Vancouver, her response is met with silence and a look of confusion both of which are followed by the customary second question: WHERE are your parents from? If I/we say that one of our parents is from the West Indies then this reply is met with a look of satisfaction: ah, that explains “it” ...

Once I asked the inquirer “oh you mean where did I get my ‘color’ from”? This of course produced silence and awkwardness. My suspicion was confirmed however—what the person really wanted to know is where does this/our “blackness” come from? (Apparently, from “elsewhere”).

The idea that one cannot be black and Canadian has been confirmed through conversations with friends and family, as well as through the many experiments I have performed over the years when I have been asked where am I from? The fact that the conversation does not end when I/we say Canadian reveals the underlying assumption: surely we are from a country with a *recognized* black population. This question illustrates how a racial consciousness about blackness and belonging is produced; it suggests that black Canadians are not, or cannot be from *here*. This seemingly innocuous question conceals an ideology of white privilege, which reproduces a racial boundary. In this context, who is/can be Canadian? Who are the citizens of this multicultural nation? What are the criteria for membership? Country of birth? Length of stay? The question where are you from? is part of a pattern and practice of exclusion from the Canadian imagery. If we are considered “outsiders,” then it is not surprising that we are not seen as entitled to the same rights and privileges as those who are considered “insiders.” We find ourselves in the difficult position of being dislocated many times over, when we are not recognized as being members in the very location(s) in which we live. As a consequence, our presence is frequently seen as an anomaly or an “exception.” In sum, this construction of the black “presence” in Canada is inexorably linked to a number of social formations, namely national discourses which position West Indians as recent immigrants, the increasing presence of black American cultural formations, and education systems which do not address the genealogy of black settlement in Canada.

Eye to Eye: The Politics of Misrecognition. Vancouver, British Columbia

At an annual party, a white woman approached me to tell me how much she had enjoyed my singing the previous year. I told the woman that she was “mistaken,” it was not I, but “another black woman” who she was referring to (Serena, a girlfriend of mine, as it happened). She paused. “Well I KNOW that I have met you before” she then said with conviction ...

Tia, a South Asian woman, works with my girlfriend Kara (who is black). On different occasions when I have gone to visit Kara, their white colleagues have mistaken me for both Tia and Kara. From talking with Tia, I learned that people have on occasion, also mistaken her for me. For the record, we are different heights, hair texture and style ... we are three different women “of color.”

On numerous occasions I have been approached on the street by white people I do not know who greet me as though I am a familiar friend. After several seconds, (because it takes them that long before they actually “see” me?) they stop talking because they realize that I am not the person they think I am. (I simply shake my head and move on.)

Once while sitting in a café in Toronto with a black female friend, a young white woman interrupted our conversation to tell me that I looked identical to a black female friend of hers whom she had just dropped off at the airport. I stared blankly at this woman and said nothing (what does one say?) When she left my friend said in an exasperated tone, “right and ‘we’ all look alike . . .”

Visual dissonance. As the above anecdotes indicate, the practice of misidentification is not confined to a particular setting; these interactions are inherent to the society in which we live. Moreover, the recurrence of these situations suggests that they are neither aberrant, nor are they simply the actions of “strange” individuals. These encounters do not take place in a social vacuum; they are linked to broader belief systems and structures about “difference.” In this context they reveal the taken for grantedness of whites consciousness of blackness. That is, these incidents are illustrative of the contradictory ways in which we are simultaneously *seen* and *not seen*. While the population distribution of each region undoubtedly informs and shapes the public’s expectations regarding the existence of different racial groups, these anecdotes support white stereotypes of blackness which perceive black women (and other “women of color”) as an undifferentiated category. These examples offer insight into established patterns of interaction between whites and black “others.” The system of white racial power is operationalized through the act of misrecognition because the white gaze, which produces this consciousness, remains hidden from view.

III: Travel Tales

West Coast, U.S.A. Post-911 America: From domestic to terrorist in three short steps. The following incident took place in 2003. I was teaching at a University in the Pacific Northwest for one quarter and on one occasion I returned home to Vancouver, British Columbia for the weekend. I had driven directly to the airport following the completion of my second class of the day. At the first security check an elderly white gentleman looked at my passport and then back at me and asked, “are you sure you don’t want to stay in town this weekend and wash my windows?” I declined his offer and I had managed to take three steps forward before I was confronted with the second wave of security. At this point a white woman in her thirties proceeded to go through my carry on luggage and then she searched me thoroughly. I asked why I was the only person being subjected to that kind of scrutiny (I had watched white women and men proceed unchallenged). Her response was that “she needed to look busy.”

The Power to ‘See . . .’. What does it mean for this white female security officer to “look busy with a black female body”? (In this instance being Canadian made no difference, I was simply racialized as a homogeneous black body). There were certainly other bodies available but they were white. Given that black bodies have historically been marked as a threat, if not threatening, this woman’s interrogation of me makes it appear (to both the public and her colleagues) as though she is doing her job, rather than simply trying to “pass the time away,” as she suggests.

Vancouver, British Columbia en route to Los Angeles, California. It was August 2003 the height of summer holiday travel. I was the only black amongst a sea of white American tourists returning “home” from their cruise to Alaska. A customs agent (an elderly white woman) singled me out. Did I have a return ticket? Yes, I reply, but it is an electronic ticket. Yes, I have a copy of the receipt on my computer. I am then asked to show this receipt. I boot up my computer, which of course takes a minute. I begin the process and before it is complete, she says to me skeptically, “Oh, it won’t start up?” “No” I said, “it just takes a minute.” Once I showed her the receipt she granted me entry and I was able to travel another day.

Given that this is not the first time I have experienced this kind of attention (I had been a target of immigration and security agents well before September 2001), it is difficult to not see this as an occasion to exercise racism without the practice being named as such. We are all not equally

under surveillance in this time of "heightened security"; the hyper-visibility of blackness takes on a whole new meaning under these conditions. There are increased opportunities and an accompanying rationalization for this kind of social surveillance. What about my vulnerability, at the hands of customs and immigration officials? It is inconceivable to either the officials or to onlookers that I am concerned about my own safety. The fact that I, the only black person in sight, am involved in an extended interrogation is confirmation to everyone in the vicinity that a black person is not trustworthy. So potent is the 911 narrative regarding the potential danger of air travel that this manner of treatment is performed under the guise of "safety," not as a strategy of white racism. In sum, this situation illustrates how a logic of white supremacy is reproduced and white subjectivity is performed through interaction with discourses of gender and nation. The scrutiny and response to my black female presence is unidirectional for only the view that whites have of me is deemed important. Again, the fact that neither the gaze, nor the actions of the agents are questioned is illustrative of how the process of white racial power sustains itself. The structures and ideologies of gender, race, and nation, which construct "whiteness" as non-threatening, are constitutive of the social atmosphere in which we conduct our daily lives. In this context, the privileging of whiteness remains invisible to "common sense" views of the world (Crenshaw, 1997).

Recently I had to go to the dentist (I cracked a tooth while eating licorice!). Before my mouth was frozen the conversation turned to this project. When I described the difficulties I have experienced while trying to cross the border, my dentist (a frequent flier) acknowledged that traveling through Los Angeles is becoming "more weird" but added that I am being singled out because "there must be something in my file." I should add that he is a white male in his late 40s. On my next visit five days later, he told me that the evening following our conversation he had seen a television program about crossing the border and a "blonde woman" (his characterization) had talked about how she was being hassled when she went through customs . . .

This story illuminates several issues that frequently arise in discussions, which include issues of gender, race, and racism. First, it is assumed that I am the source of the "problem"—how can an institution (or its agents) be at fault? Second, my dentist grants my experience legitimacy (well sort of) because he has received confirmation from another (i.e., unbiased?) source, in this instance a white woman. After watching this television program my dentist concluded that it is simply "women" who are being harassed at the border. Regardless of our "visible" (i.e., racial) differences, the end result is the same (i.e., harassment). So influential is the belief that race makes no difference, the very power and privilege residing in his ability to "not see" race remains unquestioned. His initial identification of me as the source of the problem also denies the fact that whiteness is also a racialized position which designates members and outsiders. We were both stopped, this blonde and I, but was it for the same reasons? If a white woman is harassed does this mean that there is no difference when a black woman is harassed? Or is it not harassment at all? And given the different cultural positions which black and white (blonde) women hold in society, it is likely that her interrogation may be seen as unusual if not unjust, while mine would be expected. To what extent is surveillance (as a suspect) a part of her daily life? The fact that we occupy different positions in society owing to a racial hierarchy is not considered in my dentist's interpretation of these incidents. This denial of racial difference is significant because the ability to acknowledge or negate the relevance of race is part of prevailing strategies of white racial domination. That is, the assertion that our experiences were the same privileges his position of white (male) racial power, which imposes one definition of reality as *the* definition of reality.

The other day, while working on this project my girlfriend Kara called me from the airport to relate a disturbing experience with an immigration officer (white, male, and in his late 40s). She was on her way to an American destination for the weekend. She had not traveled in over a year and she was unprepared for the aggression she encountered. The interrogation began with a question; there was

no effort at civility (apparently at this juncture, why bother?). At one point, the agent, frustrated with her answers, told her “I ask the questions here . . . and . . . I have the power to send your butt back.” Indeed.

IV: The Academy

This section comprises my experiences both as a student and as a faculty member to draw attention to the experiences and meanings that emerge in different contexts.

As a Graduate Student

Ontario, Canada, the late 1980s. It was my first term in a doctoral program. I was the only non-white student in a required theory course in which there was only one male. Each week a graduate student had to prepare one of the course readings for the seminar. When it was my turn, the professor (white and male) spent the better part of the class trying to undermine my efforts to present the reading. Rather than direct the questions to the others, he continued to isolate me from the other students, directing his focus and attention toward me, asking me specific questions each time I tried to generate a class discussion. He redirected the seminar to topics which he deemed important, implying that the areas that I had chosen to explore were not the ones that should have been addressed. For the most part, the other students remained silent. After class a number of women approached me in the woman’s washroom to let me know that they were uncomfortable with the way this professor had treated me. They felt that “something was wrong” (the students did not characterize what they had witnessed as a demonstration of white male racism). One student, acknowledged as one of the “brightest” students in the program, told me that she could not understand why this professor had treated me “that way.” She admitted that had he asked her the same questions she too would have struggled to answer them. I later learned that another student was so disturbed by the events that had occurred, she had told another student that she had considered dropping out of graduate school (she was in the first year of her master’s degree).

The public nature of this professor’s actions is significant. Crossing social boundaries tends to reveal the boundaries. The classroom was his place of institutional and social power and thus it was the place where he could exert his racial and gender domination without it being read as such. Identified as an interloper to the social order, my presence could not go unchallenged. His attempts to silence me, literally and symbolically, also sent a message to the other students—that they were superior. They deserved to be in the classroom. It is important to add that his efforts to undermine me did not end there; they continued for the duration of the course. Other incidents took place in his office, in the margins of my papers, or in his final comments on my term paper which included remarks on my character, not the content of the essay.

Word leaked in the department about his conduct and one night I received a telephone call from a senior faculty member, (white and female) who asked me if I thought that I was being treated this way “because of my race or my gender?” That is, was it racism or sexism?

The above question is important because it points to a lack of understanding regarding the complex ways in which women’s experiences and identities are simultaneously shaped by multiple axes of power. It also indicates how white subjectivities have the “privilege” of not seeing “race” as relevant to daily life. More often than not discourses on gender have examined the experiences of white women, and discourses of race, when dealing with “blackness,” have focused on the experiences of men. The assumption that it is both possible and appropriate to separate elements of my identity marginalizes and distorts the nature of my experiences as a black woman. The term *sexual* harassment, for example, has made it difficult for women to identify and analyze the diverse ways in which women are harassed. I was the only person in the class who could be visibly identified a member of a racial group. No one else in the course was subjected to that kind of public humiliation. The nature of this interaction illustrates how strategies of racialization

are able to effect material and ideological consequences. This professor’s actions enforced the racial boundary by privileging whiteness, while simultaneously advancing a narrative of white racial superiority (Crenshaw, 1997). The lack of awareness of the racialized nature of sexual harassment prohibits a critical understanding of the ideologies and strategies, which inform this kind of discrimination. In turn, the inability to comprehend the nature of the interaction undermines subsequent efforts to respond to this kind of social domination.

The Rules of Racial Authenticity Revisited . . . The Sounds of Racism

California, U.S.A., the early 1990s. As a graduate student I had wanted to be a teaching assistant for a class—titled, “Women of Color in the United States.” When I called the professor (black and female) she told me that given the nature of the material the position was reserved for women of color. I was dumbfounded, but I remained silent. I did not feel comfortable asserting my black female identity at that moment . . . the fact that my racial identity had been determined by my voice, signaled a great deal . . . I apparently didn’t “sound black” . . .

The above example offers yet another illustration of the ways in which black racial identity is interpreted according to a limited (and limiting) set of parameters. In this instance the ascription of a particular style of speaking to racial difference is part of the stereotype of blackness. The fact that this exchange involved a black American female professor indicates how particular ways of seeing and living one’s blackness are normalized to the detriment of us all.

As a Professor

I recently taught a course titled, “Race, Gender and Nation: Postcolonial Narratives of the Diaspora.” It was a senior-level class and all the students were white women. One of the students was struggling in large part because she had no background in either women’s studies or race scholarship. After several weeks, the student approached the director of women’s studies to tell her that she was dropping the class. During their conversation the student asked the chair why I “hate *them*”? When the director relayed this conversation to me, she assured me that this student’s comments had had nothing to do with race.

On the last day of class on field research I asked the students to discuss their thoughts on the course. One student, a white woman in her 30s announced that one of the things that stood out for her was that “we talked about race a lot.”

These two examples are instructive because they point to how narratives of race and gender socialize us regarding ways of being and thinking about the social world. It is important to recognize that, for the most part, education does not produce these narratives, nor does it examine the issues that these anecdotes illustrate. For the majority of the students, my classes have been the first time that they have encountered material which examines the intersection of formations such as race, gender, sexuality, and class. Certainly in sport studies (one of my areas of specialization) courses on “race” are rarely part of the curriculum and courses on gender rarely consider race. I proposed a different way of examining ideologies and relations of race and gender power. This troubles those who have been exposed to conceptual and analytical frameworks which treat racism as the behavior of aberrant individuals or extremist groups and construct gender as a monolith. Race is not seen as relevant to their lives in and outside of the classroom. In this context, issues pertaining to race and the problems of racism, remain the property of those marked as racial “Others.”

Returning to the first example, I disagree with the chair’s interpretation; the student’s comments had everything to do with race and gender. Are students openly hostile when they don’t understand physics, or English literature? And if so, do they assume that the instructor “hates” them? Do they tell the chair of the department? Whiteness is not typically explored as a subjectivity and racial formation. Moreover, students’ assumptions and experiences are mediated by racialized and gendered subject positions that are connected to broader social and historical frameworks.

Emotions and perspectives are shaped by race and gender power; in this student's imagination, I was the stereotypical "angry black woman." Her construction of me as the source of the problem privileges whiteness by evaluating me from an unmarked racialized position of white subjectivity. Her expressions of discomfort (and fear) illustrate how the manner in which knowledge is received is negotiated in relation to the racialized positions held by students. The practice of associating the material with me, the black female instructor, indicates how an ideology of whiteness generates a particular representation of the cultural politics of difference. The persistence of discourses of white supremacy is due to the fact that we are socialized to be oblivious to the ways in which our everyday lives are conducted within relations and structures of domination.

Of course to have issues pertaining to "race" taught by a woman who is recognized as member of a subordinate racial group presents particular dilemmas and concerns. Discussions of hierarchies of power and inequality often invite displeasure and hostility. The notion that race is only relevant to "non-whites" (i.e., those who are typically seen as raced) reproduces a racial logic, which renders whiteness invisible. This in turn reproduces the racial hierarchy whereby whites and whiteness are seen as natural or normal, and thus the standard against which "difference" is measured. More often than not race is only seen as relevant in a course in which race is in the title and then there may be an expectation that the course will be taught by a "raced" individual. Gender is often not seen as raced and sexualized. This consciousness and the interaction that it engenders are part of the taken for granted atmosphere in which we conduct our daily lives.

I was already a graduate student when, in my seventh year of university, I first had a teacher who was neither a white male nor a white female. This significant absence did not prompt me to pursue a career in higher education however it did make me painfully aware of those who are regarded as legitimate instructors. The lack of diversity has consequences for us all, as that which is unfamiliar soon becomes unrecognizable. The preponderance of white male and female teachers means that other racial groups are not conceived of as educators. Those who are frequently seen in the position are readily understood as authorities, and may well believe themselves to be best suited to the profession. It is not enough to say that the status quo is "normal" or "natural": visibility/presence conveys power and privilege. Over time what we *see* becomes what we understand and believe. The white racial privilege that accrues from this "common sense" construction of reality is rarely questioned and the white racial power that underlies it remains hidden. Surely we can comprehend the implications for all those who are absent? Where are the aboriginal, "asian," latino, chicano, and black teachers? Their/our absence indicates the resilience of racial and gender hierarchies and the belief systems which sustain relations of dominance and inequality.

CLOSING REMARKS: SCENES OF (RE)CONSTRUCTION

As I stated at the outset, one of the aims of this discussion is to interrogate our everyday lives as a key site and source of racial antagonism. I have described a number of events and anecdotes to illustrate the diverse ways in which social power is exercised through social relations and situations. These are not sensational tales, in that they do not involve encounters with groups commonly held as white supremacists. The prevalence of the various interactions gives the impression that these are "natural" events. In seeking to undermine the status quo I wanted to make explicit the ways in which deep-seated patterns of feeling, thought, and interaction reproduce social power in a manner that is rarely questioned. Because these particular stories illustrate the racial structuring of daily life they advance our understanding of the conditions under which racial injustice, racial inequality, and the privileging of whiteness occurs. In this regard the interrogation and inclusion of the taken-for-granted elements of our lives is crucial for these experiences and are sources of knowledge which need to be analyzed. For members of racially subordinated groups, their ways of being and thinking are shaped by structures and

belief systems which position them as racial others. I had wanted to draw attention to this area of experience to challenge dominant ways of interpreting the cultural and political significance of race in educational psychology. I had wanted to acknowledge and address how the daily lives of black Canadians creates ways of knowing and being, which need to be incorporated into our educational practices so that we do not reproduce racism through the materials that we use in the classroom.

The persistence of racism also rests in the unquestioned standards and activities around which much of everyday life is structured. At present the logic of white racial superiority is reproduced through strategies which identify and position blacks as “the other” without revealing narratives of whiteness as a racial formation and subjectivity. The fact that the everyday world is organized around processes of racialization that are not made explicit is in part due to the ability of whiteness to be the unmarked position, which identities the “other” (Fiske, 1996). This operationalization of white racial (and gender) power sustains white supremacy because it is embedded in the very atmosphere that structures our daily lives. Similarly, the trivialization of the continuing significance of race and the marginalization of contemporary expressions of racism contribute to the reproduction of educational psychology as a white discourse since the ability to name when and where race is relevant is a privilege largely available to whites. These examples of everyday life are therefore an important pedagogical device for they challenge the view that learning, thinking, and teaching are not influenced by sociocultural processes.

Previously I mentioned that the prominence of U.S. discourses on race, as well as the institutionalization of multiculturalism and bilingualism, has contributed to a certain complacency regarding racism in Canada. In addition, Canadians receive versions of race relations in the United States, which strengthen the view that racism is less overt (i.e., not as offensive) in Canada. This belief is in fact its own form of racism and it is one factor which has hindered our ability to take seriously the cultural politics of difference and inequality as they are made manifest in Canada. The above vignettes offer insight into the complex ways in which the material and ideological elements of white racism have been normalized in the organization of our everyday lives both in and outside of the classroom. The challenge remains for us to acknowledge and address the ways in which the social and political significance of the constructs of race (and gender) is of profound importance to us all.

TERMS FOR READERS

Blackness/Whiteness—does not refer to skin color but to the fact that notions of “black” and “white” are social and political concepts whose cultural meanings have ideological and material consequences. In this context racial identities are lived and understood in relation to the historical, political, and social structures in which they are located.

Everyday Racism—refers to discrimination, which occurs daily. It is embedded in our patterns of communication and social interaction. It involves those elements of daily life which are often taken for granted such as attitudes, feelings, emotions, and relationships with coworkers, and friends.

Racial Authenticity—refers to the notion that there are particular criteria which identify a person as a member of a racial group. For example, at different historical moments, there are cultural struggles regarding the nature, dilemmas, issues that constitute blacks as political and social subjects.

Racialize—refers to the practice of assigning racial meanings to the social world (e.g., social relations, structures, and belief systems).

REFERENCES

- Crenshaw, K. W. (1997). Color-blind Dreams and Racial Nightmares: Reconfiguring Racism in the Post-Civil Rights Era. In T. Morrison and C. Brodsky Lacour (Eds.), *Birth of a Nation 'hood: Gaze, Script, and Spectacle in the O. J. Simpson Case*, pp. 97–168. New York: Pantheon Books.
- Essed, P. (2002). Everyday Racism. In D. T. Goldberg and J. Solomos (Eds.), *A Companion to Racial and Ethnic Studies*, pp. 202–216. Malden, MA: Blackwell Publishers, Inc.
- Fiske, J. (1996). *Media Matters: Everyday Culture and Political Change*. Minneapolis, MN: University of Minnesota Press.

CHAPTER 80

Gender and Education

ELLEN ESSICK

What is gender? How does gender affect one's ability to learn as well as one's perspective on that learning? In our society the terms sex and gender are often used interchangeably. Sex refers to whether one is biologically female or male based on genetic or anatomical characteristics. Gender on the other hand entails much more and relates to masculinity and femininity and the expectations associated with one's biological sex designation. Gender, one's masculinity or femininity is determined by the society in which we live. In other words it is a social construction, set in motion at birth for most boys and girls. Messages about what it means to be male or female are sent to children from very early ages and continue to be channeled to them through adolescence and into adulthood. Schools often play a very significant role in the channeling of these messages and how educators choose to address them can be paramount in a child's life. While it is important not to essentialize all men or all women into these socially constructed positions, recognizing the various epistemologies or ways of knowing often attached to gender might provide a greater insight into helping men and women learn by targeting learning strategies directed toward specific epistemological stages. Educational psychology makes clear different students have various learning styles, yet these distinctions are often essentialized or generalized through several social factors such as race, class and/or gender. Gender, in specific, may be a key determinant in the ways in which students process information and the particular learning strategies employed in the transfer of knowledge. This chapter will discuss how gender, be it masculine or feminine, is a social construction and how operating with knowledge of this social construction may provide greater insight into developing more effective learning opportunities for all students, male and female. Even more specifically, it will examine how the schools could use this reconceptualized approach to educational psychology to change the way we look at the gender and learning in the educational system. Many researchers believe that males and females think and process information in different ways based on their gender. These "ways of knowing" are challenged and reconstructed in this chapter allowing for new approaches to identity, as well as cognitive development. While the assumed cognitive differences in gender affects both female and male students, pedagogical research suggests that the socially prescribed roles of femininity are more likely to have a negative impact on learning outcomes for females. Therefore, speaking primarily about the impact of traditional educational psychology on female

intellectual development and the effects of feminine dispositions on learning may provide a better understanding of how to redefine the educational experience for both genders.

THE SOCIAL CONSTRUCTION OF GENDER

While the social definition of femininity as well as masculinity has changed over time, an emphasis on woman as caretaker, woman as passive bystander, and woman as physically and emotionally weak still exists. In contrast, men in American society are still expected to be strong, aggressive, and emotionless providers. The contexts in which men and women find themselves have changed over time but the meanings have remained largely the same. Socially constructed feminine identity requires that women relinquish much of their physical and emotional power and exhibit this lack of strength through passive physical, intellectual, and social interactions. Women are to be soft and demure taking up very little physical space. Femininity in this light requires a dependence on men for both physical and emotional strength. Men in turn are expected to remain strong both physically and emotionally serving as providers for females as well as for themselves. These ideas become a source of conflict for many women and men. They may feel quite ambivalent about society's ideas of femininity and masculinity but still feel trapped within them. Many women become so enmeshed within this social construct of femininity that often they have no concept of how to begin to move outside of this paradigm. And why should they? The schools, the institutions in which they have spent the majority of their time have, sometimes unknowingly, helped to shape this paradigm. Even some of today's most intelligent men and women are unable to recognize how they too have become co-opted into these socially constructed images. Not only do they fail to recognize the social construction of the images but also often fail to recognize the gendered ways in which knowledge is produced and constructed. Students are judged not only by what they know but also by the processes by which they come to this knowledge. In an educational setting the more a student deviates from the expected way of coming to knowledge based on gender, the more he or she stands to lose, particularly in an environment where intelligence is measured on an expected standard for coming to this knowledge. Academically aggressive males and females elicit very different responses in the academic environment. As a result, teachers in the classroom often fail to see how their own behaviors toward students are influenced by gender, both their own gender and that of their students. Since feminine behaviors considered acceptable in the classroom are often quite limiting to the learning process, it is helpful to specifically examine how this femininity is constructed both socially and academically. Through this understanding, today's educators have the opportunity to change the educational and psychological methods used to encourage or discourage young women and men alike.

FEMININITY

Biological differences exist between men and women at birth, but this is where biology ends and society takes over to construct the feminine presentation that is often detrimental physically, emotionally, and academically to women today. Simone de Beauvoir spoke of this notion over thirty years ago suggesting that one is not born, but rather becomes a woman and that feminine behavior and feminine existence is in fact determined by the entire civilization in which a woman lives.

From the moment a little girl is placed in a ruffled dress and instructed not to get dirty, her culture's idea of appropriate feminine behavior is becoming ingrained into her psyche. She quickly learns that different sets of behaviors both socially and in the academic setting are required of her by others including other females around her in order to remain feminine. Additionally, attached to these physical and behavioral requirements are moral imperatives providing reinforcement for

“keeping women in line.” Women are to remain thin, beautiful, and virginal at all costs. The guilt often attached to this suggestive morality insures that women will not only continue to strive for an unrealistic body ideal or sexual abstinence but will be guilt-ridden for not reaching what is also seen as a moral ideal. A woman will spend countless hours dieting, exercising, or subjecting her body to never ending cosmetic procedures in an attempt to reach this ideal. In addition, the implied assumption with regard to femininity is that all “feminine women” are also heterosexual women. A mandated heterosexual existence keeps women in line and terrified of “the other” or any other that may speak more accurately to their emotional as well as sexual feelings. Her sense of pride and self are destroyed as she attempts to attain these unrealistic moral standards. This heteronormative assumption applies not only to female behavior but also to reading and educational practices in the classroom. Teachers often fail to see how they too have become enmeshed into this notion and create their classrooms from this perspective. Activities, behaviors, and appearances as well as all educational processes are viewed through this heteronormative lens. In *Is there a Queer Pedagogy? or, Stop Reading Straight*, Deborah Britzman (1998) presents ways of understanding and discusses reading practices that look beyond gender to a more inclusive or queer view of the educational experience. This Queer view of education eliminates the need for gender-specific morality often imposed on females. Instead it allows for a broader view of morality that requires affirmation of the dignity of all students. If this is the case then obviously girls must also be part of this equation. Feminist theologian Carol Gilligan (1982) suggests that an ethic of caring can be positively associated with female behavior. While Gilligan sees this ethic as equally valuable to traits associated to male behavior, many individuals maintain the belief that this position of caring and nurturing is sociobiological and should be held at a lower level of esteem than the moral ethic of justice that Gilligan attributes most often to masculine behavior. Throughout history, American society has developed strict norms concerning acceptable appearance and behavior for women. Since the beginning of the Industrial Revolution there has existed a separation between the public and private lives of the family. The public life, usually the responsibility of the male adult of the household, required a strong assertive life void of feeling and emotion. The man received pay for his work and along with this pay came a position of hierarchy in the family. The man lived in a bottom-line culture of competition, drive, and motivation that took on a very formal appearance. At home the female of the household directed the private, domestic life of the family. The shift toward male dominance came and continued throughout the advent of the Industrial Revolution and the assignment of monetary value to the jobs typically held by men. With money came status and power for men but a devaluing of the jobs and positions of women. Also attached to this status came an emphasis on education for males in the household. Given this patriarchal foundation of American culture, men typically developed and perpetuated the standards of physical beauty, social position, and education inscribed to women. This belief system translates into today’s society in the form of disparity of pay between jobs encompassing nurturing or emotional care and technological or industrial professions. In the school setting boys are encouraged to take courses founded in the sciences that will directly affect their abilities to attend certain colleges and universities as well as follow particular career paths. Girls are often encouraged, sometimes indirectly not to take those same educational directions. Teaching, childcare, and other “human service” careers that show care, concern, and compassion for individuals are considered not worthy of compensation reflected in most technical and industrial types of jobs. The task for society in general and specifically through the schools is to combine what Gilligan calls the justice perspective on moral thought usually attributed only to males by the culture and the caring ethic of moral thought attributed to females into a belief that both males and females are of equal value and of equal cognitive ability. Sensitivity to others does not have to be seen as a moral weakness and inferior to competition and success. Rather both sensitivity to others and assertiveness can be seen as positive traits for women and men alike.

Men and women who fail to reach the appropriate social standards of masculinity and femininity often subject themselves to what the society views as negative labels. Soft, pleasing, polite, quiet, dainty, and nice are words that represent the standard for acceptable behavior among young women. Anything different earns her any number of perceived negative labels from masculine or aggressive, to lesbian to slut. If she is very young and refuses to follow the expected norms she gets a slight reprieve and is labeled a “tomboy” by those around her. Once she reaches puberty this is no longer considered acceptable behavior. Women are taught from very early ages to maintain an expression of difference. When meeting a male they are to avert their eyes downward and avoid direct eye contact and confrontation. A bold, strong, or aggressive woman may not produce and convey the appropriate image. This behavior is carried into the classroom as girls apologize for interrupting to ask a question or censor themselves in order not to appear as a “know it all” in the classroom. In *School Girls*, Peggy Orienstein describes her experiences observing middle-schoolgirls in the classroom. She interviewed girls who routinely knew the correct answer to questions asked by the teacher but never raised their hands to answer the question. Many of the girls felt that to answer would jeopardize their social position with the boys in the classroom.

Conversely, Men are awarded privileges, not only with their own bodies but also with their behaviors that would be at best inappropriate and at worst insubordinate if practiced in the same fashion by women. Boys are rarely reprimanded for yelling out answers in the classroom but rather commended for their knowledge and understanding. They are encouraged to take assertiveness to the point of aggression. By participating in these behaviors they do not compromise masculinity; rather, they often confirm it. Women on the other hand are expected to control these behaviors at all costs and failing to do so compromises their femininity. Men receive very little reprieve if they fail to meet socially constructed masculine standards and are also labeled with terms ranging from prissy to sissy or passive to fag for failing to meet socially constructed norms for masculinity. Boys who fail to portray the appropriate image in school are labeled and often carry those labels throughout their educational careers.

The conflicting messages heard by many women students become overwhelming and it becomes an impossible task for many adolescents to know where they fit into this confusing picture. They want to be seen as feminine yet in order to be successful in many arenas they must behave in direct opposition to this “feminine standard.”

This femininity, while not a given, is quite widely accepted in American culture. This is not to say that women would not like this feminine “ideal” to be different or have the freedom to rebel against its physical and political constraints. But the nature of social construction is such that often women not only accept this “way of being” but also become part of the system that creates and perpetuates it. It is also understandable that in a society that has become so enmeshed with this construction of femininity as well as masculinity, the culture itself loses site of its stifling impact on females and males alike. While social construction affects both males and females, the negative impact of the construction of femininity on females physically, emotionally, and academically cannot be ignored.

PERFORMING FEMININITY

So why have women become so enmeshed with this socially constructed notion of femininity? Many women understand and even embrace the need to look more critically at the many culturally prescribed roles women are expected to fulfill in our society, yet must constantly be aware of the inconsistencies in their behavior as they struggle to excel in areas which are antithetical to the “feminine.” This performance begins at very early ages and nowhere is this more evident than in the academic environment of the classroom. Valerie Walkerdine (1997) examined the expected performance of females as they enter the mathematics classroom. Those young women who excel

in math are said to be “hard workers” while the boys who excelled are labeled intelligent. The young women take on this performance as the hard worker and fail to see their own potential as bright, intelligent young women. Many young women are even discouraged from taking math class altogether because to do so would not be the correct performance of femininity. Changing this performance challenges male domination and superiority.

Walkerdine goes on to discuss the threat that women present to a patriarchal society by exhibiting their power in a pedagogical setting. Women often live in very contradictory terms with an intense fear of stepping over the gender divide. The classic response then is the performance of femininity.

This fear of stepping over the gender divide may be a key determinant in the perpetuation of social and emotional problems such as eating disorders among women. Many young women struggle to be as perfect as they can be in the classroom but at the same time recognize the social and intellectual expectations of society. Women are kept in line via the performance of femininity. It is much easier and acceptable to see a woman as a frail, sick anorexic than as a strong, assertive, and competent woman not only for those around her but for herself as well. Since the day she chose not to answer a question in math class for fear of appearing “too smart” she has been performing femininity. The struggle between performing academically and the performance of femininity becomes overpowering as women negotiate the decisions to sacrifice one role for the other.

Ultimately this performance affects how women see themselves physically and emotionally as well as academically. The continual messages of how one is to perform begin to affect the self-esteem of young women, which in turn creates and perpetuates a vicious cycle reflecting weak, incapable women. Again, the problem becomes that of the young women rather than the culture, which created her. Peggy Orenstein (1994) describes observations with young women in a school setting and the social and pedagogical practices that prevent women from taking full advantage of their educational experiences. Orenstein reasons that we do girls a disservice when we encourage young girls to feel good about themselves without addressing the culture and its construction of femininity that originally perpetuated this low self-esteem.

Young women quickly learn that it is not only more acceptable in society to “perform femininity” but it also protects them against the terrifying idea of confronting the overwhelmingly misogynist ideal perpetuated by the patriarchal cultural. She has no notion that she has become so enmeshed in this culture that she not only performs femininity outwardly to the rest of the culture but inwardly within her own personal concept of herself as well. What started in the classroom with young boys and girls infiltrates the personal lives of women as they move toward adulthood and women begin to lose the innate power that exists within them. Attributed to this notion of performance of femininity, and often masculinity, is the idea that men and women, or more specifically masculinity and femininity bring with them specific epistemologies or “ways of knowing.”

WAYS OF KNOWING

Epistemology can be defined as the process or route by which a person comes to know what he or she knows. What is one’s epistemology? Where and by what means do individuals come to know what they know. Do we know things as women, as men, as children, from the heart or is each individual born into a culture that determines his or her epistemology? While some individuals may have a true clear-cut epistemology, most likely individuals combine a variety of ways of knowing in order to learn about the world around them and most importantly to learn about themselves. This epistemology also allows students the opportunity to discover how they fit into the vast world in which they live.

In the late 1960s Harvard researcher William Perry (1970) studied the intellectual and ethical development of students as they moved through their undergraduate years at Harvard. Perry described a series of stages or positions that he observed in these students as they moved through the education process. He concluded that students go through four stages of epistemological development. These stages, basic dualism, multiplicity, relativism subordinate, and total relativism, seemed to apply to most of the students Perry interviewed. Perry defined *basic dualism* as that point in the learning process when students viewed the world in polarities such as black/white, good/bad, or right/wrong. Here students were passive learners, relying on teachers to provide them with all truths. Eventually students realized that there could be many different opinions and moved to a state of *multiplicity*. At this point students can understand that teachers do not always have all the right answers and that they too can have an opinion. Eventually the teacher challenges the student's personal opinion. The teacher requires evidence and support for that personal opinion and students move to a position of *relativism subordinate*. Here an analytical evaluative approach to knowledge is cultivated particularly in one's academic pursuits. Perry believed that eventually students shifted to full *relativism* where they understand that truth is relative and that knowledge is constructed. At this point students affirm their own personal identity and their own place within the learning process. While this seemed to be the way by which most of the students Perry interviewed came to know things, these results reflected primarily masculine ways of knowing as the majority of the students interviewed were men. Later, Belenky, Clinchy, Goldberger, and Tarule (1986) revised the study to include how women moved through these stages.

In *Women's Ways of Knowing*, Belenky et al. (1986) describes how women come to know all that they know, keeping in mind that the acquisition of knowledge and the ways that women learn to express themselves often come as the result of negative events or experiences throughout their lives. *Women's Ways of Knowing* discusses the ways in which women draw conclusions about truth, knowledge, and authority. Using Perry's epistemological positions, Belenky followed women through the positions of basic dualism, multiplicity, relativism subordinate, and total relativism. Effects from society seemed to slow the rate at which women moved through these same stages.

While it may seem that Belenky's assertions were quite simplistic concerning the intellectual development of women and viewed this development from a very essentialist viewpoint, they may still provide insight into how students both male and female develop ways of knowing as a result of the many events both positive and negative that they experience throughout their lifetimes. Belenky's stages take Perry's work one step further by including the influence of socially constructed femininity on the methods by which women come to know what they know. Belenky described the *silenced women* who have received the message throughout their lives that that they should be seen and not heard. Not only are they not heard but through this silence comes the belief that they in fact do not deserve to be heard. These women begin to take what they are told as gospel and fail to give themselves permission to think for their own person. They accept the stereotyped sex role portraying women as passive and powerless, requiring the presence of a man for survival. The next level of knower described by Belenky is the *received knower*. This is the woman who gains knowledge through listening. Typical of many college women, these women lack the assertiveness to speak what they know. They feel as if this listening is the road to knowledge and rarely doubt what they learn by listening to authorities. Since these women are only listening and not speaking they almost never take advantage of the opportunity to disagree with authority. The assumption is that the information to which they are listening is true. If two authorities disagree, the listener decides on truth based on a variety of things, such as place in society, education, age, etc., which person is the ultimate authority and takes their word as the truth. The messages that have come across clearly to these women is that they are to be seen but not

heard. Unfortunately, the greater society perpetuates itself by keeping the received knower in her place. Additionally, the young women described by Belinky are only exhibiting the educational behaviors taught to them from their earliest educational experiences. In the classroom setting it is often safer for the teacher's comfort level for students to stay in this place, not questioning or challenging the "authority." For women in particular to move out of this place challenges the social structure and male hierarchy in the academic setting.

From very early ages, girls and women are conditioned to think of the "other." Eventually with *subjective thinking*, women begin to find a self and discover their own voice. She is able to listen to this voice in conjunction with outside voices as she makes decisions in her life. As many women move to a position of *procedural knowledge* characterized by reasoned thinking, they are quite ambivalent because while they hope to move beyond their subjectivism they also hope to defend it. It has taken them a long time to discover the voice from within. For many women the move to a more reasoned way of thinking is part of the overall game they must play to get to where they hope to eventually be either personally, academically, or professionally. Women begin to recognize that only relying on their own inner voice can be detrimental to their development.

By thinking more rationally women are able to make more informed decisions. Developing this type of thinking is what Belenky refers to as *procedural knowledge*. Whether through examining impersonal facts and data as does the subjected knower or developing relationships as with the *connected knower*, procedural knowers reason out decisions using given information. Eventually Belenky describes the development of a woman who uses her heart, her head, and her voice to become a connected knower. Her ultimate goal is to become a *constructed knower*. The constructed knower begins to look at things as they really are, she is patient and realizes that everything that goes on around her is part of who and what she is or will become. She moves to a place where she can be more flexible and adapts more easily to change and instead of being threatened by others who disagree with her, she welcomes the difference and the discussion. In the classroom this allows for a dialogue that includes all students and creates a learning environment of equality among students. It creates a setting where women are encouraged not only to begin a discussion but also to follow it through debate and disagreement.

So why is the process of becoming a constructed knower a woman's way of knowing? Why is it that men seem to either step into or quickly move to the epistemology of a constructed knower? Why was there a need for a book to be written about this issue? Is this process of intellectual and personal development truly inherent in the lives of women or are women socially constructed to be as they are in each stage. It appears that in a patriarchal society it is in the best interest of the dominant group for women to remain silenced or at best to remain in the position of a received knower. While it seems that many women move beyond silence in spite of the culture, there appears to be an equal number of women who hear the repeated message to be seen but not heard and never make the steps necessary to move to the next stage of knowing. While Belenky's descriptions of each type of knower do seem to describe many women in some situations, they may also help perpetuate the tight patriarchal box in which many women find themselves. We can only imagine a world in which women, from a very early age, are encouraged and even rewarded for expressing their voice and being heard. In educational psychology it becomes imperative that educators begin early in kindergarten looking at the role gender plays in the learning process and address teaching/learning strategies to move students more quickly to a constructed way of knowing. Maybe it is time to rethink how the lives of women are structured from their earliest intellectual development. Hopefully through increased awareness and education women will not become adults and still be silenced. To do this we must move the awareness into action and create curricula that recognizes and incorporates gender differences in learning. Equally important is the need to include gender-specific teacher training programs that provide teachers with the skills necessary to address and blend gendered styles of learning.

Socially constructed or not, many women develop intellectually through the process. Educators may find the work of Belenky helpful as a tool in the pedagogical processes. If as educators, we develop an understanding of how these women become constructed knowers, we can better tailor our pedagogical methods toward enhancing development of women as well as men to this epistemological stage. At the same time we can encourage women and men to develop a strong sense of self and move through these stages more deliberately at a much earlier age. The goal here is to create students who recognize the contributions of all individuals in the process of intellectual development.

REFRAMING THE GENDER MESSAGE

Margaret Mead defined an ideal culture, as one in which there was a place for every human gift. This ideal culture would allow its members to grow to their fullest potentials, and would allow the culture the maximum use of its members' gifts. Nothing would be wasted. Socially constructed differences between masculinity and femininity exist. Unfortunately, along with recognition of the differences often comes the assignment of social value to those differences. In a pedagogical environment it is important to tailor learning strategies to these differences but it is equally important to use this environment to deconstruct the hierarchal value placed on these gender differences. Amy Guttman speaks of the need for a democratic dialogue in the classroom in order to experience true understanding of these differences. She focuses on dialogue as an avenue to explore cultural, religious, and gender differences. Dialogue also serves as a curricular strategy that demands the rethinking of limitations placed on cognitive capabilities based on gender. Guttman believes that schools have a responsibility to get students ready for citizenship and that public school must be at the center of the debate. Guttman proposes the need to keep the push toward improving self-esteem and mutual respect regardless of gender, in balance. She does not suggest that dialogue will end all of society's problems with gender inequality but it will teach students about their shared citizenship and their shared humanity with all individuals, regardless of citizenship (Guttman, 1996). This conversation gives students the opportunity to have direct experience with who the other is, affording them countless opportunities of the practice of daily democracy.

By encouraging classroom dialogue about difference whether it is race, class, or genders in the school, students are provided with a more solid ground for decision making and value clarification. Students are moved more quickly to the position of a constructed knower regardless of their gender. Individuals must be taught to share mutual respect. This does not mean that all bias will be purged from the educational system nor does it mean that everyone will agree with or accept those differences, but it does mean that there will be an ongoing dialogue that encourages the mutual respect among people. In order for this dialogue to be effective it needs to be framed in such a way as to allow everyone the opportunity to have an equally valued speech, free from the limitations of gender roles. By continuing this dialogue there may eventually be a time when women no longer feel the need to "perform femininity." Once the voices of women in the classroom began to be heard, we begin the reconstruction of access to learning. All students learn how to voice one's opinion free of trivialization or invalidation as a result of one's gender. This in turn leads to varied positions of authority or expertise in the classroom. Students become repositioned as producers and interrogators of knowledge. In the mean time, it is important for educators to recognize how the social construction of gender as well as the performance of that gender contributes to the way students learn, apply, and produce knowledge, and how traditional conceptions of educational psychology has in the past classified gendered ways of knowing that result in counterproductive learning experiences for both female and male students. And of equal importance is the need for educators to recognize their own positionality within

this social construction of gender. Failing to do this jeopardizes student learning and perpetuates the positions that educational strategies are meant to overcome. Educators must be aware of the plethora of ways that students learn and specifically include the contributions of gender to the construction of the self, academically, intellectually, emotionally, physically, and socially.

REFERENCES

- Belenky, M., Clinchy, B., Goldberger, N., and Tarule, J. (1986). *Women's Ways of Knowing: The Development of Self, Voice and Mind*. New York: Basic Books.
- Britzman, D. (1998). Is there a Queer Pedagogy? or Stop Reading Straight. In W. Pinar, *Curriculum Toward New Identities*. New York: Garland Publishing, Inc.
- Gilligan, C. (1982). *In a Different Voice: Psychological Theory and Women's Development*. Cambridge, MA: Harvard University Press.
- Gutmann, A. (1996). *Challenges of Multiculturalism in Democratic Education*, in Relativism, reason and public Education. Cambridge MA: Harvard University Press.
- Orenstein, P. (1994). *School Girls*. New York: Doubleday.
- Perry, W. (1970). *Forms of Intellectual and Ethical Development In the College Years*. New York: Holt, Rinehart & Winston.
- Walkerdine, V. (1997). *Femininity as Performance*. New York: Routledge.

CHAPTER 81

TEAM: Parent/Student Support at the High School Level

PAM JOYCE

SHOULD PARENTS BE INVOLVED IN SCHOOLS?

Parent connections within schools should be prioritized as a respected and sought after mandatory aspect of all school systems. It should be viewed as a viable and visible force for aiding student enrichment. TEAM, a parent/student support group at the high school level, addresses the important aspects of educational psychology in relation to parent involvement and adheres to the belief that academic ability has multiple dynamics and thus is involved in nurturing the mind and the intellect. One might query why parents are associated with the topic of educational psychology but I would counter that inquiry and respond by saying why not? Why not critically examine parental involvement for the benefit of students? One of the dynamics attributed to academic ability is parental involvement. The dynamics that are interrelated both with the mind and with the intellect in the learning process require the support of nurturing and caring parents along with the help of society to participate in the guidance and knowledge sharing associated with the education of children.

Education is a complex endeavor involving young impressionable minds and thus should be approached as a TEAM effort. All parents, regardless of race, class, or gender should be a part of a team that serves to provide viable resources about their children to the school community. Parents should be able to use their multidimensional backgrounds as resources for the benefit of the children and provide ontological as well as psychological insights into the lives of their children. Parents usually supply the initial foundation of resources to their children because they plant the seeds of culture, economic status, personal ideologies, and position in a child's web of reality. In a world defined by multiple "people labels" subjugated knowledges and indigenous ontologies become lost, devalued, and/or sometimes diminished through physical and mental positioning. There is an established ideology that accompanies negative labels and categories in reference to specific parent groups where parent voices are not encouraged in the school community. It blatantly professes that ostracized parents are not intelligent enough to stand up for their children and when they attempt to advocate for their children they are ignored. A school stance that ignores indigenous knowledge espouses arrogance and insensitivity to marginalized groups. TEAM works to unearth new participation frameworks for parents who do not fit into existing communities of

practice ultimately enabling them to eventually experience portable learning styles, which can be transported into lived world experiences under varied circumstances.

Predispositions, that hinder change, are sometimes contrived concerning specific parents groups. Educators believe that the “hard to reach/low profile” parents due to their lack of participation in school activities are not interested in the well-being of their children. I would argue that when underserved parents and students do not feel they are a part of the dominant community of practice they disengage from the mainstream community. When individuals do not feel as if they are a part of the hegemonic group they are not drawn toward the group and actually shy away. Consequently more than likely they do not have the tools needed to share their voices in unfamiliar and varied contexts. If by chance disengaged parents were able to transport the skills of navigating the system, acquired in TEAM, to new and or existing dominant frameworks, then coparticipate comfortably with TEAM members and also with the mainstream high school parent group, ultimately overall parent involvement would increase. These results of course would be contingent on the level of criticality demonstrated by those involved and the belief in democratic practices.

In order to live critically and pursue democracy for all we must see “what is.” Inside and outside the world of academia the placement and assignment of negative categories and labels further serves to alienate parents and this problem can be addressed by pushing beyond the established boundaries or obstacles. Traditionally parents of underachieving and/or underserved students have not been welcomed in the school environment. The situated position of these parents, who are usually minority and lower to lower-middle-income status, has usually been recessed from the forefront and apart from the hegemonic parent group. In this sense race and class aspects of postformalism thinking have surfaced at the school level to be a strategic consideration in comprehending the far-reaching aspects of the lack of parental involvement and also in seeking alternatives to the situation. The critical lenses of postformalist perspectives do not support either isolating parents from school activities nor insulating them from the mainstream parent population. In this sense isolation means being closed out and not being allowed to participate and insulation means being protected from the hegemonic group, basically not being allowed to mingle with them. TEAM reinforces a critical dimension that condones questioning and promotes understanding of the multilogicality of the issues surrounding high school parental involvement. Through this expanded lens parents are exposed to new vistas and comfort zones while the mainstream school population is exposed to the positive aspects of difference both by sharing the lenses of multilogicality. This far reaching intervention serves both populations for the greater good of all with particular focus on the students.

TEAM invests in underserved parents through the power of intervention. Parents are scaffolded into power positions as in Vygotsky’s Zone of Proximal Development (VPD) whereby parents and students are guided by interactive, meaningful activities to achieve higher positions within the school community and the ability to self-advocate. In order to achieve a redefined positionality parents reconstruct their reality and mainstream society adjusts their preconceived notions about specific parent groups. A mechanistic psychology assumes parents of underachieving/underserved students are not intellectually savvy enough to orchestrate effective interventions for their children. TEAM presents a more positive scenario of parent/student relationships but hegemonic differences arise with the belief in the existing mindset that underserved parents are unable or less likely to advocate for their children and consequently the children often suffer. Sometimes underserved parents lack the privilege of having a critical ontological vision but if given the opportunity to exercise the right to a broader vision their understandings and insights can support the nature and legacy of their past and the lived world interactions of their present to confidently lead them to productive ends. Acknowledging the ability for transformations due to the fluctuating levels of parental involvement, it is imperative to explore both the historically and socially situated self of

the teachers, parents, and students. In order to understand the complexities and interconnectedness of all involved in the school community, simultaneously become aware of the myriad of forces, and strive for the connections that can bring people together, a powerful synergistic relationship must develop. This occurs when TEAM parents form a powerful synergistic relationship with teachers, other parents, students, and community members and eventually construct a power literacy that repositions them and helps them realize their new place within the web of reality. To witness this synergistic relationship is to witness critical democracy at work passionately fighting for the inclusion of parents in schools. It is in essence an honoring of the complete person first within self and secondly outside self, meshing the micro, meso, and macro lived parental worlds.

PARENTAL INVOLVEMENT AT THE HIGH SCHOOL LEVEL

In the twenty-first century starting with Goals 2000 and currently with the No Child Left Behind (NCLB) Act parents have been and continue to be encouraged to get more involved in various aspects of school life. In agreement with Concha Delgado-Gaitan, I also believe school success for many minority children is dependent on the ability of the schools to incorporate the parents and the culture of the home as an integral part of the school curriculum. Presently making a connection between the home and the school is not a usual occurrence and consequently not the norm for underserved parents. As indicated under the NCLB, opportunities are currently available for parents to exert a more visible and viable role in their children's school careers. Due to blatant discrepancies one might ask, is overall parental involvement actually happening? Unfortunately there is a dichotomy between what school legislature purports and what seemingly occurs in reference to parental involvement. In spite of the documented inviting atmosphere of academia toward parents there are still a percentage of parents who choose not to get involved with the school from the K–12 levels for numerous reasons and sadly, historically this lack of parental involvement has been more noticeable at the high school level. The fact that the problem usually heightens at the high school level only tends to exacerbate the need for immediate action. What better time but at the culmination of mandatory formalized schooling, would it be to assist, nurture, and support children if not when they are getting ready to embark into the “real world?”

Noting the culminating aspect of the high school years, I believe adults and/or educators should feel obligated to give high school students tools to help them survive in the real world? It is not only an obligation but also a necessity for society to equip children with what they need in order to be productive citizens. Some educators have accepted the tapering off of parental involvement at the high school level but now more than ever there is a need to unite as a TEAM for the students who have inadvertently been forgotten by the system. We are losing greater numbers of students, therefore, educators need to unite and assist in providing stability for a number of underserved students by helping to increase parental involvement at the high school level.

If a proportionate amount of school attention concerning high school parental involvement can be shifted or redirected from the lower grades to the higher grades and more priority can be placed on student well-being then the focus on the future of young people can be restored and forgotten students can be rediscovered. In the interest of fairness and democratic practice assisting parents to create partnerships with their children, teachers, administrators, and community members is an important and extraordinary combination of human forces, which ultimately enables schools to accomplish more expansive opportunities for underserved students. In this case parents are the missing key component that will enable students to regain perspective but they are not the only missing piece to the puzzle. Further exploration into the causes of reduced high school parental involvement for underserved students needs to be examined.

PARENTAL OBSTACLES

Parental involvement varies across grade levels usually ranging from a higher level in the lower grades to a lower level of involvement in the upper grades. Statistical information over the years documents that parents who fall into the category of “hard to reach” and/or “low profile,” in the school system are often from minority groups, such as black, immigrant, non-English speaking, and/or are from the lower socioeconomic strata. In addition the children of these parents are traditionally the underserved population of the school. Therefore, in an effort to understand the underserved parent position it is only fair to take into consideration multiple factors that might cause parental involvement to sink so low. There are personal factors that repeatedly arise that hinder these partnerships from occurring but problematically often at the crux of the problem is the system that continues to underserve the parents of these students and consequently allows them and their children to remain invisible in schools.

Often, parents of students labeled as underachieving and/or underserved feel unwelcome in schools. A variety of factors tend to lead to these feelings subsequently inhibiting parents, preventing them from advocating for their children, and successfully navigating the system to help empower them. Linguistics, economics, logistics, institutional racism, feelings of marginalization, and cultural factors, for example, are a few obstacles that offer a somewhat accurate yet narrow explanation for the lack of parental involvement. Past stigmas, which might be preventing parents from participation in school activities, can be relinquished with rigorous efforts initiated by teachers. Transformative changes can be incorporated in schools in an effort to thwart the unwelcome feelings that labeled parents experience or anticipate when faced with an invitation to participate in various school activities, but barriers inhibiting parental involvement must be addressed.

The information that follows was accessed on the Internet, in a literature review, which guided the development of the South Carolina Parent Survey. It provides information concerning the obstacles affecting parent involvement on three levels, practical, personal, and institutional. Practical, personal, and/or institutional barriers affect parental involvement and contribute to perpetuating low visibility. Underserved parents are faced with practical issues such as lack of time, lack of appropriate childcare, language-communication barriers, juggling of multiple work schedules, and diverse linguistic and cultural practices to name a few. They sometimes experience personal experiences such as reminders of their own past negative school experiences, reawakening of old fears and frustrations, lack of knowledge about how to become involved, and mistrust of the educational system. Institutional barriers also remain a problem for these parents. Many schools fail to examine current school practices that are not effectively promoting parental involvement, which is a number one deterrent for high school “hard to reach/low profile” parents. I would argue that institutional barriers are “hot spots” for educators. These “hot spots” create spaces in school communities that are charged with untapped negative as well as positive energies. I believe educators can tap into the positive energies of “hard to reach/low profile” parents and help to dispel some of the long-standing barriers that have been promoted in the past by developing a counselor’s role with parents. In essence, educators in an academic arena have the power to institute transformative change by rectifying the negative results of limited or absent parental involvement. In order to develop TEAM, an understanding of parent background information, with all the obstacles that prevent or limit participation, is needed.

The aforementioned parent obstacles provide the impetus for the interconnected and supportive structure of TEAM. A study of the unique obstacles that confront the parents of specific districts can provide the information needed to bring people together. TEAM opens possibilities needed for parent/school connections. Each TEAM is comprised of at least one parent/guardian, one

teacher, one student, and a community member. In essence each student TEAM member is given a personal team to advocate for her and assist her in navigating the system. Students are the most important members of TEAM because they represent the future of our country. Two of the most important goals of the team are one that all students and parents involved eventually learn to navigate the system and two that both students and parents learn to advocate for themselves. Navigating the system and knowing how to self-advocate are basic survival tools which more often than not are missing from the toolkits of the underserved children and parents.

In light of the present day reality of disenfranchised parents and forgotten children, teacher's roles have expanded to that of parent counselor. This role entails building a connection with the "hard to reach/low profile" parents and creating a supportive and nurturing place for them to be seen and heard in the school community. As I discovered it can happen simply by human agency. Teachers can have a strategic impact on building the bridge between home, school, and community. TEAM is an example of an alternative approach for partnering with parents.

SHIFT FOR THE RETURN OF PARENTAL INVOLVEMENT

A reanalysis and reconstruction of the norm must take place in order to discover the remaining missing pieces needed to create a support system for parents that will ultimately benefit underachieving and underserved students. School communities must be able to admit and see that something is amiss if a percentage of the parent population continues to be invisible. Contradictions abound in education. Teaching involves both intended and unintended lessons, and often the unintended lesson, that parental involvement of the "other" is not welcomed, is the message that is sent by the schools. I argue that the resounding message echoing forth through the walls of academia is that parents who are not involved and subsequently whose voices are not heard are people who are not embraced by the school community. Living in a society that professes democratic beliefs and practices should be an adequate reason to become proactive about this issue. It is morally wrong and undemocratic to allow such an obvious human disconnect to occur when a shift in thinking and the launching of a action plan can make an immediate and significant difference in the level of involvement of high school parents traditionally known as "hard to reach/low profile" parents. A successful shift can make a difference in the lives of many parents and students and have a resounding impact on society. Parents and students can benefit through a renewed faith in the educational system that previously distance them, and then subsequently society can benefit from students emerging into the "real world" with a sense of purpose and direction. TEAM is an example of what a shift in thinking and a commitment to action can produce in answer to the dismal scenario of unwelcome parents and invisible students. Educators can make a difference in high schools with increased parent involvement.

Educators need to shift support for parental involvement at the high school level not only for the sake of the students but also for a productive future society as well. How is it possible to forget underachieving students, become oblivious to their needs, and closed off to all possible means of correcting the situation? Two contrasting ways to address this pressing situation is first: (1) to remain oblivious to the needs of students and ignore the obvious positive contribution that parental involvement can afford to students and schools and (2) to tackle this issue by moving forward with the vision of a critical educator. I decided to move forward with a critical vision and start TEAM, a support group, in an effort to partner with parents for the benefit of the students as well as the society. TEAM stands for Teacher Efforts—Advocating/Motivating. TEAM is a teacher-initiated support group formed for the purpose of giving support to students and parents while advocating on their behalves and motivating them to master navigation of the intricacies and subtleties of the system. The end goal is for the parents as well as the students to be able to have their voices heard and recognized and to encourage self-advocacy for both.

TEAM OVERVIEW

Parent involvement can be referred to in several different terms such as home-school relationships, family-school involvement, home-school collaboration, and home-school partnerships, although these terms encompass a wide range they do not adequately define parent involvement in TEAM. Parent involvement in TEAM has broader implications and relies on graduated life-learning experiences for all members. The broader underlying factor or basis of the group rests in the ability to act individually in some instances and then collectively in others depending on the circumstances in order to accomplish diverse tasks ranging from simple to complex. The individual and collective aspects of TEAM highlight the dual efforts needed to build the connection between the school and the team members. The worth and power of individual and collective endeavors become an opening for personal growth, thus releasing parents and students from invisibility and equally as significant creating space for the exchange of new discourses.

TEAM initially is energized by the individual and collective efforts of teachers nurturing and supporting parents and students and quickly picks up this positive momentum as TEAM membership increases. The goal is for the initial energy of teachers to become infectious and spread to all TEAM members. Consequently, each TEAM member helps to enact difference or change through dedication and participation thereby causing a snowball effect within the communication system of the school arena. The contagious energy level ultimately results in collective and magnified differences in the world and these differences can be instrumental in education if manifested as renewed, revitalized, and/or newly discovered discourses of teacher/parent/student voices. In order to accomplish this endeavor, TEAM focuses on eight essential posits:

- Helping students and parents to navigate the educational system.
- Helping “hard to reach/low profile” parents and students recognize and express their voices.
- Exposing students to options for life after high school.
- Modeling “how to” advocate for self.
- Providing motivating experiences for students and parents to pursue school involvement on multiple levels.
- Encouraging community assistance and participation.
- Enhancing academic achievement.
- Developing leadership skills of students and parents.

Helping students and parents navigate the educational system is essential because this introduces them to power structures and the means to acquire power. TEAM organizes workshops based on parent requests and teacher suggestions. It informs parents how to interact with guidance counselors, teachers, administrators, and other dominant parent groups within the school, while simultaneously advocating for their children. In addition to workshops and informal meetings TEAM teachers volunteer to accompany parents, if necessary, to conferences with school personnel. Parents are aware that they always have the option of requesting teacher assistance in school matters. This type of “in person” hands on parent assistance is necessary at times and involves going the extra mile or going beyond a job description in order to achieve increased parent involvement at the high school level.

Navigating the system requires learning how to schedule courses, interpret report card grades, and knowing what to do when students are not performing well. Navigating the system can be a TEAM meeting topic where guidance counselors can engage with parents in intimate roundtable discussions or in panel format and share pertinent information with parents. Power is key!

The information below is a sample parent information sheet entitled *Navigating the System* that can be revised to suit the needs of any school.

Navigating the System

START UP CHECK SHEET

1. Check the total amount of course credits your child is registered for each year.
2. Check the transcript or report card at the end of the year. Do the credits earned match?
3. Check report cards every cycle.
4. Check report cards for grades of D and F. TEAM Alert!
5. Check for possible tutoring services for student. TEAM can help!
6. Check the mail for warning notices. If parents receive a warning notice schedule a conference.
7. Check the school calendar for parent conferences and Back to School Night (attend).
8. Schedule your own teacher conferences (in person or by phone) to
 - monitor your child's academic progress and/or to,
 - check for unusual lateness or unexcused absences.

Note: request your child's presence at the meetings when appropriate.

9. Schedule a meeting with your child's guidance counselor
 - Know the name and number of your child's guidance counselor.
 - Request the attendance of all teachers.
 - Request summer school information.
 - Request information for summer enrichment programs.
 - Request a four-year layout plan for getting into college, if college is a future consideration.
10. Request your child's transcript at the end of each year. Review the transcript!
 - Less than the required yearly credits accomplished—consult TEAM for guidance.
 - Grades D and F—consult TEAM for guidance.

Helping “hard to reach/low profile” parents and students recognize and express their voices is essential because parents and students need a space in which to be heard. It is imperative that they begin to express their needs and store up enough cumulative energy so that they may become visible and recognized as people who count. In this manner they will not have to assimilate but on the contrary they will create a new and unique place for themselves where the power wielders will take notice and finally they will have a vote that counts and a voice that matters and can be heard. Voice is key!

Exposing students to options for life after high school is essential because it creates the continuity and connectedness that should be associated with high school graduation. It provides avenues and possibilities for continued learning and encourages students to think in that direction. Building connections and modeling the importance of life long learning is one of the strengths of TEAM. Lifelong learning is key!

Modeling “how to” advocate for self is essential because students learn to analyze what they need, speak up for what they want, and then secure what they need all in an effort to establish themselves as productive individuals in the world. Self-advocacy in TEAM requires students to empower reluctant parents or guardians to attend meetings on their behalf and if for some reason parents or guardians cannot attend students are encouraged to go beyond the roadblocks and seek family support from relatives or adult friends approved by the family. As a last resort if these measures are not successful TEAM teachers or community members will support and represent students at a meeting but family representation is the goal. Self-advocacy is key!

Providing motivating experiences for students and parents to pursue school involvement on multiple levels is essential because continuous visibility and physical presence in strategic locations of both parents and students within school walls creates an infectious positive shift in thinking for the dominant members of the school community and thus for the power wielders of education. Involvement is key!

Encouraging community assistance and participation is essential because that level of involvement goes beyond school walls and helps to establish valuable connections for parents and students. For example, if a percentage of the parent population's primary language is not English, they might need legal, medical, and/or translator assistance in order to navigate the system. This is a situation TEAM can address by scheduling meetings with legal and medical representatives and securing the services of appropriate interpreters for the various languages spoken at these meetings. In this case foreign-born parents can be instrumental by creating a multilingual newsletter to assure that parents remain informed on a timely basis about all school events. Community resources are key!

Enhancing academic achievement is essential because through information gathering and sharing students begin to understand the worth of education and how successfully pooling individual and collective efforts can be effective in achieving higher goals. When students attain this enlightened level of academic awareness it is assumed at that point they have developed an understanding that power can be used as a tool to abandon and circumvent all negative labels associated with them thus increasing and opening the likelihood of present and future personal success. Education is key!

Developing the leadership skills of students and parents is essential because it often requires specific "take charge" skills in order to self-advocate and navigate successfully through the system. One goal of TEAM is to have traditionally "hard to reach/low profile" parents expand their school participation to include attendance at parent meetings that involve the larger school parent population and eventually develop enough confidence to assume leadership roles in these arenas. It can be projected that the benefits of these actions will trickle down to the students and spill over into the school community. Leadership is key!

The highlighted eight essential posits of TEAM mentioned above emphasize key underlying components of the group. Its message refutes Piagetian assimilation, whereby deeply embedded parental marginalized perspectives as well as beliefs in the marginalization of specific groups by educators is adhered to. In TEAM we break away from fixed notions about underserved parents and rethink and reconceptualize the framework constituted for these parents. The preconceived notion that nonparticipating parents categorized as "hard to reach/low profile" parents conveniently fit into existing categories which happen to be negative is not acceptable any more. This perspective must be uprooted, extricated, and reconstructed in order to move forward with a new agenda. TEAM is an example of the new agenda because it embraces an alternative mindset one which involves stepping out of the box and moving away from assimilation to accommodation perspectives. In this manner educational psychology expands boundaries from a micro focus to include a meso and macro understanding of underserved high school parents, with all the complexities, in relation to the issue of school involvement.

The focus of the essential posits recognize the changes in cognition needed to honor the new realities of parents and in conjunction it also acknowledges the innovative categories needed to accommodate that information. The educational institution, in an effort to change parent/school relationships, must reevaluate the situation and reconstruct what currently exists. The new realization, which necessitates new dimensions for educational psychology, should include the realities of the twenty-first century, which harbors over stimulation of the senses, high-tech equipment, and prevalent links to hyper-reality. In light of these distractions whether they are deemed positive or negative, it is suggested that educators remember to consider the lived world experiences of

parents when reconstructing new partnerships with them. It is inconceivable that schools can continue to think that parents will assimilate to the traditional parental positions constructed which created opposing realities, one of acceptance in print and in contrast one of rejection in practice. There are many dichotomous relationships within the “hard to reach/low profile” parent’s web of reality between the parents and the school that continue to manifest.

The dichotomy between the seemingly under-participating parent and the minimally supportive school system with TEAM assistance can lead to a dialectical interaction between the parents and school representatives. The challenge is to maintain the vision and passion of postformalist thinking while attempting to unravel past discrepancies. The problem with the lack of high school parental involvement is not one-dimensional it expands into a complexity of experiences ultimately surfacing through the lived world of each parent. Information obtained about parents changes according to culture, economics, race, gender of the dominant parent and various other factors. In order to process this information it is necessary to think on many levels and to be committed to see the bigger picture and the multilogicality of the context. Joe Kincheloe proposes that with multilogicality every description of the world is an interpretation and there are always new interpretations to encounter. Educators need to be very careful when they hastily interpret the actions of “hard to reach/low profile” parents. Observations have to be made and on one hand we must enter into a multifaceted world similar to the multidimensions of all people and on the other hand acknowledge dissimilar and similar aspects within its unique intricacies. Adhering to Kincheloe’s belief that postformalism assumes reciprocity and holism, TEAM makes strides to demonstrate that postformalist viewpoint. In this sense when parents are involved in TEAM they are empowered by position and action. Their contributions to the TEAM help to complete the purpose of the TEAM and the reciprocity or the mutual exchange of ideas among TEAM members reestablishes the importance of the parent as a group member making the idea of TEAM a complete experience.

Joe Kincheloe’s postformalism rethinks intelligences, embracing four concepts relevant to TEAM: etymology, pattern, processes, and contextualization. The etymology or personal history of parent TEAM members originates from a common nuclear space. A historical trek back in time exploring the negative and positive aspects of childhood school experiences uncovers the origins of current dispositions. Shrouded in a cloak of misconceptions often parents begin to form life patterns and subsequently transmit these patterns to their children. It is possible that the historical dynamics constructed also helped to create the present situation made apparent by the uninvolved parent or by the compliant educator accepting existing conditions. It eventually becomes necessary, after careful scrutiny, for the interconnecting relationships that shape the similar parent scenarios to be seen in a broader more inclusive and questioning light. Ultimately, the personal histories of parents lead to deep patterns, unique life structures, and in addition expose subjugated knowledges and perspectives typically not found in schools. Sometimes negative labels originate from these circumstances.

In the educational institution the labels of the students become the labels of the parents and vice versa. The ability for parents, students, and school personnel to connect and interact becomes strained under these recurring deficit patterns. TEAM deconstructs these deficit conditions and engages in a process that acknowledges the past and accommodates for new ways of doing and seeing things in the present. TEAM assists parents and students to escape past stigmas and move beyond the devastating and debilitating circumstances of exclusionary practices. The process of deconstruction redefines the information of the existing system and strives to address the needs of parents while recognizing their efforts to affect change in their children. If we dare to challenge the norm we just might be able to alter the negative context and recreate the experience under a new context. With this in mind, TEAM attempts to alter the distorted parent/student context to make it possible for parents of underachieving/underserved students to experience a different

reality within the school system. In an expanded context the previously uninvolved parent is no longer labeled or rejected but seen as an asset to the school community. In this context teachers can experience the parents as resources, helpers in exorcizing tacit student potentials, and members in a fluid-learning environment with all members interrelated and learning from each other. TEAM is one way critical educators can incorporate and cultivate postformal thinking in schools.

There are six primary areas that must be addressed in order for TEAM to be successful, which includes setup, pre-event, day of event, post-event, during the year, and projected activities. Highlights concerning the six areas are listed below and section that targets “Underserved Families” provides further information.

The Setup

The setup stage of TEAM requires conscientious planning with sensitivity to the needs, desires, and expectations of parents and students. A primary consideration is to provide varied accommodations for parents to make it possible for them to start to feel welcome in the school community.

TEAM Teacher Recruitment. It is important to enlist other teachers to join the support team. When teachers initiate additional support systems for parents and students and take an active role in their lives the result is increased parental involvement. In order to recruit the participation of other dedicated teachers,

- send flyers out requesting teachers who are interested in supporting parents;
- create a TEAM responsibility sheet that addresses the areas of expertise of all teacher members (see Figure 81.1)

TEAM Motivational Perks. Incentives or motivational perks are important and play a strategic role in the continuation of TEAM. Therefore they should be monitored and periodically reevaluated and updated to hold the interest of all TEAM members. For example,

- Parents—babysitting services provided, dinner served for the family, all family members are encouraged to come to the meetings (brothers, sisters, etc.).
- Teachers—professional development hours, free days, stipends, teacher suggestions.
- Students—extra credit for attending meeting with parent, credit for empowering a parent to attend a meeting, credit for completing all assignments connected to the meeting whether on or off site.

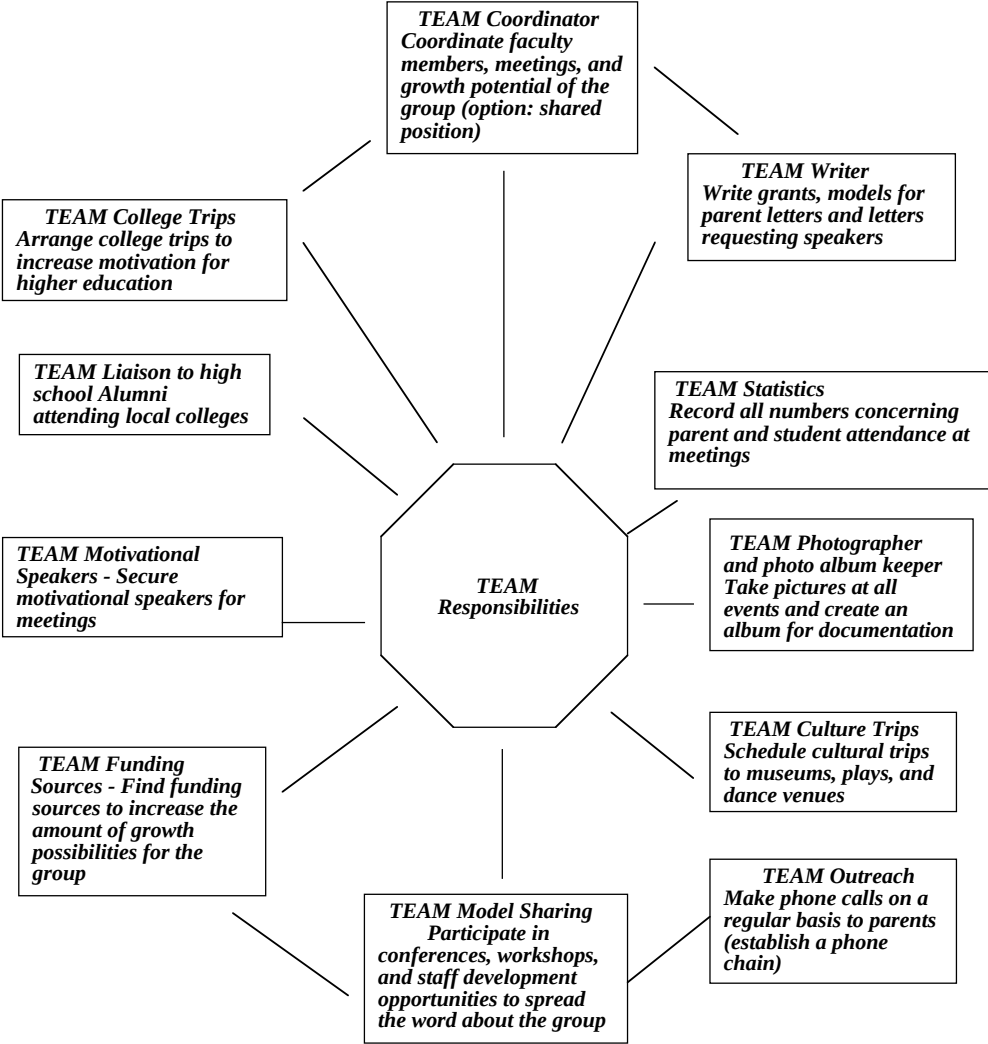
Community Involvement in TEAM. Can come from numerous places depending on what a particular community has to offer. TEAM members should periodically evaluate community assets and establish ways students can give back to the community.

Pre-event Preparation

There are multiple responsibilities before an event takes place and these responsibilities should be dispersed among the Team members.

- Multiple methods of communication should be used to promote the event.
- Introduce the academic aspect of TEAM.
- Choose the event and topics that attract interest—get feedback—have a workshop based on the suggestions
- Students and teachers develop event rules.

Figure 81.1
TEAM Responsibility Sheet



Day of event

On the day of the event responsibilities and trip rules should be dispersed. Transportation, chaperones, teacher/parent/student roles should be reviewed before the event. Sometimes community members accompany TEAM members as guardians to students who cannot find family members to attend meetings with them.

Post-event

Teachers, parents, students, and community members need to know their responsibilities for the event. These responsibilities will vary for each event.

Projected Activities

TEAM Club. Often underserved students do not join school clubs and this lack of involvement on a social level further alienates them from the mainstream student population. Giving TEAM students the opportunity to join a club where they will not feel intimidated and will be able to have fun and learn how they can give back to society is a nonthreatening way to enhance leadership skills.

Club Ideas:

- Student Newcomer Registry
 1. Photography—photo bulletin board of students
 2. TEAM students become escorts or partners to new students
 3. Write literature about TEAM
 4. Students create profile sheets about themselves
 5. Review new student course schedules
 6. TEAM Students organize community outings for new students
 7. Encourage new students to get involved in the community
- Voicing Room/Ideas
 1. Voicing room can be located in classroom
 2. “Voice Box” will be available for depositing the issues to be discussed
 3. Monthly meetings
 4. Bulletin board for TEAM student club
 5. Encourage TEAM students to Speak Out!
- Community Service Possibilities/Ideas
 1. Students create multicultural materials for TEAM (flyers, etc.)
 2. Students and parents can organize cultural events
 3. TEAM students can read to younger children in different settings/locations
- Election of officers—practice in leadership
- Club advisors—parents and teachers

Projected TEAM Ideas

- Establish a cohort of parents that will encourage consistent attendance and participation in the TEAM program (parent delegates for TEAM).
- Establish a cohort of students that will encourage consistent attendance and participation in the TEAM program (student delegates for TEAM).
- Increase parent and student involvement and ownership in TEAM.
- Disperse teacher responsibilities.
- Gradually increase parent involvement.
- Gradually increase student involvement.

VIP Parents.

- VIP parent letters/correspondence—choose ten to twenty families as the supporting cohort of TEAM (focus on and nurture that cohort)

A sample of a Teacher TEAM responsibility sheet is listed further according to individual areas of expertise.

TEAM Workshop Model. Building a Support TEAM—Staff Development Workshop—create a personalized TEAM model that will fit your school based on the essential posits. Then share the model with other schools at workshops and conferences.

Time Frame:

Target: underserved families

Objectives:

- To enhance the leadership skills of our parents and students.
- To enable the parents and the students to successfully navigate the system.
- To enhance academic achievement.
- To act as advocates for students and parents throughout the year.

Questions to think about:

- Why are a certain percentage of parents absent from school meetings?
- What can we do to rectify this problem?

TEAM startup worksheet:

1. Build a teacher team (find teachers that share the same students)

List Partner Possibilities _____

2. Identify student population

List methods of identification _____

3. Establish areas of focus to encourage parents to attend meetings

- Navigating the school system
- Parent/student academic empowerment

4. In class promotion (get students involved—talk about)

- Parent/guardian roles with students
- Personal ownership of future
- Student course credit for participation

5. Plot student geographic locations

- Index cards—students write address and location in the town.
- Students write their names on the town map indicating where they live.

6. List things that can be determined from the map activity

7. Class Discussion—get an idea of parent availability from students (weekends, evenings, specific days, etc.)

Meeting location ideas _____

1st consideration—location should be in close proximity to the majority of parent homes.

2nd consideration—if special meetings are further away, transportation should be provided.

List multiple steps for correspondence _____

8. Correspondence #1—send flyers home—give them out in class.

9. Correspondence #2—mail letters with RSVP—get a written response from parents—include self-addressed envelope.
10. Correspondence #3—in addition distribute parent letters to students in class.
11. Correspondence #4—send home student-written post-it notes to put on the refrigerator (reminder) include school telephone number to call.
12. Correspondence #5—make telephone calls—if someone is calling the parents for you make sure to provide a phone conversation script for that person—verbal response from parents

Write telephone script ideas—ask for TEAM volunteers to make calls

-
13. Meeting Accommodations—explore all possibilities
 - Food
 - Babysitting
 14. Meeting Agenda—program inclusions
 - Parents—ex-students Parents discuss issues and concerns and share expertise
 - Students—sharing information with parents
 - Teachers/administrators—facilitate / distribute materials/ share expertise
 - Panel discussions
 - Small group discussions—topics can originate from teachers, parents, or students
 - Community representative

Meeting Topics

- Immigration
- Health care
- Transcripts
- Guidance counselors as guest speakers
- Enhancing the reading experience
- After school support programs
- Extra curricular activities

Off-site Locations Possibilities

- Public Library meeting rooms
- Local colleges
- Ask parents where they would like the next meeting to be

Note:

- Involve parents and students in the planning of the next meeting
- Are home visits an option?
- What are some options for students without an advocate?

TEAM Trips—College Component. The goal of preparing students for life beyond high school is met when we have succeeded in teaching students and their parents how to pursue avenues of life-long learning. One way to achieve this is to assist in making the college environment

comfortable for both parents and students. TEAM arranges visits to a variety of colleges so that a broader view of the range of options that are available can be introduced to TEAM families.

- Students participate in classes with their parents,
- tour the dormitories on campus,
- eat lunch with a special delegation of college students,
- are included in the college classes that day,
- are expected to participate (professors send work for students prior to the class).

Note:

- Following the classes, the students and their parents meet with university administrators, professors, and college students to discuss EOF, the admissions process, financial aid, college life, and the experiences of the day.
- Seniors are allowed onsite college registration during the visit if the time frame is appropriate with the college admissions office (prearranged by TEAM teachers).

Team pre/during/post college trip activities:

All students develop career planning and workplace skills. At the same time, they use critical thinking, decision making, and problem solving skills. Before participating in a college visit, students are required to do “prework,” including self-exploration activities on future goals. They must develop a mock course schedule for college freshman year and support their course choices. Course selections are to be based on where they see themselves in the future and the career path they want to be on in the future. (See basic sample sheet below for during a college visit)

During a College Visit—students receive a worksheet when they arrive at the college with two items on it.

1. Write about something different you experienced in the college class.
2. What was the college lesson about?

TEAM year report

Early documentation is important and yearly reflections are needed in order to upgrade the effectiveness of the program.

Event date	Total student attendance by grade	Total parent attendance by grade	Meeting location	Theme/ agenda	Materials distributed	Colleges acceptances for seniors

Year End Awards Program. Congratulate and thank parents and students for their various aspect of participation in the program. Both parents and students receive awards. Students can present their parents with the awards as a gesture of thanks for their support.

Team Culture Trips. Students and parents participate in various cultural activities to enhance aesthetic awareness in dance, music, theater, and visual arts.

Reaching Out to “Underserved” Families TEAM Ideas

Setup/teachers	Setup/parents	Setup/students	Setup/community
– Recruit teachers – Build a teacher team – Determine shared “in common” students among TEAM teachers – Plot students residencies on a town map (assists with planning meeting locations) – Establish teacher/parent/student/ community participation incentives or motivations – Develop a student/parent master call list and info sheet – Design a brochure	– Develop a student/parent master call list	– <i>Help design a TEAM brochure (for credit)</i>	– <i>Teachers find out what community resources are available in the town.</i> – Students stick pins on a town map indicating locate strategic community sites
Pre-event/teachers	Pre-event/parents	Pre-event/students	Pre-event/community
– Discuss upcoming event in class with students – Receive letters and flyers in class – Make-up an agendas Secure a site – Write a letter to parents about the upcoming event – Each TEAM teacher call four or five parents – Remind students of all incentives connected to the event – Create a flyer about the event for students and parents – Include parent incentives for attending the event (ex. Have a raffle) on the flyer – Arrange for food, child care, and transportation at the event – Xerox information for distribution	– Receive letters and flyers – Parents call teachers about the event – Activate the phone chain the night before the event – Have a suggestion box at each event and ask for agenda ideas/meeting topics – Build in a feedback time at meetings for parents	– Help plan event – Help create flyers – Help package info for distribution – Address envelopes – Complete assignments connected to the event – Discuss upcoming event with students and review strategies on how to empower a parent/caregiver to attend the event – Build in a feedback time at meetings for students – Collect responses from parents and students	– Teachers check date, time, and room accommodations prior to meeting – Students research site event on the Internet

(continued)

Reaching Out to “Underserved” Families TEAM Ideas (*continued*)

Day of event/teachers	Day of event/parents	Day of event/students	Day of event/community
– Give students a written assignment either to complete on event site or off event site (see college example) – Take attendance – Travel with emergency phone list – Teachers must enforce the student dress code – Take pictures at the events (photographer) – Provide transportation	– Adult chaperones required – Parents request transportation in advance – Parents take the place of absent parents – Parent are asked to help enforce the dress code on trips and at events – Parents also should take pictures (photographer)	– Attendance encouraged – Students must empower an adult to attend the event with them (parent, a friend’s parent, a relative, or a TEAM teacher) – Students must adhere to a dress code – Students can take pictures (photographer) – Collect assignments	– Locate the key person at the site responsible for the event
Post-event/teachers	Post-event/parents	Post-event/students	Post-event/community
– Write personal thank you notes or call /e-mail parent & presenters thank you notes – Give feedback for TEAM documentation records – Record statistics (see TEAM yearly sheet) – File materials connected to the event	– Give feedback–written or verbal – If verbal record comments	– Write and email thank you notes	– Get feedback and if appropriate discuss dates for next event
During the year/teachers	During the year/parents	During the year/students	During the year/community
– Plan the yearly calendar – Delegate responsibilities (see chart) – Agree on event themes – Confirm event dates – Start a scholarship fund – Establish additional TEAM supports (guidance counselors, administrators, etc.) – Choose a team historian – a person to collect all the data and house it in one location	– Help design a brochure – Parents plan and organize an event – Parents start to attend parent meeting that include the mainstream population – Parents seek membership on school committees	– Students plan and organize an event	– Continue various forms of correspondence with community business owners
Projected activities/teacher	Projected activities/parent	Projected activities/student	Projected activities/community
– Explore funding opportunities – TEAM creates parent officers – Schedule trips out of town(ex. colleges, cultural)	– Parents volunteer for TEAM officer positions	– Students start a TEAM club	– Ask community parents to connect with TEAM parents

CHAPTER 82

Becoming Whole Again through Critical Thought: A Recipe

ROCHELLE BROCK

An often-asked question of teachers concerned with critical thinking is how to “do-it” in their class, in their curriculum, in their pedagogy. I so wish I could provide a fail-safe lesson plan to be used in any and every situation. But of course that’s impossible if we understand and except the changing nature and fluidity of critical thought. Instead, I offer an assignment I have given my students, which provides the space to question and reflect on a specific issue utilizing critical thought/critical cognition as the vehicle to understanding.

When working with my students on issues that are difficult to understand I ask them to write a dialogical play, complete with stage directions. The play is written in the questioning Socratic method and the characters (preferably only two) represent the confusion the student feels about the subject matter. Inform your students that the stage directions should convey in a literal and metaphorical visual both the mystification and enlightenment the characters (and by extension the student) experience. The process of conceptualizing and writing the play allows students to question themselves, constantly delving deeper into obscure meanings. As a conclusion for this exercise you can either have certain students perform their play for the entire class or depending on class size and time all the plays can be performed in a culminating event for the class. Sell tickets, invite the community, open the knowledge to others. After all is not that one of the goals of critical thought in education?

Ingredients to make a Black goddess of Critical Thinking:

- * spirit of ancestors
- * a healthy dose of angst
- * sense of humor
- * patience
- * theoretical understanding of all and everything
- * wholeness of being

Take your ingredients and stir while listening to your favorite jazz tune—preferably Cassandra Wilson. Allow the sounds of a Black woman to seep into your mixture. When everything is smooth

(the mixture, not the jazz) get out your old beater and slip a pumpin', bumpin' reggae CD in, turn it up as loud as you can and twirl and dance as you beat the shit out of your mixture—Remember, you are paying homage to those who came before so do it with the rhythm of your past adding your unique flavor to the batter—then beat . . . the faster the better.

And call her Oshun, the African goddess of voluptuous beauty, the goddess of love, the goddess of fertility, the female master of strategy. Oshun is the sweet and sour taste of life. Don't forget to add a little Yemaya for water purifies and is a giver of life . . . new life

A goddess was just what Rochelle needed. Not only a higher power but one from the historical memories of an African past. Created with music and brought to life with rhythm and soul, a goddess with the strength to move the paradigm beyond the margins. She holds a golden chain in her hands, a chain to tie all of her people together.

Together Oshun and Rochelle will write and speak their truth. Oshun brings voice to the silence surrounding Rochelle. Rochelle brings life to the historical memory of Oshun. As one they tell you A Black woman's story . . .

Stage Directions: *Rochelle is sitting at the kitchen table in her apartment, an ashtray, an old battered typewriter and a stack of blank typing paper is on the table in front of her. A lone light hangs over the table forcing the kitchen to be seen only in shadows. There are several candles on the table in varying heights. A bowl of grapes sits in the middle of the table with a coffee pot on one side. One large purple coffee mug is placed in front of Rochelle. Surrounding the table in a semi-circle are four 6-foot bookshelves. Scattered on the floor are books stacked haphazardly and in varying heights. The books represent the knowledge of the leaders in the field of Critical Thinking, Radical Education, and Black Woman's History. Note: The audience should get the feeling of "intellectual chaos" from the books.*

The Players:

Oshun the African Goddess of Critical Thinking

Rochelle the teacher of all students

Rochelle: *(Looking out into the audience.)* Where can I find the power to understand the feelings I have? Who will hold me; help me traverse this hostile world I find myself in? I sit here confused, stuck, barren. *(Extending hands toward the typewriter and then pulling them back, roughly)* I cannot even write a facile sentence in a language not meant for me. It's as if I'm fighting an abstract, stubbornly refusing to engage in these words and thoughts that feel alien. Why?

(Standing and moving to the front of the table Rochelle begins to pace.) My head hurts, I cannot fill my lungs with enough air to speak a thought, even one that is silent. I need to turn away, take a mind-rest, at least for a moment, from this malaise. But I can't. It is too important to work my way through, process my alienation from abstract thought, explain and articulate so all can understand. I must write and complete this article on critical thinking as a means to help Black women understand and fight their status in a racist sexist society. But the pieces will not come together in any type of cohesive whole. Instead, I sit, staring at an empty piece of paper, drinking coffee, killing myself with cigarettes, questioning my intelligence, my critical thinking skills. Why? Pufffffff.

Oshun: *(As soon as Rochelle utters "Why" Oshun walks out of the shadows onto the stage. Soft jazz and sounds of the ocean can be heard in the background, which should remain for the entire play. Walking to the kitchen table, she reaches one hand out toward Rochelle.)* I hear and feel your pain and I have come to help you process that pain. Go inside of yourself, reach deep, and find the strength to look and think critically about your life. Change your way of

thinking of seeing the world. Use those analytical skills of transgressive critical thought to help and guide you. Remember that you are a conscious being and therefore possess the cognitive skills to consciously control the trajectory of your world. Never forget that racism and all its manifestations produce a mind—funk that distorts thought and action. What has enveloped your soul is internalized racism; it's taken away your wholeness. You are defining yourself through it, accepting that because you are Black and a woman your options; your worth is limited. You are forgetting your own power of thought and mind.

Rochelle: (*Still pacing and walking aimlessly while at times talking to the audience and other times talking to self.*) I once read about this thing called mindfunk. Caused by internalized racism, it has encapsulated my thoughts, my entire sense of being until I cannot find the words to articulate the things I know. I have become theoretically challenged, not by outside forces but from the inside. I have allowed the words of others to enter my Being, forgotten that their thoughts do nothing but pull me down. I have been violated. But I must find a way to climb out of and far from this mindfunk. Damn, where is my shelter against the pain? My confusion, anger, and isolation increase as I realize that my critical insight into the constructions of Black womanhood does not insulate me from the daily pain of my otherness. (*Laughing*) But then perhaps if I did not possess a critical understanding, I would be crazy rather than terminally depressed. I don't know.

Oshun: (*slowly and gracefully sits in the chair opposite of Rochelle*) Ahhh yes, you are experiencing racism at its finest my Original World daughter.

Rochelle: (*repeating*) I would be crazy rather than terminally depressed.

Oshun: (*Speaking directly to Rochelle*) You are crying, I am happy. For I want you to never lose your passion. Do not become the rational thinker attempting to scientifically analyze your feelings of incompleteness. Instead, feel deeply and allow those feelings to move you to passionately question your world. Racism works at the decomposition of the cultural integrity of Blackness. Close your eyes, walk with me, and visualize. Decomposition, the breaking into parts, affords a visual, emotive sensation to describe the realities of racism. In order to remain whole, you must keep a constant vigil against internalizing racism. Anything short allows the space to exist where mindfunk can thrive. You must understand that mindfunk is more than a catchy phrase; it is a consuming way of reading the world and reading the self. It fosters the doubt, which stops a person from moving beyond their prescribed boundaries, to break out of Western psychological assessments of who we are as black women. You were not careful enough, not cognizant enough. You let your armor rest a minute too long.

Rochelle: (*Walking over to the bookcase Rochelle speaks while looking at the books. Her back is to the audience.*) Could it be that my soul has been raped? Could it be that my armor has been stolen? Or could it be that I'm tired as hell of constantly having to carry that armor! Whatever the reason it's missing and I have no idea how or where to find it. My position as Black and female hinders the ability I need to think my way out of this oppressive frame of mind I find myself in. I let things inside that I should not have. Western positivistic evaluations of my abilities have found their way into my selfhood. What makes it so difficult is this inner turmoil that is blanketing me is caused by something outside of me. (*Turning toward the audience, but speaking to no one in particular*) I am alienated not only from society but also from myself. And even though I strive for knowledge of my otherness; despite my understanding of subjugated knowledge and objectification; regardless of my awareness and acceptance of critical thinking's transgressive cognition, I still allow myself to be silenced. Does it really matter if that silence is internal or external? I still become too tired to make my voice and thoughts heard. Such an insipid thing, racism can seep into every pore until it feels you with hate, bitterness, and confusion.

Someone please tell me how racism accomplishes the decomposition of the cultural integrity of Blackness? Why am I allowing myself to be silenced and not using the critical thinking skills I have worked so hard to get? How do I find the strength to develop and become a critical agent of change and transformation for all those Black women I come into contact with daily and for myself? How do I re-remember the spiritual strength that aided my ancestors during the years of capture, enslavement, colonization, and exploitation? How do I retrieve my wholeness?

Oshun: (*As angry and confused as Rochelle's words are spoken Oshun speaks in a calming, reflective voice.*) Wholeness is delivered when your spirit is strong. Yes. Re-remembering and reconnecting with that which aided our ancestors is extremely important to your survival and the strength you need. But you ask how do you survive and I answer that you must open your eyes and your heart to all that surrounds you. You must become conscious of the powerful influences, which seek to destroy your understanding of self. You must learn to not only use critical thinking to analyze what is outside of you but more importantly what is inside. (*Reaching for the grapes.*) Dig deep and discover that which gets in your way, hinders you as a Black Woman. (*Rises from her seat and moves to the front of the stage, parallel to Rochelle.*)

Rochelle: (*Moves from the bookcase to center stage and begins to slowly, rhythmically sway. Oshun standing far left moves in unison.*) What is it that keeps getting in my way? Concepts of me as the other. A nonentity. Different, unheard, unwanted, unrespected, unloved, the only, removed, outside of society. My position as a Black woman in America is as *the other*, which is such a strange term to describe a person. What does being the *other* have to do with how I feel about myself? People explain me, they study me, they write about me and if I am not careful I occasionally allow their definitions to seep into my thoughts. Everywhere I look they try to take me out of myself. (*Movement stops.*) There are powerful forces that attempt to construct my identity; place me within an oppressive cage; force me to become the spectacle in their obsession.

Oshun: (*Oshun continues swaying dance.*) The decomposition of the cultural integrity of Blackness is cultivated, in part, through an ideology of the *other*. You are greater than the sum total of your parts. Perhaps it is this knowledge that will allow you to dismiss the attempts at decomposition.

Rochelle: (*Still center stage, perfectly still*) When I disrobe, lay down my shield, rest, I am left with no choice but to use my *otherness* to define the boundaries of my existence. As the *other* I am removed, standing at the perimeters of normalcy helping to clarify a criterion I can never meet. Those who stand at the perimeters of normalcy are constantly demeaned by mainstream education and psychology's regime of truth.

Oshun: (*Walks to center stage several feet from Rochelle, looks at and speaks directly to Rochelle. Rochelle continues looking out into the audience, oblivious of Oshun.*) My child you always have a choice. Yes, you are the other but the other must never define you—resist that regime of truth. A liberated mind is the manifestation of critical thought. Deconstruct the significance of the *other*. The paradox of your life is that as the *other* you are both despised and yet needed. Although your status threatens the moral and social order of society you are also essential to its survival—your position at the margins of society help to clarify those very margins. Black women empower the privileged in dominant culture's norm referenced tests. Without us at the bottom they can't be the superior ones. Know that African American women, by not belonging, emphasize the significance of belonging.

Look for your shield in the knowledge that you are not what they say. Those writings by other people that you speak of do not or should not necessarily mean control. You are giving those who harm you the power to define. Stop! Make clear to yourself the ways in which ideology work.

Rochelle: (*Should be read stilted as if reading from a book in the beginning. As Rochelle reads the words should become more natural, like she is internalizing the knowledge of the many attempts to define and dominate Black women*) I am a political being. My life is politically inscribed. I must make clear to myself the ways in which ideology works. Ideology, socializes us to believe that the taken for granted assumptions are a natural, inevitable function of life. It calls us into being, but a being that is falsely constructed. Historically, Black women have been controlled with an ideology of domination, through legitimization, categorization, reification, mystification, and acquiescence, that ideology has used to subjugate, objectify, and dominate Black women in America since enslavement. Remember that ideology functions in such devious ways. It becomes legitimate when systems of domination are represented as being worthy of support. Likewise, systems of domination are denied or obscured and unequal social relations are hidden—"there's

no oppression in psychology's testing industry." In other words, ideological forces ensure that oppressed people are either not aware of their own oppression, or aware but can not necessarily articulate how it operates. Yes, it is becoming clear. Ideology works vis-à-vis fragmentation, which occurs when meaning is fragmented and groups and individuals are placed in opposition to each other and to self. Decomposition. Through reification a transitory state is represented as if it were permanent, natural, or transhistorical. I was becoming that which society said I was. Ideology allows society to believe that the constructed images are valid. And more importantly, it allows the individual/the group to believe that the constructed images are valid. In this ideological configuration IQs are real. I really don't have the ability to make it in the worlds of commerce, academia, knowledge work, technology, helping professions—the hell I don't. (*Read with the pain and joy of giving birth to a new thought*) These forms of ideology are interwoven and occur simultaneously and ultimately work to interfere with my wholeness of being. I can become an intellectually free person.

Oshun: (*Moving closer to where Rochelle stands.*) Once you truly understand and internalize the definitions of ideology you begin to develop the strength and knowledge to fight. Can you now begin to see our recipe for wholeness—connectedness to our ancestors, spiritual strength, power through self-definition, and deconstruction of ideology—that come together when we use critical thinking as a methodology? These are your ingredients but you must still add others, depending on the spiciness you need. Remember the fluidity of critical thought. Move with it. Allow it to take it you where it must. There are times when the moon is right and the ingredients for wholeness are few but at other times the weight of racism will threaten to pull you asunder and you must add the spices of your past. Although difficult to find they will bring about a taste favored by the goddesses.

Rochelle: (*Moving away from center stage and from Oshun, Rochelle resumes her seat in front of the typewriter.*) I will write and think myself away from this. I will prove to me that despite the changing faces of racism spiritual strength and connectedness with the ancestors will and can guide me to wholeness. I will combine all that I know and feel and bring forth my greater truth. I will do it all with the passion that is central to my being. Yes, that is what I will do.

Oshun: (*For the first time Oshun speaks directly to the audience*) The mind-funk, the depression, and confusion which had been smothering Rochelle for weeks began to open, not completely, just enough so that she could see and breath her way into thought.

Rochelle: (*Speaking as she puts a fresh piece of paper into the typewriter. Should be spoken while simultaneously typing*) I can craft words to define thoughts to tell a story that is both personal and political. I can do it all while remaining true to my voice. When I stop and breathe and reflect on my life I know the only way to survive is to give birth to my wholeness. I must recreate and redefine me. (*As these final words are spoken Oshun walks to where Rochelle sits, Rochelle rises when Oshun reaches her and for the first time they look directly at each other and become one*) I weave a tapestry for the future with threads of hope and humanity.

FURTHER READINGS

- King, J. E. (1994). Being the Soul-Freeing Substance: A Legacy of Hope and Humanity. In M. J. Shujaa (Ed.), *Too Much Schooling Too Little Education: A Paradox of Black Life in White Societies*, pp. 269–294. New Jersey: Africa Free World Press.
- Murrell, P. C. (1997). Digging Again the Family Wells: A Freiran Literacy Framework as Emancipatory Pedagogy for African-American Children. In P. Freire, J. W. Fraser, D. Macedo, T. Mckinnon, and

- W. T. Stokes (Eds.), *Mentoring the Mentor: A Critical Dialogue with Paulo Freire*, pp. 19–55. New York: Peter Lang.
- Yamato, G. (1995). Something About the Subject Makes it Hard to Name. In M. Anderson and P. Hill-Collins (Eds.), *Race, Class, and Gender: An Anthology*, pp. 71–75. New York: Wadsworth Publishing.

Situated Cognition

CHAPTER 83

Situated Cognition and Beyond: Martin Heidegger on Transformations in Being and Identity

DAVID HUNG, JEANETTE BOPRY, CHEE-KIT LOOI,
AND THIAM SENG KOH

With growing attention being paid to situated cognition—where context and cognition are deemed inseparable and interwoven—there has also been increased interest in Martin Heidegger’s work, even if only on a small scale. It is the intent of this manuscript to reconsider Heidegger’s *Being and Time*, in particular the concepts of *Dasein*, *worldhood*, and *understanding* in relationship to situated views on learning, cognition, and identity. Recent works in situated cognition point toward learning as an appropriation of “ways of seeing meaning”—related to identity formation of the individual within a social community. In terms of learning, researchers are now distinguishing between learning *about* and learning *to be*. Learning *to be* (or just being) forms the essence of identity formation. Whereas most learning in schools relates to learning *about* subject-knowledge domains such as Mathematics, Science, Literature, and other disciplines, in learning *to be*—such as in becoming a member of a community of practice—an individual develops a social identity. The identity under development shapes what that person comes to know. Fundamentally, educational psychology is understood as an account of change in learning and behavior, and our aim in this chapter is to bring consistency of such a change in relation to situated cognition.

Identity creation is a transformation process, a metamorphosis. Identities are shaped through local interactions in which individuals confirm or disconfirm each others’ state of identity. In this sense, identity is always mutually constitutive, and reconstituted through local interactions within the community. Knowledge cannot be detached from the knower, it has no independent existence; it is part and parcel of the identity of the individual.

SITUATED COGNITION

Martin Heidegger’s work provides a theoretical foundation for recent formulations in situated cognition. According to William Clancey, there are three aspects of situatedness: social function which regulates behavior (meaning of action), the structural mechanism which is concerned with the physical coordination of perception, conception and action (the internal mechanism), and the behavioral content which relates cognition to spatial-temporal settings (local feedback and time-sensitive nature of action in place). These aspects of situated cognition emphasize the contextual dimensions of knowing where meanings are inseparable from relations among situations and

actions. In other words, meanings are perceived as inseparable from interpretation, and knowledge is linked to the relations of which it is a product. Knowledge is fundamentally co-specified by the mind and world which, like a woof and warp, need each other to complete an otherwise incoherent pattern. It is impossible to capture the densely interwoven nature of conceptual knowledge completely in explicit, abstract accounts, which Clancey calls descriptions. The situated cognition perspective as advocated does not deal primarily with the relationship between entities as distinct and separate, instead, it considers the system—context, persons, culture, language, intersubjectivity—as a whole coexisting and jointly defining the construction of meanings. The whole is not composed as separate entities but is a confluence of inseparable factors that depend on one another for their very definition and meaning. John Dewey expressed the view that knowledge is not just a mental state; rather, it is an experienced relation of things where no meaning exist outside of such relations. According to such a perspective, the mind incorporates person-environment interaction, where activity involves a transaction between person and environment that changes both. In this sense, learning means being woven into the perceived fabric of life as authentic activity. For Martin Heidegger (elaborated in the next section), existence and interpretation are the same thing, thus making interpretation key to all three aspects of situatedness. Existence and interpretation are essentially the same thing because human-kind cannot be divorced from interpretation. From a post-modern perspective, all “realities” are interpretations.

Situated cognition research signals a shift from the study of how we process representations to how representations are created and given meaning. An essential idea is that this process is perceptual and inherently dialectic. As representations emerge from the interaction of mental processes with the environment, they are not the stuff of mental processing. Each time we create these representations, we are engaged in an act of perceiving and reconstructing; we are interpreting. Categorizations of things in the world are not retrieved descriptions, but created anew each time. Mental organizations do not merely create activity like stored programs (as in AI research), but are created in the course of the activity, always as new, living structures. In other words, situated cognition researchers hypothesize that we do not have an internal memory of representations, but a process memory, that is, a memory for reconstructing events and words. As a product of interaction with the environment (sensory, gestural, and interpersonal) and not a fixed substrate from which behavior is generated, representations cannot correspond to an external, objective reality. In addition, representations may themselves be interpreted interactively, in successive cycles of perceiving and acting. Instead of an objectivist worldview where the aim is to arrive at the one singular “truth,” the situated view is a relational perspective where knowing is a social process of continually seeking for explanations of holistic phenomena and yet preserving an awareness of the inadequacy of any unified conclusion.

Theoretical foundations for situated cognition can be provided by the writings of Martin Heidegger, in particular, his emphasis on the nondualistic nature of mind and body, or the unity of mind and external reality. Situated cognition emphasizes the relativist in situ emergence of meanings arising from persons-and-context as a unity rather than as a duality—person and context. In the sections below, we discuss the writings of Martin Heidegger with emphasis on his masterwork, *Being and Time* and how his views ground a relativist stance by focusing on the transformations in individual identity or Being as a basis for educational psychology.

DASEIN, WORLDHOOD, AND UNDERSTANDING

A great deal of dispute has focused on the person and thought of the philosophy of Martin Heidegger. There is considerable debate about the extent of difference between the thought of the early and the late Heidegger. We do know that Heidegger’s major work, *Being and Time*, was dedicated to Husserl who is associated with phenomenology. Heidegger’s thought is complex,

and any attempt to convey it in brief fashion must necessarily produce distortion. In this paper, we confine our discussion to the notion of *Dasein* and the more general concept of *Being*.

Heidegger begins *Being and Time* with the question of Being, or of what it is to Be (*Sein*). “To Be” here is similar to the notion of learning *to be*. More specifically, it is an inquiry into the meaning of Being (*Sinn von Sein*). From Heidegger’s perspective, Being cannot be defined because Being is not an *entity*. Various translators and commentators have translated this term *Being* as “being-there” (the literal meaning), “being-here,” or some variation thereof. In one sense, we could almost render *Dasein* as “human being,” since it is a way of understanding our human existence, and thus derivatively, of understanding being in general. Here Heidegger reverses the common tendency to understand Being, or even the being of humans, from an understanding of the being of specific objects. In fact, *Dasein* rejects the distinction of object and subject, even in the Kierkegaardian form that stresses subjectivity. Heidegger says, *Dasein* is not only close to us, we are it, each of us, we ourselves.

Dasein and Worldhood

Dasein is important because it is through it that we know the world. As our knowing of the world is mediated by it, its presence must be acknowledged. *Dasein* must be understood in light of Heidegger’s conception of the world, for it is very wrapped up with the human relationship to the world. We cannot conceive of *Dasein* apart from the world. He says that modes of *Dasein* or Being “must be seen and understood *a priori* as grounded upon that state of *Being* which we have called ‘*Being-in-the-world*’.” By being in the world, however, Heidegger does not mean *in* as a spatial location, the way knowledge is in the mind (as a container) or water is in a cup. Rather, it means something like “being associated with” or “being familiar with.” *Dasein* and the world are not two entities that could be conceived of as existing side by side: “Being-in is not a “property” which *Dasein* sometimes has and sometimes does not have. The relationship toward the world is possible only because *Dasein*, as Being-in-the-world, is as it is.” *Being* can only be understood in context and in relation with the world. This relationship between *Being* and *World* is intertwined, and although Being can be phenomenologically perceived separately from World, being exists or takes meaning only in relation to the world. Although Being is here interposed with context-world, Being is recognized as an individual distinctive identity as transformed in the process of Being-in-the-world. Being can also be understood in the context of educational psychology as the individual learning-in-the-world.

In other words, *Dasein* is a relationship, a quality of the way we are related to the world. The world here is being understood as our environment, that in which we are found. The German *Umwelt* (world) carries the idea of the “the world around.” [Umwelt is more like a species-specific niche] *Dasein* then is a way of being so related to the world that its contents are not merely objects, separate from us with their own independent identities, but objects only in relation to us. Objects may be regarded either as *vorhanden* or as *zuhanden*, perhaps best rendered as “present at hand” and “ready to hand.” In seeing objects as present at hand, we are thinking of them in terms of their discernible qualities or attributes, which may be examined, analyzed, classified, and the like. This, however, says Heidegger, is not the primordial way of relating to them, which would be ready to hand. “Present at hand” is a derived or secondary way of reflecting on them. We thus cannot conceive of *Dasein* apart from World, because it is prior to any separation of self from world in the objective or cognitive sense. World is *given* along with *Dasein* prior to any act of conceptualizing. Indeed, all conceptualizing takes place in terms of World, which is prior to it.

The primordial way of treating an object such as a hammer as “ready to hand,” is in terms of using it to drive nails or pound on other objects. This ready-to-hand character cannot be grasped theoretically. It demands that account be taken of what Heidegger calls the *towards-which* (*das*

Wozu) of equipment. For example, the shoe that is to be produced is for wearing, the clock is for telling the time, and so on. Heidegger is quite clear about this priority: "The kind of dealing which is closest to us is . . . not a bare perceptual cognition, but rather that kind of concern which manipulates things and puts them to use." As this pragmatic orientation is so immediate, we may tend to overlook it. If, however, the hammer were to break, we would become very conscious of the importance of the "ready to hand" dimension.

In a way that almost seems to recall parallel observations in Wittgenstein, Heidegger admits that our relationship of practical concern toward a thing may escape our awareness or notice because of its very familiarity and everyday character. For example, we may take for granted the significance of a hammer as a piece of practical equipment that is "ready-to-hand," that when we consciously consider it we look at it "objectively." But as soon as the hammer becomes broken, we see all too clearly what "hammer" really means to us as something ready-to-hand. More especially, "when something ready-to-hand is found missing, though its everyday presence (*Zugegensein*) has been so obvious that we have never taken any notice of it, this makes a *break* in those referential emptiness, and now sees for the first time *what* the missing article was ready-to-hand *with*, and what it was ready-to-hand *for*."

Dasein is thrown into the world in that Dasein is "always ready" in a specific situation that determines the possibilities that are available to it, with the mood or "state of mind" that reveals its thrownness. Dasein is "thrown possibility, through and through." Such a notion of *Being* and the situated-ness of being thrown-into-the-world are central to situated cognition. In this sense, learning translates into Being (that is, the whole person as a character or identity) and Being is thrown into actions in the world until "breakdowns" occur of which reflection is then interposed. In this sense, the world that is before us is the current world authentically ready-to-hand (soon to be realized) or present-at-hand (already realized as current). In Heidegger's view the world is an environment (*Umwelt*) to which man has a practical relationship of concern.

If Dasein is our way of being in the world, then our understanding of the world is through and constrained by Dasein. Thus, to be situated means to be situated within Dasein or our within our experience of the world. Situated cognition must be considered as experiential. When we say cognition is situated, we mean that it is situated in the flow of experience that comprises Being.

Understanding and Interpretation

As understanding is *a priori*, Heidegger views it as prior to cognition. This is because understanding is rooted in possibility, in Dasein's ability-to-be or "potentially-for-Being" (*Seinkönnen*). Dasein *has* possibilities before it *knows* possibilities. Understanding projects Dasein's Being both upon its "for-the-sake- of-which" and upon significance, as the worldhood of its current world. At the deepest level, understanding involves not seeing actual objects or situations so much as seeing the possible use, possible contexts, and possible ways of service. We return to the notion of "potentially-for-Being" (*Seinkönnen*). Congruent to Wittgenstein's thought in his later writings, it is forms of life and "life" which determines meaning and potentials for subsequent understanding. It is life which determines logical grammar, and not the other way around.

Interpretation, to Heidegger, is working out the possibilities *projected* in understanding. The interpretative function of understanding is not some "additional something" which is different from understanding itself, but rather an explication or elucidation of it. Understanding operates through a projection of possibilities; interpretation constitutes a working out of this projection, which makes explicit what was already given through human awareness. What is explicitly understood "has the structure of *something as something*." We "see" something as a table, a door, or a bridge. This relates closely to what has been said earlier about "in order to" (*Um-zu*) or "for the sake of what" (*Worumwillen*). We see a pen for the purpose of writing and communicating; or

see a key for the purpose of locking and unlocking. This is connected with the fact that meaning is not just a property attached to objects, but is grounded in human life and attitudes. The situation provides the context and richness for projecting possibilities and understanding the world.

We are also reminded of Wittgenstein's thoughts that only in the stream of thought and life do words have meaning, and that each use of language occurs within a separate and apparently self-contained system complete with its own rules. In this sense our use of language is similar to playing a game. We require an awareness of the operative rules and significance of the terms within the context of the purpose for which we are using language. Each use of language constitutes a separate "language game," and the various games have little to do with one another. Interpretation, in other words, is projected in the everyday contexts through which understanding arises. The characterization of language as a "game" presumes that language is not a private phenomenon, arising when an individual mind grasps a truth or fact about the world and then expresses it, but rather that language is a social phenomenon, acquiring its meaning in social interaction.

SITUATED COGNITION AND BEYOND

From the writings of Martin Heidegger we discuss its relevance and contributions for situated cognition, but more importantly, we highlight dimensions which perhaps can be further explored in the field of situated cognition and beyond. As a precursor, we highlight that the original conceptions of situated cognition are very much aligned to Heidegger's works but we recognized that subsequent proliferations began to misunderstand the epistemologies underpinning situated cognition. The two fundamental epistemologies of situated cognition are: (1) the nondualistic and relativist stance between mind and the world; and (2) the in situ or emerging nature of cognition. The fundamental nondualistic stance is strongly mooted in Heidegger's integration of existence and interpretation as essentially being the same. Furthermore, Heidegger stresses the dimension of "thrownness" and "being in the world" as in situ emerging phenomena from Dasein's point of view until breakdowns occur. Dasein is simply thrown into actions and mind and worldhood is a unity. In this sense, context and cognition are interwoven as depicted by purposeful activities. Within purposeful activities, signs are "ready-to-hand" in "our everyday dealings;" they are produced for "various purposes," which relate to human purposes. The "indicating" of a sign is not the "property" of an "entity;" but occurs as the "toward-which" (*das Wozu*) of a serviceability and the "for-which" (*das Wofur*) of a usability. This issue of "purposefulness" can be further elaborated within situated cognition as the role of descriptions and reflections of actions are not well articulated within literature in situated cognition. Descriptions and reflections arise out of possible breakdowns in cognition and activity and these are brought into the open through language and representations. Dasein works with these articulated or explicit descriptions as signs to further in situ phenomena from his or her perspective. In the notion of "purpose" in practical-meaning usage, meaning is that *from* which something is understandable as the thing that it is. Meaning is the "upon-which" of a projection in terms of which something becomes intelligible as something, it gets its structure from a foresight and a fore-conception. The use of metaphors in order to explain, interpret, or understand a phenomena is along the same vein of thinking, where one metaphorical idea is used as an "upon which" projection onto another. To reiterate, situated cognition does not adequately account for this projection of meaning in situated and emerging actions.

The concept of "purposiveness" also emphasizes meaning, intention, and experiential processes, and an active organism that exhibits thought, emotion, volition (agency, and control) over its functioning. Purposive behavior consists of integrated acts associated with physical and social environments, with change and process being central features of the whole—a spatial and temporal confluence of people, settings, and activities that constitutes a complex organized unity.

However, the organism is the one that undergoes emerging change in identity, Being, or Dasein. There are no separate actors in an event; instead, there are acting relationships, such that the actions of one person can only be described and understood in relation to the actions of other persons, and in relation to the situational and temporal circumstances in which the actors are involved. The situated cognition perspective as advocated does not deal primarily with the relationship between entities as distinct, instead, it considers the system—context, persons, culture, language, intersubjectivity—as a whole coexisting and jointly defining the construction of meanings. The whole is not composed as separate entities but is a confluence of inseparable factors that depend on one another for their very definition and meaning. In other words, situated cognition points toward defining things which emerge from within the processes of acting and inquiry. However, where situated cognition needs to continue to define is how the human organism restructures or reorganizes itself in purposive behavior with regards to agency, self-regulatory behaviors, and control. In other words, how would an organism or organisms within the social context undergo continuous transformations in embodied thinking, emotion, and volition. In contrast with the distributed view of situated cognition, cognition is embodied *only* in the operation of the living systems interacting with the artifacts around them.

The notions of Heidegger and situated cognition compel us to consider the life-community as the meaningful contexts for learning and thinking. Similar to Heidegger's thought of "being-in-the-world," Polanyi observes that the primitive sentiments of sharing values, experiences, and joint activities in the community are *prior* to formal articulation—that is, reflection. By fully participating in a "ritual," the members of a group affirm the community of their existence, and at the same time identify the life of their group with that of antecedent groups, from whom the ritual has descended to them. The assimilation of great systems of articulate lore by novices of various grades is made possible by a *previous act of affiliation*. Hence, identity is formed within the individual but co-constructed with other members of a community. This implies that each community has a set of beliefs, values, and "way of seeing" which characterize the members.

The view of situated cognition has yet to account for an intricate balance between the social and contextual dimensions of cognition and the individual *transformations* in knowing, understanding, and identity. Such a basis for individual transformation forms the premise for educational psychology and theories of situated cognition in relation to learning. Clancey refers to this as using a "both/and" logic rather than an "either/or" logic. Besides transformations at the cognitive level, we need to recognize transformations at the personal-emotive level and also at the level through which actions and decisions are meted out. Being or identity is complex and it involves the entire psyche of the individual in relation to the social-cultural and environmental levels. The identity perspective from Heidegger helps us to move away from behaviorist critiques of situated cognition as doing and responding without reflection.

On the aspect of situatedness concerning the structural mechanism for coordination, the interpretation of meanings is based on the authenticity of purpose. Congruent with recent notions of how learning ought to be authentic in meaning interpretation, Heidegger's work reminds us to project meanings for purposefulness and to challenge them to see potentials for applications and contexts. Not only is meaning personal for *Dasein* or Being, meaning should also be negotiated with others in the community. Who we are (our identity) at a particular instance of our history and the medium (situated context in the world) we are in mutually specify each other, contributing to creating the world of the next instant, and so on, creating the world by living in it. It means that learning is a reciprocal dynamic process in which structural changes occurring in one (that is living system or environment) trigger changes in the other. In other words, we are always learning as we experience being-in-the-world. Problems which stimulate the intelligence of the learner grow out of conditions of the present experiences; but these problems should be catalysts which arouses the interests for an active quest for yet unanswered questions of the future. According

to John Dewey, new facts and ideas become the ground for further experiences in which new problems are presented. The process is a continuous spiral. In this regard, all of the central concepts of learning, thinking, and identity are to be conceived in active and relational terms rather than in terms of static objectivist matching and representations. Meaning constructions are purpose-driven according to relational contexts and thus constantly fluid, albeit relatively fixed patterns of phenomena observed across similar situations. Mind and body are perceived as an aspect of person-environment interaction, where activity involves a transaction or interaction between person and environment that changes both.

On the aspect of situatedness relating cognition to spatial-temporal settings, human beings are thrust into the world with tools and material objects as “ready-at-hand” until breakdown occurs. A hammer is used for the purpose of hammering until it fails to achieve its purpose. At such a stage, reflection as a process to reconsider the purposes for which an object is to us is usually necessary. Current work in situated cognition can emphasize the role of reflection, abstraction of meanings, and how as humans we are able to engage in metacognitive thought where language and thinking are central. Identity can be modified through reflection in the context of prior situated understanding. However, the field of situated cognition needs a balance between meanings as always situated and when interpretations have value for transfer across contexts resultant from reflection. Meanings are implicit and embedded into the forms of life, as Wittgenstein explains, and usually made explicit only through reflection and secondary orders of perception. Meaning is personal at the phenomenonal level when one is engaged and absorbed in the situation. It can become more explicit when one starts to move away from the situatedness, and can be shared as one articulates at the description level.

Situated cognition implies learning “to be” as contextualized. For example, one learns to be a scientist in the context of the scientific practice and in the process appropriates the “ways of seeing” meanings within that practice. In this sense, identity is context dependent such as the community of practice being an important instance of a rich situated context. From Heidegger’s view point, identity as *Being* is thrown into the real world and not necessarily constrained to a limited community. In other words, *Being* should be cast from the perspective of *Being in general* rather than *Being within a situated context*. In other words, *Being* can transcend a situated context into a generalized Worldhood. Although *Being* is purpose-driven, *Being* or identity can be cast from the perspective of identity as a “process-journey” unfolding in situ (as *Being* is continually being transformed through each experience) according to broad rather than narrow prescriptive conceptions of purpose. Here purpose is generalized to actions in the world rather than specific situations. In other words, when identity is formed within individuals, such a state is contextless rather than bound to specific contexts. From a situated cognition perspective, knowledge and information is contextually bound, whereas we argue from Heidegger’s viewpoint that identity is presented as context-free, or more accurately, identity is bound to Worldhood as the largest possible context. In other words, within Worldhood, identity is transferable across contexts. If we think of situatedness as a continuum, then Worldhood lies at one end of the extremes—the unsituated end. This provides us with a framework for rephrasing the problem of transfer of learning across different contexts as one that is less relevant. Instead, learning involves the ability to generate appropriate states of the living organisms on demand. These states form part of our identity, and it is identity that we carry with us from one context to another.

CONCLUSION

A consistent framework is needed in situated cognition and beyond to account for embodied cognition within the individual Dasein or *Being* since the organism emerges in situ through personal experience in the context of worldhood. On the other hand, situated cognition needs to

account for purposeiveness and breakdowns with regards to reflections and descriptions of these interpretations. The organism needs to also observe phenomena and “metacogite” on reflections and descriptions made by *Dasein* at the social level. A consistent framework needs to be developed at the social to individual levels.

Summing up the process of learning and identity, we conclude by emphasizing that learners (or *Dasein*) commonly begin with certain naïve, “romantic” conceptions (and beliefs) of the situated world and move through an incredible deconstruction and transformation of their identities and arrive at more accurate and mature worldviews through an ongoing, dialectic cycle—knowing that theories and principles are the product of human construction, imagination, insight, and experience. This understanding begins at the phenomenal level and provides the basis for human knowing at a tacit level which may transform into more explicit understanding at the description level. Such a transformation in identity implies a metamorphosis in different levels of Being—thought, emotion, and volition. Such a transformation is dialectical in that social levels of *Dasein* are also metamorphosed.

The problem posed by situated cognition for educational psychology is that field needs to move toward a transactional worldview; away from “what is stored in the brain” to “what forms of interactions are possible.” Intelligence can not be seen as a trait as much as an ability to join and create worlds of understanding. Clancey, for example, supports a move toward ecological psychology (beyond situated cognition) to accomplish this goal. The important question stops being “what is happening in the brain?” and becomes “what are the transactional functions of the capabilities of an organism (with a brain) in its everyday life within a specific niche (both cultural and physical)?” Ecological psychology requires us to understand systems of which we are a part: systems upon which we have an impact even as it has an impact upon us. Important contributors to ecological psychology include Gregory Bateson, Heinz Von Foerster, Humberto Maturana, and James J. Gibson, although the work of the last requires some reformulation to work well with situated cognition as explicated by Clancey. Situated cognition demands that we take a total-system view, that we consider mental processes as constructors of order rather than containers of information.

Situated cognition and ecological psychology are proposed as alternatives for reconceptualizing educational psychology—a relational stance between persons-and-context where the emphasis may not be only in persons or context but in the dialectical interactions between both entities. Heidegger’s views provide a theory of learning which does not deal simply with descriptive theories of knowledge acquisition, but provides insights into how learning occurs as situated within the individual in dynamic interrelationships to the context.

FURTHER READING

- Clancey, W. (1997). *Situated Cognition*. Cambridge: Cambridge University Press.
- Heidegger, M. (1962). *Being and Time*. Oxford: Blackwell.
- Polanyi, M. (1964). *Personal Knowledge: Towards a Post-Critical Philosophy*. New York: Harper & Row.
- Wittgenstein, L. (1958). *Philosophical Investigations*. Cambridge: Basil Blackwell.

CHAPTER 84

Situating Situated Cognition

WOLFF-MICHAEL ROTH

During the 1990s, it has become fashionable to talk about knowing and learning in terms of distributed cognition, embodied cognition, and situated cognition. All of these terms imply that knowing (etymologically, knowing and cognition have the same origins) exceeds what can be found in the head. Like many others the reader may ask, “What do you mean, isn’t all we know in our heads?” In this contribution, I articulate how and why we understand knowing as situated (which implies embodied and distributed) and what implications this has for education and psychology. Let me begin with the following two examples from my own experience.

Over the past fifteen years, I have become very familiar with my word processor. Many people in my surrounding know this and ask me questions about how to do this or that with the software. Sometimes I can provide them with an answer, but more often than not, I cannot articulate in so many words how I do it. However, as soon as I am sitting in front of a computer, I can show how to implement what the person wants to do, or walk him or her through over the telephone, both of us sitting in front of our machines. As another example, consider this. Several years ago, I wanted to call an old friend. At first, I tried to remember her number, but as hard as I tried, it did not come back. Then I was looking for it in different places, but could not find it. Eventually I gave up searching and trying to remember. For some reason, I picked up the phone: my hands began to move over the dial composing a number without looking at it. Through the receiver, I heard a combination of sounds that rang familiar. When I had finished dialing, I knew I had the right number even before I heard my old friend’s voice on the other end.

In both of these instances, I failed remembering something and articulating it in words. In the first instance, it was a practice, a patterned way of doing something. In the second instance, it was a fact, something one can state in so many words. If I had taken a written test, such as those that are used in formal schooling, I would have failed, utterly so, in both instances. That is, my test responses would have been interpreted to mean that I did not know. Fortunately, I did not have to take a test; in fact, virtually all circumstances in which I operate on a daily basis and which show what “I” know have little to do with testing situations.

In both situations, I knew as soon as I was interacting with the computer and telephone, respectively. It was not that these items were just there but my knowing was in the interaction and anyone watching me would have observed it as such. More so, “my” knowing was in the

interaction with the two devices. That is, whereas isolating me from my normal environments would have made me look dumb in both situations, operating the devices exhibited patterned ways of doing relevant activities and therefore exhibited knowing. This is what all three terms, embodied, distributed, and situated cognition are about. To understand the patterned actions that you could have seen observing me in the two situations cannot be explained by looking at my brain alone. My knowing cannot be understood by looking at my brain and the computer or telephone. Rather, to understand my patterned actions, you need to look at the interaction (or rather transaction) of Michael and computer (telephone), and at the structure characterizing the two entities involved (device, me). In fact, what is relevant is not the structure these devices have for everyone, but the objective way that they appeared to me in those situations.

I remembered the telephone number but it was not through my conscious thoughts. Rather, I knew the number with my body, or rather, the knowing was exhibited in the patterned actions of my hands and fingers and in the apparently correct outcome of my dialing. Perhaps less evident but equally so, my knowing of how to do some formatting with my word processor is embodied. To articulate how to do something, I have to sit down, take the mouse and keyboard, whisk the cursor across pull-down windows, and select from the options that appear. I know that I know when I am there, and I do not have to memorize any of it. Memorizing is prohibitive, and does not guarantee success to some beginner with the software.

The terms embodied, distributed, and situated cognition do not mean that there is nothing or little in the brain, or, as some critics facetiously said to me, a brain scattered across the environment. All three terms are intended to highlight that to understand knowing (and learning), we need to take into account more than some stuff that might be located in our minds, which we carry around, and which someone else can test us for at any moment. We need to look at a person in the setting. More so, we need to look at the person acting in the setting. But it is well known (e.g., just think of divergent testimonials of the “same” event in courts of law) that a setting does not appear to all persons in the same way. That is, to understand *why* a person is doing something, we need to understand “the person acting in the setting as it appears to him or her.” Talk about situated cognition therefore means talk about the interactions of people with objects and tools rather than talk about what is in their brains. It is a choice that we make about how we look, and, therefore, we situate situated cognition.

What is being considered in analyzing some phenomenon is called a unit of analysis. Scholars who think about knowing and learning in terms of embodied, distributed, and situated cognition articulate their unit of analysis “the person acting in the setting as it appears to him or her” in different ways. Some prefer to speak of transacting, which implies that person and setting mutually constitute one another or, alternatively, that person and setting stand in a dialectical relationship. To express this in yet another way, dialectical means a chicken-and-egg type situation, where one automatically implies the other. That is, the setting always exists for the person, but there is no person without setting. Other scholars prefer to speak of a person acting in his or her lifeworld, where the latter term denotes the setting as it appears to the acting person.

AGENCY AND STRUCTURE

Situated cognition can be understood within a framework of agency and structure when these terms are thought dialectically, as two sides of the same coin. First, agency denotes the capacity to act. It is immediately clear that there is no agency without structure: Humans, like all beings, need a material body to act and thereby to display knowing. Structure is everywhere. It is self-evident to most that our bodies are structured and so is the world in which we live. Most people attend less to the fact that our ways of seeing, hearing, feeling, moving, and doing things are structured, too. When we speak to someone, we hear words not inchoate sounds; furthermore, when we hear

barking rather than a noise, we hear a dog barking rather than another animal. We see trucks as trucks, cars as cars, and wheelchairs as wheelchairs. We do not confuse one type of thing for another.

Second, there is no structure without agency. We cannot experience space, time, dogs, trucks, cars, or wheelchairs without having acted in a world of things and people. How do we come to see the world in a structured way?

A number of classical studies exemplify the inseparability of knowing and action. In one study, kittens were initially raised in the dark and experienced light only under controlled conditions. Each kitten from one experimental group was allowed to move around normally, but was harnessed to a carriage that contained a second, matched kitten from the second group. Both groups of animals therefore shared the same visual experience. However, the first group of animals was active, the second group was physically passive. After a few weeks, the kittens were released. Members of the first group behaved normally. Members of the second group behaved as if they were blind: they bumped into objects and fell over edges. The scientists then sacrificed the animals and looked at the brain and found that there was ten times the development in the active kittens than it was in the passive kittens. We can conclude that experiences cause brain growth, but one must actively participate in the experiences for growth to take place. That is, agency leads to structure, both in the world (a kitten recognizes a *material edge* as an edge) and in brains (kittens recognize a material edge as *edge*). The first in each couplet is the material part of the dialectic, the second is an aspect of the brain—researchers have come to talk about these patterns as schemas.

In a similar vein, the philosopher Maurice Merleau-Ponty suggested many years ago—something recent neuroscientific research verified—that everything we know about the world is the result of our moving around in and interacting with it. Thus, we do not see the roundness of a ball, but in seeing a ball partially, that is, from one side, we know what we will see when we walk around it, turn our head, or move our eyes from left to right. We also know what we would feel if we were to touch it, and how this feeling would change if we were to move our hands over the ball. Remember my knowledge of the word processor? It is not my knowledge per se that counts but my knowing what will happen if I move about within it, constrained and enabled by its structures as these are given to me.

The example with the kittens shows us something else. Structures are not only nonidentical partners with agency, but also are dialectical themselves in the sense that they always exist simultaneously as objectively experienced structures in the world and as (mental) schemas. The structures in the world are not only material, but also social. These structures in the world are resources for actions. We therefore speak of them as sociomaterial resources. These resources both enable and constrain what humans want to do.

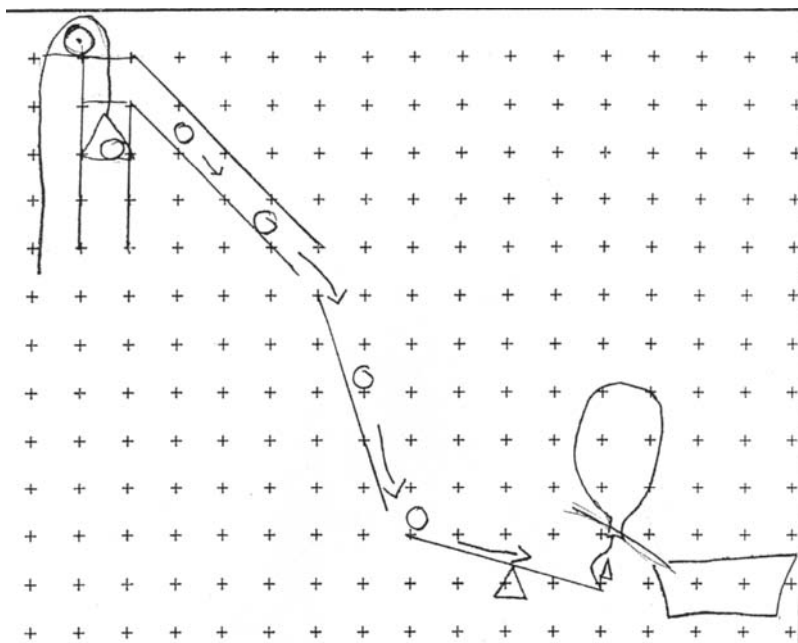
To see how all of this plays out when we observe real human beings while going about their business, I provide the following example from a seventh-grade science course that I had taught many years ago. In analyzing the episode, I exemplify the situated (embodied, distributed) nature of cognition by showing (a) how hand gestures, body movement, pitch, and orientation are used to coordinate conversations and (b) how hand gestures present ideas not concurrently expressed in words and animate static structures perceptually available to other participants.

DESIGNING THE “ELEVATOR THING”

In this science course, students learned about the physics of simple machines largely by designing machines themselves, including the entire process from initial conception to the completion of a prototype. The following episode was recorded while the students designed something like a Rube Goldberg machine, a device that consists of several interacting elements and brings about

Figure 84.1

The three girls are focusing on this sketch of a Rube Goldberg machine, deliberating how to implement the “elevator thing” on the left side of the drawing, which they intend to move a ball to the top of the tower, from where it begins its journey to launch a few processes



a desired event only after having completed a number of intervening processes. The three girls (Amanda, Bella, and Leanne) in the episode had decided to make a food dispenser, in which a ball is moved in an elevator up to the top of a tower, then first rolls down a chute onto an inclined plane, and then falls onto and tips a balance. The nail on the other side of the balance pokes a balloon, which, upon exploding, releases the food for the cat that was stored inside it (Figure 84.1). I begin by providing a gloss of the conversation and then move on to show different aspects of situated cognition in action.

The episode was recorded just when the three girls were deliberating how to go about building what they called the “elevator thing” on the far left of their design sketch (Figure 84.1). Leanne was just finishing to articulate their next steps by pointing to the elevator and saying that they had to build this part for which she had brought wood (line 01). She finished by uttering a little drawn out “So:?” which ended in a rising pitch as if she was asking, “Do we start?” or “How do we start?” There was a pause, which in fact constituted an opportunity (resource) for another person to take a turn at talking. Here, Bella began to articulate, which turned out to become an alternative to Leanne’s proposal of building the elevator from scratch.¹

01 Leanne: I have wood over there to build it. So:?

02 (0.79)

03 Bella: *[Figure 84.2a] Or (0.40)

((her hand moves forward to Figure 84.2b))

04 *[Figure 84.2b] [my brother *[Figure 84.2c] (0.22)

05 Amanda: °Uh um°.

Figure 84.2

Moving her right hand forward toward the design, Bella (left) indicates intention to take the turn at talk; by withdrawing her left hand from the design, Leanne (right) indicates willingness to relinquish her turn at talk. Amanda (center) exhibits attention to the current speaker, which she makes visible to the others by adjusting her gaze direction



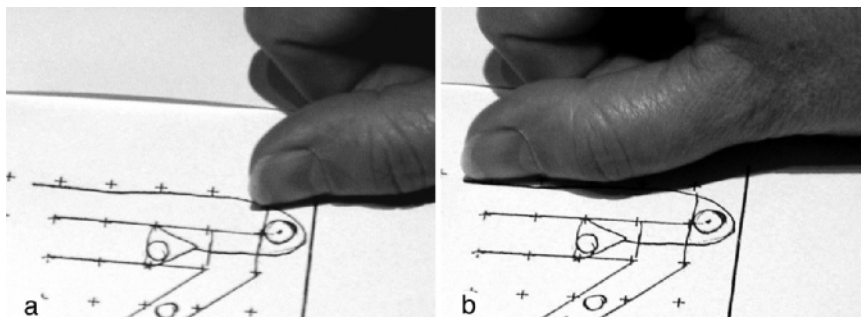
- 06 ((Erects body, orients gaze))
 [(1.55)
 ((rH moves to scratch herself))
 07 Bella: he [has a parking lot
 ((rH returns to drawing, stops at tower part))
 08 (0.90)
 09 um: (0.20) you can take this part out (0.32)]
 ((repeatedly moves up and down along tower
 ((Amanda turns gaze to diagram))
 10 then you pull like *[Figure 84.3a] this *[Figure 84.3b]
 ((hand moves to top, then toward the bottom of tower part))
 11 (0.45)
 12 ((Bella's hand retracts to Figure 84.4a, up to Figure 84.4b))
 and then put some batteries in it]] and it works.
 ((hand rocks back and forth))
 13 Leanne: ((nods repeatedly))

Bella began to speak, and over the next 11.7 seconds, produced the idea that they could take a part out of her brother's parking lot (lines 04, 07). She did not specify which part, she wanted to take out, but pointed to what Leanne elsewhere called "the elevator part," allowing us to infer that she meant the lift. Bella then said that they would pull on it in some way (line 10), while moving her hand along the tower part (Figure 84.3). Finally, she proposed to put some batteries in it (presumably the lift), while making a repeated gesture with her right hand as if she was putting a battery in a horizontal battery receptacle (Figure 84.4).

With the "Or" (line 03) Bella announced an alternative to what Leanne had just proposed. It was a contrast to what has been proposed before, when Leanne had asked for the materials. Bella was responsible for bringing a pulley, and this responsibility was inscribed into the diagram, at the bottom, where they noted the materials needed and who was supposed to bring them. Subsequently, Bella admitted that she did not bring a pulley or even have one. The two other girls talked about the chute, the pipe-shaped part leading away from the top of the tower. The "or" sets up a difference, a contradiction with what they had done or were presently doing. In this episode, Bella then develops a different idea, it takes shape in her talk and action, but at the same time retains its ephemeral nature, for talk and gestures "vanish" as soon as they have been

Figure 84.3

Bella's iconic gesture animates the elevator, which expresses knowing in action that her speech does not make available to her peers



produced, they recede into the past, increasingly so, unless it is reproduced in subsequent actions and talk.

Although this episode may appear straightforward, it is rife with complexity and shows just how much human beings need to know to communicate about something, to take turns at talk, to understand what someone else is talking about even if they do not say it. Situated cognition researchers therefore might ask questions such as, “How did the girls know when to talk?,” “How did they gain and maintain a turn at talk?,” or “How did a speaker know that others were listening and being attentive?” Researchers may also ask, “How did participants know what a speaker was talking about?” The answers to all questions will involve the relation between the girls and their situation, both in its material and social aspects.

GAINING AND MAINTAINING TURNS AT TALK

When we talk, others normally listen. Changeovers occur when the current speaker has stopped, when there is a pause, so that someone else can begin speaking. Thus, the pause after Leanne had stopped speaking (line 02) allowed Bella to begin (line 03). Bella not only uttered “Or,” but also moved her hand forward placing her finger on the tower part of the design. She thereby indicated in two ways that it was her turn: by beginning to speak and by moving her hand forward

Figure 84.4

After Bella stopped to point to the paper, Leanne raised her gaze, acknowledging listening (a–b). It also allowed her to see the gesture showing how the batteries were oriented (b–c). She acknowledged understanding by nodding (b–c)



toward the design (Figures 84.2a–b). Leanne acknowledged the change of turn by retracting her own hand, which had thus far rested on the tower part (Figures 84.2b–c). That is, even without having to think and say, “Oh, I am giving up my turn at talk,” Leanne’s change in body position articulates this situation.

By uttering “Or,” Bella had announced an alternative design possibility, which means that others would normally wait until she had completed describing the possibility. But whenever there is a longer pause, others can take it as an opportunity (resource) for taking a turn and for talking themselves. Making some noise or producing a gesture, which most often occurs unconsciously, indicates to others that the speaker wants to continue. The noise or gestures are resources that may have the outcome of constraining the listeners to continue listening. One such occasion was apparent when, after a conversationally long 0.90-second pause (line 08), Bella produced an “um:” that was drawn out, before she continued talking (line 09). In one sense, her hand was still on the drawing, an indication that she had not yet abandoned her turn at talk, so that the “um:” constituted an added resource for indicating (likely without being consciously aware of it) that she was intending to continue.

A striking example how gestures are used to maintain a turn occurred after Bella had apparently completed the description of her design alternative (line 10). That she had completed articulating the idea was also visually apparent when Bella was pulling her hand back from the drawing that was the focus of the three girls’ attention. If we look ahead, we see in fact that the battery idea (line 12) was almost like an afterthought. Therefore, the lengthening pause (line 11) became a resource for others to start talking. When Bella moved her hand forward again (line 12), it became a gesture that can be experienced in the same way as if she had said, “Don’t start, I am not yet finished.” Neither Amanda nor Leanne began, thereby providing Bella with the opportunity to propose an addition to the lift idea, namely operating it by using the batteries rather than the hand operation that she had earlier described (line 10, Figure 84.2).

EXHIBITING ATTENTION

Under normal (most) circumstances, participants in a conversation do not tell one another explicitly that they are listening and paying attention. Saying so would in fact interrupt the current speaker and take the turn at talk away from him or her. However, there are other ways to exhibit attention, some of which can be seen in this episode. For example, Amanda had oriented her upper body and her gaze toward Leanne (Figure 84.2a). When Bella began to speak, Amanda moved her body upward and turned her head, so that she was now facing the speaker (Figure 84.2b). However, when Bella returned her hand to the diagram (line 04), Amanda shifted her gaze, watching where Bella pointed and moved her hand that enacted pulling. When Bella was done with this part of her explanation, Amanda reoriented herself to face Bella. In both cases, Amanda made her attentive listening available to Bella: she looked at the speaker and then followed the hand that pointed and moved about. If Bella had had not been present, or if the girls had been in a telephone conference call, Amanda could not have shown attention in this way. Making some noise at a volume lower than the current speaker, often “Uh um” (line 05), is another way of exhibiting attention. Listeners also nod their heads in the way Leanne had done (line 13), visible in the difference between Figures 84.4b and 84.4c. This nodding could also have meant agreement, which might even have been the case. But immediately after this episode, Leanne critiqued Bella’s idea, and thereby exhibited that she was not in agreement. All of these ways usually are unconscious, but they are structures in the setting that allow speakers to know that others are listening even without thinking about it. Attention is exhibited with and through the body (cognition as embodied), and it is available to others there in the setting (cognition as situated and distributed).

WHAT DID BELLA TALK ABOUT?

Our (Western) culture is almost obsessively preoccupied with language—which has led the philosopher Jacques Derrida to call it *logocentric*, centered on language. However, in much of everyday life, words are only a small part of what it takes to experience a situation as meaningful. To understand others, we need to be attuned to not only the words others say but to their gestures, body positions, voice inflections, current activity, objects and events, and so on. Gestures play an important role in our knowledgeable everyday behavior, in part because they articulate explicit links between the current speaker, talk, and the surrounding world. Thus, a speaker may be pointing at something or in some direction, and thereby establish a link between what is concurrently said and some thing out there. In the present situation, Bella pointed to the diagram (line 03, Figure 84.2b), and, more specifically, to the tower part of the diagram. This gesture therefore is a resource for the listeners to make a link between what she was going to say and the tower part. That is, although Bella continued by saying “my brother” (line 04), one knows that she was talking about the tower. She then moved her hand away from the drawing to scratch herself (line 06), but then pointed to the tower again while saying that he had a parking lot. Because of her pointing, the audience is attuned again to the tower part rather than to the brother or his garage, though the relevance of the latter is implied. This became clear from the next part of her presentation.

Bella said that her brother had a parking garage and that one “can take this part out” (line 09). This statement is contradictory. She was pointing to the drawing not to her brother’s parking garage. But she said that one could take some part out of the parking garage, although she pointed to the drawing when she said “this.” Yet taken as a whole, her communication can be understood. She literally made a connection between the two, the tower in their design (which she pointed to) and an equivalent part in her brother’s parking garage (which she described verbally) are to become one and the same thing.

Bella actually did not just point but moved her hand up and down right next to the tower, similar to a subsequent gesture that accompanied the end of the utterance, “you pull like this” (line 10, Figure 84.3). Moving gestures trace out a path, and this path resembles some entity or event. Such gestures are called *iconic* (from the Greek for “to be like”), because they depict some object, for example, in the setting. Thus, to know which object the gesture is intended to make salient, listeners need to be attuned to the setting.

The iconic gesture accompanying the utterance “this part” served to make the tower figure; this movement actually turned out to be better than simple pointing, which is inherently underspecified in terms of its aim, and could be a general or specific pointing. The moving gesture, however, paralleled the tower and therefore made its shape more salient. It made it more apparent that she wanted others to attend to the vertical aspect of the tower rather than to the triangular elevator or the pulley on top (Figure 84.1). In line 10, Bella said that the parking lot part would allow them “to pull like this.” However, neither her peers nor we would understand what she was saying, unless we attended to her gesture, formed when the thumb followed the line from the top toward the bottom of the tower configuration (Figure 84.3a–b). The gesture made the situation a dynamic one, as we can literally see the movement of a hand pulling down on the string, which, mediated by the pulley, would bring the triangular elevator and ball up to the beginning of the chute.

In this situation, it is quite evident that we need to attend to sound (words), the movement of the hand (gesture), and the diagram, which are in the setting. I don’t have to think, “I am seeing Bella’s hand pulling on the string,” but the pulling is out there, immediately apparent to everyone who is attentive. For speaker and audience, cognition therefore becomes situated, because it is not just something happening in their heads, but also something involving their bodies and things in the world that matter. All of these are resources in the setting for making sense, therefore need

to be included in the analysis of knowing—so that it makes sense of speaking of cognition as situated.

INTERACTION IS A COORDINATED ACTION IN SITUATION

Social interaction involves several people. Like a dance involving two or more individuals, interaction requires coordination. Both interaction and coordination imply a phenomenon that goes beyond the individual human being, and especially beyond the human mind. To understand what is being communicated (in words, gesture, body position, and setting) and how it is communicated, we need to attend to the situation as a whole. We cannot understand an action by itself, but have to see it as both a response to a previous action and the antecedent of a subsequent action. This is why cognition is situated not only in a material but also in a social sense. Take the following example.

While Bella was developing the alternative design, or rather, the particular implementation of the “elevator” part, Amanda and Leanne provided her with evidence that they were attuned to the unfolding design. In fact, when there was evidence that Bella did not continue while attention was focused elsewhere, alignment was signaled. After Bella had uttered “my brother” (line 04), Amanda had turned her gaze from the previous speaker Leanne to face Bella; Leanne was still looking down toward the drawing. Her gaze moved up to meet that of Bella only 0.97 seconds after Bella had completed; the pause was produced long enough until alignment had occurred and was signaled to have occurred. By the time Bella had uttered “lot” (line 07), Leanne was gazing at the diagram as if following the pointing finger, but Amanda was still gazing at Bella. The latter’s continuation fell precisely together with the point in time when Amanda, too, had directed her gaze at the diagram. At “this part” (line 09) both listeners were looking at the diagram until Bella had finished the description of what to do with the part from her brother’s garage. Both simultaneously moved their gaze to look Bella squarely into the face. Amanda continued to gaze at Bella, whereas Leanne nodded repeatedly (line 13). After the episode presented here, Leanne, still facing Bella, began to talk and Amanda shifted her gaze to the next speaker after having briefly dropped it downward in the direction of the design.

DIALECTIC OF SITUATED ACTION

In the forgoing section, we have seen a brief episode from a design activity, which took the three girls from initially sketchy ideas and possibilities via several drawings and many gesturally enacted visions to a completed prototype (Figure 84.5). We can envision the complexity of human activity if we just think about the fact that the three girls worked for nearly ten hours, amounting to more than 3,000 episodes such as the one discussed here, one following the other. However, without the overall activity of designing the Rube Goldberg device, the individual actions make no sense. Bella’s talk about her brother’s garage, a part of which they could use here made sense, because all participants were attuned to the motive of the activity, the production of Rube Goldberg machines. This motive existed at a collective level, others in the class were doing it too; Amanda, Bella, and Leanne concretely realized the motive in their own project, the cat feeder. Being in this classroom, therefore, contextualized each action in the collective motive. In this way, each action was further situated in a social way. This is what gives an action its sense, the connection it has to previous and subsequent actions, for reasons others can understand, and for whom actors produce resources to help others understand.

Actions are not only socially situated in the group and materially situated in the world: they are also situated in the body of the person who acts. That is, when the students uttered words and sentence fragments, they just produced them without doing much planning ahead of time;

Figure 84.5

Each action during the process of designing a Rube Goldberg machine, made sense because it was situated in the collectively motivated activity, which included an exposition in the library, available for everybody in the school to visit



when they used gestures and oriented their bodies, they, as any other individual, did not plan such movements but unconsciously moved. Actions are situated in our bodies of which we are, most of the time, not even conscious, but without which there would not be an action at all. Yet although components of actions are produced unconsciously, they are properly sequenced and coordinated with the actions of others and the surrounding material structures.

This way of understanding actions as situated allows us to understand meaning in a new way. Meaning is not something that is attached to things, or put down in writing during a test, but is something happening as people act, each action being grounded simultaneously in the social and material setting and in the body.

KNOWING IS SITUATED ACTION

People continuously act. Each action produces an outcome, which can be a word, sentence, gesture, artifact, and even a pause. Each outcome is a resource for subsequent actions by the same person or by others in the setting. From this perspective, situations continuously unfold, operated upon by the human beings present. They use these resources not only to produce a design, or to make available to one another some idea, but also to manage the conversation itself. Cognition is situated because people are always oriented toward their setting, and without the setting and motive of the activity in which they participate, there is no way of understanding what is going on. It is the situation as a whole that allows us to understand, and it is the situation as a whole that we draw on to make our own understanding available to others.

If, however, we attend to many things other than words while attending to others, communicating, and speaking, then cognition is inherently situated. It is situated not like an object that is

placed somewhere, but in that all action is transaction in an irreducible unit. This unit cannot be broken down into a person, on the one hand, and his or her lifeworld, on the other. Person and lifeworld presuppose one another, they are, in other words, dialectically related. All knowing is inferred from action, even by everyday folk as they attempt to understand others; and because all action is situated, all knowing is situated. Acknowledging this fact is an instance of situating cognition in the situation, which has led me to the title of this contribution—situating situated cognition.

Cognition is not just situated, a phenomenon out there. To be consistent with the approach advocated here, my own work is situated, taking cognition as its object. My writing, my analysis therefore actively situates cognition in situation, but is itself a form of situated cognition that cannot be understood unless we take into account the entire setting that includes me, computer, camera, VCR, Internet, word processor, library, and so on. My concrete analyses of one episode exemplify how situated cognition itself becomes situated.

TERMS FOR READERS

Agency—A term that denotes the fundamental capacity to act. Agency stands in a dialectical relation with structures, with which it forms a unit. Without agency, there would not be structures recognized by and acted toward by human beings.

Dialectical relation—A relation is dialectical when it is based on the identity of nonidentical things, two things that are prerequisites of one another, like a chicken and the egg. A chicken comes from the egg but the egg comes from the chicken. In theories of situated cognition, the object of a person's attention is both material and mental. It is therefore *one* object that simultaneously appears twice, as material out there and as perception inside body.

Gesture—Gestures come in many forms and have many functions. Gestures that are used for pointing are called deictic gestures; an example was found in Figure 84.2b. A gesture that depicts something is an iconic gesture, because it resembles something else in an image-like fashion, something else it is said to stand for. Thus, in Figure 84.3, the thumb moved up and down the drawing, thereby standing for the pulling motion required to get the elevator with the ball moving up in the tower. Although they do not say in the way words do (to linguists, body language is an oxymoron, because there is no grammar for body movements), gestures are a central aspect of human communication.

Resources—Resources are the structures in the world surrounding a human being. Resources can be social, as in the patterned ways that we greet other people, or material, such as the characteristic shapes of the things surrounding us in everyday life.

Schema—Structured aspects of the human body that make us perceive and act in the world in the patterned ways we do. These structures are experience-dependent and therefore are different for different individuals, though they are more similar within a culture than between cultures. Seeing the left part of Figure 84.1 as an elevator is possible because of the schemas that the girls and we have developed through experience. Schemas are part of a dialectical unit together with social and material structures that characterize the world in which we find ourselves.

Structure—A term that denotes the second part of the agency | structure dialectic. Although structures constitute a unit, we can associate them with the world surrounding the person (resources) or with the body (schema).

NOTE

1. The following transcription conventions have been used: (0.41) – time in seconds; [] – bridging consecutive lines indicate beginning and ending of overlapping speech; °Yea° – degree signs enclose speech with lower than normal volume; *ten* – italicized utterances were stressed; u:m – each colon indicates an extension of a phoneme by 0.1 seconds; *[Fig. 84.2c] – the asterisk aligns speech and video offprints in a figure, here Figure 84.2c; ((rH moves)) – double parentheses enclose descriptions of actions, here the movement of the right hand; and.,?! – punctuation is used to indicate speech features, such as rising intonation heard as a question, or falling intonation to indicate the end of an idea unit (sentence).

FURTHER READING

- Lave, J. (1988). *Cognition in Practice: Mind, Mathematics and Culture in Everyday Life*. Cambridge: Cambridge University Press.
- Roth, W.-M. (2001). Situating Cognition. *Journal of the Learning Sciences*, 10, 27–61.
- Suchman, L. A. (1987). *Plans and Situated Actions: The Problem of Human-Machine Communication*. Cambridge: Cambridge University Press.

Stakeholder-Driven Educational Systems Design: At the Intersection of Educational Psychology and Systems

DIANA RYAN AND JEANETTE BOPRY

The current interest in communities of practice within educational psychology brings up the question of how the concept of design relates to such communities and how that view intersects with current theories and practices in educational system design. Etienne Wenger (1998), one of the originators of this theory, claims it is not possible to design communities of practice, however, according to Bela H. Banathy (1996) and others who study educational systems design (ESD), the design process part is of the emergent practice of the community members themselves. We find an intersection between the constraints to design suggested by the notions of situated cognition, communities of practice, and enaction theory and the ongoing developments in systems design theory and practice.

SYSTEMS DESIGN

Current developments in educational systems design reveal that attention to cognitive engagement and action by a community of learners is an essential part of systems design practice. This is a relatively recent development in systems design.

Systems design is a practice that originated in the early twentieth century and gained prominence during World War II because of its positive impact on the war effort. Applications to training in the United States during that era were particularly remarkable and the practice of systems design became a foundational pillar of the field of Educational Technology. From this perspective, trained and educated experts from outside educational systems diagnose problems and prescribe solutions to improve systems. They also draw up plans for potential new systems. It is the job of experts to decide what individual educational systems should look like and how the members of the systems should go about achieving these expert visions. This view of systems supports the idea that an educational system can be designed exclusive of stakeholder interaction and that a template of that system can be applied to any educational system.

The form of systems design that interests us, social systems design, has its roots squarely in instructional design as its major proponent, Bela H. Banathy (1919–2003), was a practitioner in that field. One of his primary interests was the development of social systems design for

educational change. Others associated with the theories and practices of educational systems design include Charles M. Reigeluth and Patrick M. Jenlink. All three claim that the traditional assembly-line view of creating educational systems is consistent with the industrial-age model of education and not appropriate for the information age. They each express an eagerness to see the approach change for educational systems as it has for other social systems. What Banathy, Reigeluth, and Jenlink offer has much in common with the thinking of proponents of situated cognition, communities of practice, and enaction theory.

EDUCATIONAL SYSTEMS DESIGN

From a systems view, expert knowledge is only one of the many dimensions of the design process. The educational system is seen as nested within and interconnected with other social systems in which an individual may have many overlapping memberships. Local interactions create meaning and action by stakeholders in each of those systems. In this view, the design of the educational systems is the result of the interaction of the stakeholders in that system grappling with their respective needs, values and desires. Those with professional experience in designing educational systems are a subset of the broader system of stakeholders, contributing to the process, but not controlling or dictating it.

While there has been a great press for reform of education systems since the late 1980s, most agree there has been little fundamental change. For at least two decades educational systems researchers and practioners have called for educational systems to make adjustments, improve, or restructure. Instructional design has traditionally focused on well-designed, efficient, and effective instruction as the source of learning and change. Banathy's work drew the attention of education theorists and practioners to the comparison of school-based practices with practices in the broader social system. He compares the idea of focusing on teaching with focusing on learning. When teaching is in focus, you enhance teaching; the key performer is the teacher. When learning is in focus, the key performer is the learner. Energy is brought to bear on the learner interacting with the problem or issue. Banathy uses this as an analogy for the system: focus must be placed on the stakeholders that define the system. Banathy says that stakeholders must design the system rather than outside experts. He claims we have reached the end of the era of social engineering by outside experts. Instead, we have entered an age of *user- designers*: people designing their own systems.

For Banathy the fact of self-reflective consciousness makes it the responsibility of humans to guide their own social evolution. He calls for communities to develop this evolutionary competency by envisioning and working toward an ideal image of themselves. He considers it a basic right of people to guide their own destinies by taking part in decisions that have an impact on their lives, to take responsibility for the creation of communities that are caring, nurturing and healthy. To design one's own future is a fundamental human right. He further holds that it is only once these rights are ceded to stakeholders in communities that a truly democratic civil society will emerge. This democratic civil society will continually reproduce within its practices the same rights that brought it about.

THE INTERSECTION WITH EDUCATIONAL PSYCHOLOGY

The idea of stakeholder design is key to understanding how educational psychology's current views of learning, cognition and development intersect with educational systems theories and practices. The theories of situated cognition, communities of practice, and enaction place the learner and task in the context of social practices. Theorists propose that learning is situated in the social experience of learners and continuously emerges from this activity. It is not the end result of knowledge transmitted by an outside expert. Those who are working for fundamental

change in educational systems design propose that the traditional top-down, expert-driven design approach to change be made into an intimate social process of idealized design by user-designers. This “way of seeing” the design of educational systems as a process embedded in communities of practice is a relatively recent development. Advocates of this approach assume that successful educational systems design is an interactive, dynamic social process in a unique context. From this point of view, the community of stakeholders must be involved in the design process. The educational community is only one part of a complex and interrelated world that must be taken into consideration if the design is to succeed. Advocates believe that the community stakeholders themselves must envision “what should be” in order to design a system that is open to purposeful development. One can trigger change in a system by changing the environment in which it operates (as is attempted by lawmakers, for example); what the change will be, however, is determined inside the system through the practices generated by its membership.

Enaction and Social Systems Design

Current developments influencing educational psychology (situated cognition, communities of practice, enaction) recognize that learner interaction with and/or within an environment is the source of learning. The principle tenet of enaction is that we relate to the world through action rather than through representations. Viability in the various spheres through which we move requires *effective action*. Social systems scaffold effective action. So, within the enactive framework social systems provide the milieu for the survival of their members. Social systems are constituted in social practices; a social system is both the medium and outcome of the reproduction of these practices. It is both the creation of its constituent members and the milieu that supports their survival. Changes in membership or member interaction affect the entity as a whole. The individual member is not a dispensable component of the system. A social system is a unit only by virtue of the members that comprise it. As a consensual domain, societies are what we, as participants in their realization, make them to be. They are our responsibility.

Social system design offers an opportunity for members of a community to engage in conscious, goal-oriented design. Design, here, is grounded in the context of the affected community rather than in theoretical prescription and all members of a social system can be expected to have an impact on proposed changes. Design must be an instantiation of effective action.

Enaction supports a proscriptive rather than prescriptive approach to design. Within the enactive framework prescription is viewed with suspicion. To tell someone else what to do is to use them as an extension of one’s own cognition and to remove them from the center of their own cognitive activity. To be allowed to be at the center of one’s own cognition seems a basic human right. To tell someone how to do something makes alternatives not chosen invisible. Learners are deprived of meaningful acts of creativity. *Proscription*, or telling someone what *not* to do, immediately brings to mind the question “*Why not?*” What is hidden by prescription is made visible by proscription. Proscription demands creativity on the part of learners because the problem of *what to do* is theirs to solve. At one and the same time, proscription creates an environment conducive to creativity and a critical stance.

For those interested in the connection of educational systems design and enaction, the question becomes “Does prescription have any place in the design of educational activity, or by extension in the design of social systems?” At the heart of the enactive suspicion of prescription is a rejection of oppressive activity. To the extent that prescription is not oppressive and does not remove the stakeholder from the center of his or her own cognitive experience, it may be considered a tool of design. In other words, to make prescriptions for oneself cannot be considered an oppressive activity. To the extent that, in stakeholder-based design, prescriptions are a consensus of the community, they cannot be considered oppressive to members of that community. The key here seems to be true consensus rather than majority rule.

In Banathy's ESD approach, the prescriptions that will affect the community involved in the design process come from within the community rather than from without (i.e., from theory or from outside experts). The process of design within his model is understood to be evolutionary. Changes are made in cycles; those that are made early on help determine those that can be made at a later time. This approach to social systems design has built-in protection against oppressive activity. Here stakeholder design uses short-term prescriptions in the service of a community-determined goal. Because the community can revisit these prescriptions at short intervals and even the goal can be renegotiated, the potential for oppressive activity is mitigated.

Situated Cognition, Communities of Practice, and Social Systems Design

Situated cognition and communities of practice are also concepts that intersect with this approach to social systems design. Theorists in the 1990s, in relating thinking, learning and development, changed the view of these as separate elements to seeing them as dynamic parts of a whole relationship. The idea of mindful interaction between the individual and the environment that dated from Dewey decades earlier was coming to the forefront of thinking in educational psychology. Full-blown situated cognition, as Clancey (1997) defines it, is enactive and encompasses both the social and the cognitive. A narrower form that ignores internal cognitive structure in favor of an in-depth discussion of the social environment is assumed in Lave and Wenger's (1991) discussions of communities of practice.

Until recently it has been assumed that learning is an individual activity and that it is the result of teaching. What Lave and Wenger propose in their concept of communities of practice is that learning is a social experience that results from engagement in everyday social practices. They focus on how social relationships rather than cognitive structures shape learning. They argue that communities of practice exist everywhere and that members of these communities are involved in activities and relationships that develop over time. Community members develop ways of doing things that are mutually valued and in so doing, they learn from each other. Learning is situated in the community where a given skill is relevant.

Wenger discusses communities of practice as subgroups of larger social systems that contribute both to the viability of the members of the subgroup and to the viability of the larger system within which the subgroup resides. So, a group of engineers at Ford Motor Company who come together to contribute to solving one another's problems may also affect the viability of the company within the economic environment. They do this by affecting a change in the practice of members of the larger system in such a way that there is an effect upon that system's economic viability in its interactions with its environment. These communities then, may have a design impact on the larger system by effecting change from within.

Wenger argues that communities of practice cannot be designed into existence. While it is the case that these types of systems are immune to creation from the outside, they do emerge as a response to a perceived need on the part of those who will comprise the community. If once a community exists members choose to organize or be organized for the purpose of change then Banathy's approach comes into play. Banathy and proponents of his approach would say that if participants themselves deliberately and mindfully envision and take responsible social action for change relevant to the system, then it is social systems design.

SOCIAL SYSTEMS DESIGN AS PROCESS AND CONTEXT FOR SOCIAL PRACTICE

Banathy's user-designer approach acknowledges the complexity of the educational system and considers change from multiple perspectives, but always puts primary decision-making power

in the hand of stakeholders. He stresses that the challenge of designing self-governing and self-organizing societies is not to create and impose coercive societal-level design from the top down or project the outcome. Banathy focuses on an evolutionary change process; change can be expected to take time to accomplish. Thus, he only broadly describes the complex task that is set for individuals in communities in larger social systems rather than prescribing specific procedures.

He concludes his book, *Designing Social Systems in a Changing World*, with several generalizations for designers of a new society. They have to (1) transcend the system boundaries that exist now and learn to think anew about the world, rather than extrapolate from it, (2) create ideal visions of future society based on shared ideas and values, (3) engage in disciplined inquiry of design to bring those images to life. In addition, he stresses these caveates: (4) Authentic and sustainable design must be genuinely participative by individuals at all levels of society; (5) The design of the design inquiry itself and all the various design processes must be established at the various societal levels; (6) A prerequisite to design is that a design culture and evolutionary competence must be developed across the society; (7) Design inquiry should ethically; reflectively, and never-endingly pursue the ideal from multiple perspectives; and (8) Take advantage of existing and emerging technologies for communicating at all levels of the design inquiry.

Banathy's educational systems design perspective has influenced a number of systemic change efforts in education and has led to efforts to create contexts for stakeholder-based changes. As the study of systemic change in education has matured, there have been theoretical and practical efforts to clarify and develop this area of research and practice. Reigeluth's work has included clarifying what Banathy and those working with ESD mean by systemic change and how stakeholder roles at various nested levels of the system are differentiated in the ESD approach. Distinctions are made between state-wide, district-wide, school-wide and ecological approaches to systemic change. Banathy's three "lenses" are used to describe educational systems from this perspective: a birds-eye lens, a functions/structure lens, and a process lens. The bird's eye lens provides an overall view of the relationships in the system environment and context. The functions/structure lens looks at the purposes and components of any system and their relationships to each other, and the process lens looks at how the systems' purposes are attained and how the system behaves over time. Ecological systemic thinkers view systems as complex, multidimensional organizations. Systemic change from this view considers change as comprehensive and evolving from a continuing process of dialogue and self-examination by all who are impacted by the system—the user-designers.

Reigeluth, Jenlink, Carr, and Nelson have done extensive work over the past several years to develop specific process guidelines for facilitating change in school districts based on the ESD approach. They propose some process maps developed from their experiences and that of others engaged in educational change at the district level. Their guidance system reflects skills and knowledge essential for process facilitators who are assisting a school district and community in developing its own changes.

Like Banathy, they define the approach as one that recognizes the interrelationships and interdependencies among the parts of the educational system. As a consequence desired changes in one part of the system must be accompanied by changes in any other parts that affect those desired changes. They recognize the interrelationships and interdependencies between the educational system and its community: parents, employers, social service agencies, religious organizations, etc. All these stakeholders are recognized as having ownership of the change effort.

The guidance system describes specific activities that the process facilitator and the community stakeholders would use in creating the envisioned community. The list of prerequisite beliefs they propose for the facilitator include, systemic thinking (similar to Banathy's), inclusivity (all stakeholders in the educational system are included), stakeholder ownership (all stakeholders are empowered rather than represented), coevolution (mutual change in concert with interrelated

parts or persons of a system), collaboration (the process of creating safe and trusting purposeful relationship), community (a state of being and becoming a whole toward action for change) and wholeness (participants ability to see relationships which connect them to their educational system and community). Reigeluth, Jenlink, Carr, and Nelson (1998) lay out a series of discrete events or transition points that occur in the systemic change process. Phase I assures the facilitator and the district are in a state of readiness for the systemic change effort and it is sealed with a formal agreement. Phase II of the system is to develop a core team. That team would then expand into a decisioning team and a design support team. The community enters Phase III with the facilitator helping the expanded teams to prepare themselves for the redesign process. In addition to these discrete events, Reigeluth et al., propose that there are many continuous events integral to the process. Among these events are: Engaging in self-disclosure where participants continuously engage in self-disclosure as it applies to dialogue and design conversation, guiding and evolving community as opposed to groups and teams, and organizational learning. Organizational learning is another of the key events for its relationship to educational psychology. This event entails the continuous development of skills and knowledge about forms of organizational learning and how they relate to systemic change. Their guidelines calls for continuous redesign of the process as it unfolds. Rather than expert, top-down leadership, the idea is to empower and support a flatter, more democratic environment.

APPLYING THESE IDEAS TO THE CLASSROOM

If one applies this idea to education one begins to see, in the classroom, a set or series of communities that contribute to the viability of their members in the classroom setting. Some of these communities may contribute to the instructional prerogatives of the teacher, others to the place of individual students in the larger social hierarchy that is part of the lived experience of students within the school setting. The teachers' lounge will provide insight into other communities. The school itself may be seen as a subgroup within a larger community that includes parents, professionals, service providers, etc.

Design choices should emerge from the local community (or communities) that the design affects. Banathy's social system design model grounds design decisions in the stakeholder community. The implications of educational systems design and the user-designer approach as they relate to the classroom level of the system have given rise to new challenges in educational systems design and highlight the way in which the area intersects with educational psychology. Reigeluth and Squire say that an ecological systems thinker examines a student/ teacher relationship just as an ecologist would examine the relationships of forest denizens in their forest as part of a nested system. The stakeholders in the classroom system are seen within the context of the classroom as it is nested within the context of the school, within the district, within a state educational system and so on. Banathy calls for using a variety of modes: self-directed learning, team learning, technology-assisted learning, and social and organizational learning. Reigeluth calls for information-age instructional design that utilizes self-regulated learning and shared decision-making, focusing on real world problems and building cooperative relationships through learning teams. He challenges practitioners and researchers in the field to consider the implications of shared decision making which might incorporate the notion of "user-designers."

TERMS FOR READERS

Communities of Practice—Wenger uses this term to describe systems that organize attempts by members to improve their own practice.

Educational Systems Design—ESD is defined as the process of educational communities, at whatever level of the system, collectively designing their own educational systems.

Enaction—Fundamentally, enaction is the position that the primary way that we relate to the world is by interacting with it rather than by processing representations of it. Enaction is a framework, in much the same way that representational realism is a framework. It provides a warrant for a number of approaches that are considered constructivist in nature. Situated cognition and Communities of Practice can be seen as warranted by this framework. Enaction is remarkable in that it is the first framework to use a metaphor of mind that is backed by biological rather than technological evidence. The framework is valuable because it provides a measure for determining the internal consistency of practice that is called “constructivist.” It also provides guidance for design, and guidance for the creation of research agendas, something that is often considered a weakness of the constructivist project. Enaction is sometimes referred to as a post-constructivist position.

Evolutionary Consciousness—Banathy contends that because human culture has evolved into self-reflective consciousness, we have the ability to engage in self-guided cultural evolution.

Situated Cognition—Clancey claims that situated cognition is comprised of three aspects: the social function which regulates behavior; behavioral content which relates cognition to spatial temporal settings; and the structural mechanism which coordinates perception, conception, and action. What cognition is situated in is human experience (which includes time, place, and other aspects of a dynamically changing environment as well as dynamically changing internal mechanisms). From this perspective much of the literature on situated cognition is incomplete in that the internal dynamic is often missing. Further, situatedness is often confused with environmental context. On the other hand this literature base does make the social-centeredness of learning visible.

Systems Design—Banathy defines this as a future-creating human activity where members of a system engage in creating and implementing their vision of what their system should be or in consciously redesigning it to meet changes within the community and/or its environment.

FURTHER READING

- Banathy, B. H. (1996). *Designing Social Systems in a Changing World*. New York: Plenum.
- Clancey, W. (1997). *Situated Cognition*. Cambridge: Cambridge University Press.
- Lave, J. and Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. New York: Cambridge University Press.
- Reigeluth, C., Jenlink, P., Carr, A., and Nelson, L. (1998). Guidelines for Facilitating Systemic Change in School District. *Systems Research and Behavioral Science*, 15(3), 217–234.
- Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*. New York: Cambridge University Press.

CHAPTER 86

Teacher Thinking for Democratic Learning

BRENDA CHEREDNICHENKO

Schooling is compulsory for all young people, yet not all young people have the same experience of school nor do they achieve the same outcomes. Teese and Polesel (2003) have found that dramatic differences in schooling outcomes support social and educational inequality across the society. This chapter discusses some research in Australia which looked at the way teachers think about their students, their students' families, and communities and the curriculum. It revealed the different approaches teachers take to making curriculum decisions and uncovered some of the reasons why not all children have the same opportunities at school and as a result of their years at school. It showed that it is critical for teachers to be aware of the understanding they have about their students, the assumptions they make about what students are capable of and what things they need to learn in order to be successful in school and in the community.

In teaching, what occurs in the classroom between the teacher and the student is informed by teachers' cognitive processes: their knowledge, intentions and their understanding of students, curriculum, school organisation and the development of their professional knowledge. It is important to understand not only the social context of teaching but also the psychological context as well. Understanding how teaching and teacher thinking about learners affects learning, requires rich description and understanding of the behaviors, relationships, and the engagement in the classroom. This inquiry into the cognitive processes of and influences on teachers is needed if we are to unlock the "insider" view of teacher decision making.

The real value of learning is indicated by the way in which learners apply their knowledge. How well schools do their job can be judged by the way in which students use their knowledge and skills when they have opportunities (Eisner, 2001). Similarly teachers will make choices about what are the appropriate knowledge and skills to be taught and about the best strategies for building relationships for learning. This chapter describes the influences on teachers' thinking and decision making for curriculum. It explains the factors which help shape these choices and shows that teachers in different communities are influenced by their communities as well as their own educational background and experience. These social and psychological factors help shape the learning activities that students have in their classrooms. Research which examined teacher thinking and understanding about their students, the school curriculum, and the application of thinking skills programs in a broad sociocultural sampling of primary schools in Victoria,

Australia, is discussed here (Cherednichenko, 2000). The explicit teaching of thinking skills programs, for example, based on the work of de Bono, Bloom, or Gardner was not widespread at that time in the state of Victoria, although in 2004 there is now a very strong inclusion of these strategies in classrooms. In 1990s there seemed to be a small but growing number of schools which included a specific emphasis on thinking skills in their curriculum. There was also a clear tendency for this high demand to be in wealthier schools, which already offered a wide range of curriculum programs.

It is important for field of educational psychology to explore and understand why teachers in different communities think and behave differently toward students and curriculum and to discover whether this is based on educational knowledge or other factors. Teachers were asked to reflect on their schools and their classroom practice and to identify programs which they specifically included for teaching student thinking. Interestingly, most private schools and many public schools in well-to-do communities felt it was important to attend to the development of thinking skills explicitly in the curriculum. Very few teachers in schools in working class communities thought that their students needed or could manage thinking skills programs. Teachers in different social contexts had very different understanding of the intellectual needs and capacity of students and this seemed to very closely linked to issues of social class. A link was identified between these educational psychology issues of intelligence and learning styles and teacher thinking, knowledge, and actions and consequently to broader social outcomes of schooling.

Teachers were asked why they had “added” thinking skills programs to their class curriculum. The research also inquired about teachers’ understanding of their schools, children, and families and gathered information about teacher attitudes and expectations as well as descriptions of their practices. One hundred and twenty teachers teaching in schools in a range of sociocultural communities participated in the research. The research found that a wide range of factors were considered when teachers made decisions about curriculum, including the decision to focus explicitly on teaching thinking skills or not. The findings of the research enabled some connections to be uncovered between teacher thinking about education, about their own learning experiences, the intentions of teachers as well as the sociocultural environment in which the school and its families were located.

THINKING ABOUT TEACHING AND THE SCHOOL ENVIRONMENT

Most teachers argue that any curriculum decision is guided by an essential commitment to change for improvement. There is a shared belief that all teaching can be improved, students can learn better and that this is the main job of the teacher. The potential for teachers to think deeply and critically about their teaching and then to make the changes necessary for improved educational and social outcomes is strong and has been long supported by the work of Schon (1983) and others. It is important therefore to know about the way in which teachers think about and act toward their students and communities and the factors that influence this teacher cognition and so the potential for change.

The deeply personal nature of teaching ensures that action and response are highly individualised. When the culture of the school supports conservative and traditional practices, there is a reduced ability of teachers to redirect their efforts to change outcomes. Yet in supportive and collaborative environments, school change is more readily achieved as this culture provides a basis for exploring new curriculum and an ability to implement change so that learning can improve. Teachers in similar environments do share strong cultural, social, and educational values and therefore often have close agreement about what is needed or appropriate for their students. When these cultural connections and similarities are acknowledged and explicit, schools are more readily able to provide an enriching curriculum for students, specifically for those who

demonstrate precociousness. This cultural relationship or affinity strongly influences the way in which teachers understand their students and their needs and so establish learning opportunities as their own knowledge and values, the aspirations of parents and the needs and abilities of students mediate their decision making, as do differing resource and policy structures. This results in a form of curriculum selection, which commences in the early years of schooling building to reinforce a differentiated curriculum and learning outcomes for students of different sociocultural backgrounds as they progress through school.

The cultural affinity between the teachers, their students, and communities in the schools in this study was found to be a significant influence on their decisions about curriculum, more so than many other factors such as for example, quality of resources for teaching. Most teachers share a strong cultural affinity with middle-class students and less so with students of poorer communities. This translates to teacher behavior and decision making, which results in students in some communities, notably the middle-class schools, being offered a more complex, challenging, and intellectual curriculum.

Frequently it is assumed that working-class families are unable to engage fully in academic and intellectual pursuits. Families and students from working-class communities are disadvantaged as they try to access the high culture pursuits of tertiary education and the arts for example. Even when families are able to interact with prestigious cultural activities, increased social mobility is impeded unless the tools for access are developed. Equal numbers of teachers in working class and middle-class schools participated in this study, and revealed their reasons for including thinking skills as very different from each other, notably related to sociocultural issues.

Two trends were uncovered. In both the public and private schools in wealthier communities, teachers felt pressured to extend and add value to the curriculum in order to preserve the image and role of the school as catering to the intellectual needs of students and to support their academic success. Teachers understood their students well because they lived in these communities and often sent their children to the same or similar schools. A close alignment of cultural values and standards was found between parents and teachers. This meant that the teachers' actions, often unconsciously, were supporting the existing enriched curriculum. Teachers and parents held similar aspirations to students and the curriculum decisions endorsed these.

However, in poorer communities, teachers who implemented thinking skills programs did so at some risk. While most schools worked with parents to change the curriculum, in some cases there was concern about making these programs explicitly known to parents as anything which was perceived as moving away from core skill development might be unsupported. Teachers and parents' expectations and knowledge about what was good teaching and curriculum were not aligned and the teachers felt parents would not approve of some innovative practices such as thinking skills programs. Most teachers in these communities argued that these differences made change and innovation more difficult. While realising that the teaching of core skills was essential, they also wanted to instil in their students an ability to inquire, think, challenge, and solve problems so that they might engage in the world more fully, more democratically, and more powerfully. These teachers were acting against what was expected by their communities, taking conscious decisions to change what they were doing for improved learning.

The study of the teachers' reasons for introducing certain curriculum, such as thinking skills programs highlights the critical role of teacher cognition, beliefs, values, and attitudes and the external factors which influence teacher actions in shaping the curriculum. Much has been written about the role of society, schools, and teachers as powerful social structures and agents in construction of an unjust social and educational experience for young people. As they respond to government pressure and their own experience, teachers often *unconsciously* support the continuation of the unequal class system many times because they feel they do not really have the power to change or because this would mean extensive negotiation with the parents and

communities about innovative curriculum. These social and cultural factors that influence teacher cognition are characterised as follows:

School Influences

Within the school environment the direct fields of influence are:

- *Educational Delivery: Teaching and Learning.* The educational program for which the school is responsible includes curriculum provision and the range of curriculum offerings which are implemented, the policies that shape the practice of curriculum, the priorities the school sets for development, the personal relationships which exist and are fostered between teachers, parents and students, and the resources which are available and the way in which they are distributed to support programs.
- *Institutional Profile: Corporate Identity of the Institution.* The school's identity and profile is developed through the School Charter and the embedded practices and policies, which define the school, such as school uniform, the interpretation of its corporate values and traditions, the location and status of the school within the market, the profile of the staff and the strategic development and visioning drives school decision making.

Community Influences

Within the community context the direct fields of influence are:

- *Community Context: Social Identity of Students.* Within the context of the school's community the identity of students is shaped by the socioeconomic conditions of the local community, which in turn are influenced by the wider context; the cultural mix and diversity of the community; the level and distribution of community services and resources; and the location of the school, in urban, industrial or rural settings.
- *Global Perspective: Government, System and Policy Macro-economic Conditions.* The overarching policies and structures of government and education systems with regard to education, economic management, and industrial relations are highly influential in the way in which schools evolve and construct their curriculum.

THINKING CONSCIOUSLY, TEACHING DIFFERENTLY

The practice described by most teachers in working class schools of this study was a shared commitment to change learning opportunities and the social and educational outcomes for students, despite a chronic lack of cultural, educational, and physical resources. Michael Fullan (1991) discusses the things that stimulate us to behave differently and explains changes in teachers' practices as being stimulated by a range of contradictions between the values of the families and the values, attitudes, and knowledge of the teachers. Because teachers take a strong interest in the educational outcomes for their students they are constantly reassessing what is needed and how what they know can be used to change the curriculum and so the outcomes.

As a consequence, teachers who are consciously able to understand the pressures that educational experiences contribute to unequal social and educational opportunities for young people, are better prepared to act and to change their own preconceptions and expectations and so, through conscious and purposeful innovation, they are able to educate for improved outcomes. In so doing they serve to diminish the relative differences in schooling and so enable more equitable social and educational outcomes for students than would otherwise be achieved. This creates a strong argument for the development of teachers who are able to understand the practices of schools and as a result make conscious decisions to move beyond a functionalist social theory of social

reproduction and to consider themselves as active decision makers, along with students in the learning process.

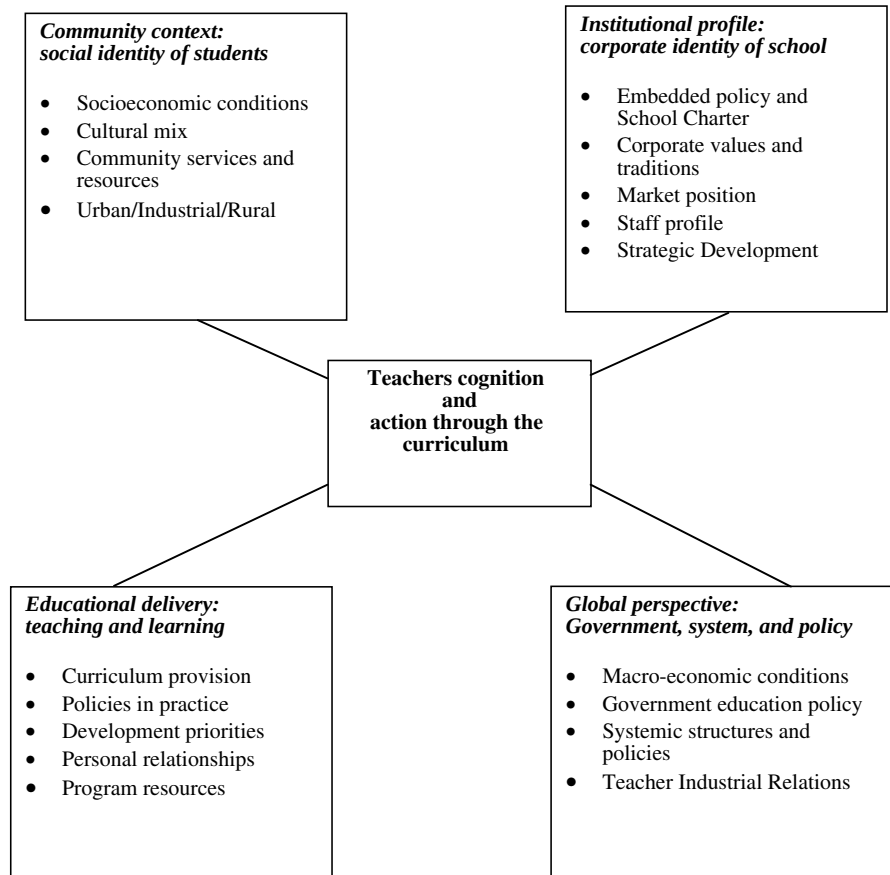
In some settings, teachers demonstrate a metacognitive awareness of their own teaching and respond to reject the hegemonic curriculum and to initiate and implement curriculum that is outside not only the government determined curriculum, but often also the expectations of parents and community for the possibility of improved social and academic achievement of their students. Such actions require conscious decision making and civic courage on the part of teachers as they develop and implement changed programs, aiming to reach beyond the basic demands of the society for technical competence in literacy and numeracy or for welfare, as adequate focus for the educational energy in working class schools. These teachers demonstrate an ability to act in ways which reflect a “*critical constructivism*” of teaching as they seek new approaches and build new curricula.

It is argued therefore that the perceptions of teachers and their understandings of their students, their students’ abilities, and their learning environments are interrelated, indeed inseparable. This has a critical impact for the work of education psychology; thinking, and action are not context-free and understanding behavior is clearly demands consideration of sociological and psychological factors, that is the sociocultural context as an integral part of teacher thinking, behavior, attitudes and actions. This research highlights the need for the construction of a new knowledge base for researching teaching, learning, and thinking. This new knowledge must be eclectic, connect the disciplines of educational psychology and sociology to understand teaching as a result of the ways in which teachers know and interpret sociocultural factors. It must be an essential component of preservice and inservice teacher education and underpin decisions about practice.

Educational psychology has a significant role to play if the school is to take a significant role in deconstructing barriers to social mobility and supporting access, rather than creating barriers and enabling exclusion. Understanding teacher cognition (as well as student learning behavior), its impact on building social and intellectual capacity is critical at both the institutional and personal level. As teachers engage in teaching practice, learning will be delivered at the point of intersection of the sociological influences outlined above and the psychological influences of teacher’s thinking. Any deliberate changes in teacher practices are responses to the interpretation of family needs and wants, as well as to teacher’s education knowledge and experience, and set within the framework of policy and practice at both the global and local levels of management of education. Individual action is therefore always within the context of a wide range of structures and institutional forces, so highlighting the importance of understanding the ways in which teachers think about their students and students’ families and backgrounds as well as their personal goals and practices. The model for the relationship outlined in Figure 86.1 illustrates how teaching cognition (the psychology of education) filters and interprets school and community influences (the sociology of education) in deciding curriculum, teaching, and learning.

Effective change is driven by the power to make decisions and to access the appropriate resources to work against the prevailing culture to act critically to construct positive experience and outcomes. Working against the prevailing culture is difficult, but can be sustained when the innovative change is connected to cultural change and supported by systems and government policy. The perceived influences of parents and community are as powerful as the explicit impact of system and policy in supporting and inhibiting change and innovation. Without systemic and policy support for practical reform, some teachers will continue to struggle to address issues of equity and learning improvement in environments which very often serve to reduce the impact of their efforts and abilities.

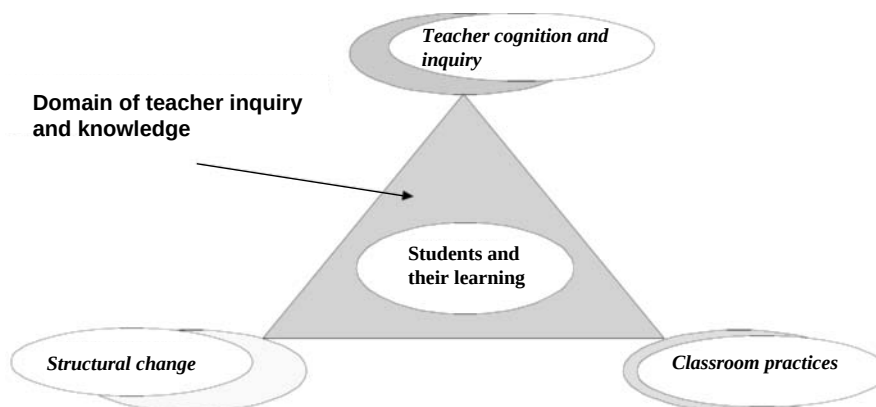
Such change begins with educational psychology leading the way in supporting teachers to develop a critical understanding of personal knowledge and practice. Making this knowledge

Figure 86.1**Interpretative framework for curriculum decision making: The psychological and social context of education**

explicit and understanding the social factors that inform teacher cognition provides the capacity to make different decisions, which support better student learning and social outcomes. It is not sufficient to encourage students to be risk-takers, innovative, and change agents; the responsibility lies initially with teachers in schools and universities to be change agents in their own work.

A starting point for this inquiry with and about teacher cognition draws on a third related discipline in the form of philosophical or critical inquiry. This deep reflective inquiry has the capacity to enable individual teachers and groups of professional to challenge their accepted beliefs, values, and practices as well as strengthen commitments. There are several layers of this development, which are critical for students and teachers alike as we grow to make sense of and improve our world. They include the establishment of personal goals for learning and the way we relate to others and the world; professional inquiry, research and reflection on practice to ensure teacher knowledge is current and relevant; nurturing values of social democracy and understanding of social contexts both local and global; and participation in shared professional discourse of teaching and learning. By engaging with others in the development and critique of ideas and practices, a more humanist and holistic approach to teaching and learning can be developed, which is cognizant of and responsive to a range of social and cultural influences

Figure 86.2
Teacher thinking for democratic learning, school reform and social justice



on learning. This engagement enables teachers to explicitly identify individual differences and respond appropriately to these. As well, a professional discourse of change for improvement is generated, based on professional inquiry, reflection and research.

In a climate of globalization and uncertain futures collaborative inquiry fosters civic courage and increased possibility for action and social change. The relationship between psychological influences of teacher cognition and social outcomes of schooling, as illustrated in Figure 86.2 suggests a demand for educational psychology to support teachers to learn about themselves as the basis for improving student learning:

- Personal understanding and knowledge which underpins personal practice and leads to the development of
- Professional knowledge which informs teaching practice which enables
- Student inquiry and thinking development for improved student learning outcomes which in turn support the achievement of
- Democratic and socially just schools and enhanced equity of educational opportunity.

TEACHER SELF-STUDY: ENHANCING TEACHER AGENCY

Educational psychology has both an opportunity and responsibility to support the development of more explicit teaching cognition and decision making, so that the social context of learners is a critical consideration in setting curriculum. This will result in the development of a conscious reflexivity, or awareness of thought and action. For teachers, the potential for innovation and improved learning outcomes is derived from the professional need to discover better ways to foster student learning. Teachers' deep concern for student well-being and development is evident, but the system often acts to thwart any sustained attempt at change for improvement.

Encouraging all teachers to engage in professional development is difficult and again issues of social justice and equity colour the delivery of excellent practice in every school. It is often argued that there are impediments within Australian culture to success and innovation: the tall poppy syndrome, government bureaucracy, utilitarian politics, and cultural cringe. The delivery of inequity is bound, at least in part, to the funding from the government failing to meet the needs of educating every child, and it being based on the assumption that all students come to school

with the similar experience. These institutional inequities serve to diminish teachers' capacity to innovate and reform schools. Consequently, a recognition of the diverse backgrounds and experience must be attached to real resources for teachers and students.

The critical link between teaching and learning is defined as personal agency, shaped by a range of structures—curriculum, resources, and policy. Understanding the relationship between structures and agency, Giddens (2000) explains, is the basis for informed and democratic decision making. Exploration of these links must be lead through the field of psychology in teacher education so that teachers can study their own motives and thinking and consciously engage in the development of democratic practices for the direct improvement of curriculum provision. In such environments, decision making will serve the interests of students, teachers (and communities) and lead to improved learning outcomes for students. As a consequence, the social and cultural impact of improved working, teaching, and learning conditions leads to the development of shared leadership, stronger relationships, and changed practices.

Similarly, the ability to act is also shaped by knowledge and experience: knowledge of self, others, and the contextual influences. Teachers as agents of change make choices. They will act to change and disturb the curriculum, or to reinforce the existing curriculum. It is the way in which this agency is exercised, that determines the curriculum which is delivered and the impact it will have on student learning outcomes. Through teachers' study of their behavior and cognition, they will be better informed and prepared to respond to the prevailing social pressures so that professional and personal reflection leads to significant and meaningful change for students. This new direction for educational psychology, that of teacher self-study, connects teacher cognition to social improvement, strengthens reflective inquiry, and opens the way for a better teaching and learning practice.

FURTHER READING

- Cherednichenko, B. F. (2000). *A Social Analysis of the Teaching of Thinking Skills in Victorian Primary Schools*. PhD thesis, University of Melbourne.
- Eisner, E. (2001). What Does It Mean to Say a School Is Doing Well? *Phi Delta Kappan* 82(5), 367–372.
- Fullan, M. (1991). *The New Meaning of Educational Change*. London: Cassell Educational.
- Giddens, A. (2000). *Beyond Left and Right: The Future of Radical Politics*. Cambridge: Polity Press.
- Schon, D. (1983). *The Reflective Practitioner*. New York: Basic Books.
- Teese, R. and Polesel, J. (2003). *Undemocratic Schooling*. Camberwell, Victoria: ACER.

CHAPTER 87

Recognizing Students among Educational Authorities

ALISON COOK-SATHER

It is a striking phenomenon that rarely, since the advent of formal education in the United States, have students been consulted about whether or how schools are serving them. With few exceptions, adults have controlled the design, implementation, and reform of K–12 education. This practice has its roots in deeply problematic assumptions about young people’s capacities and about relationships between young people and adults. These assumptions issue, in part, from the frameworks provided by educational psychology. As part of the larger project of this encyclopedia to redefine traditional notions within educational psychology, I present in this chapter an argument for recognizing students’ capacities as critics and creators not just consumers of education and a parallel argument for rethinking who should learn from whom in relationships between young people and adults.

Traditional educational psychology has viewed students as disempowered participants in the educational process who must be well monitored and restricted to specific roles. According to this view, students are passive recipients and consumers of knowledge or depersonalized objects whose learning can be manipulated without their active participation in the planning and implementation of that learning. Using the concepts of recognition, authority, perspective, and listening, I argue for a reconceptualized role for students that sharply contrasts the restrictive roles promoted by traditional educational psychology.

What does it mean to use the concepts of recognition, authority, perspective, and listening to reconceptualize student role such that we recognize students among educational authorities? It means that instead of continuing to impose on students a traditional, adult-generated, agrarian-and subsequently industry-based model of education, we acknowledge the world in which today’s youth live—one saturated in information technology, youth cultural media, and political currents set in motion by globalization. It means that instead of excluding students from important policy- and practice-shaping conversations, we create legitimate and valued spaces within which students can speak and to re-tune our ears so that we can hear what they say. It means that instead of assuming we know what and how students need to learn, we acknowledge their knowledge, interests, and goals and invite students to assume active roles in critiquing and reforming education. In short, it means changing the structures in our minds that have rendered us disinclined and unable to elicit and respond to students’ perspectives and changing the structures

in educational relationships and institutions that have supported and been maintained by this disinclination and inability.

Judging from the little but important work that has been done in this area, profound changes in role and relationship as well as in learning can result when adults listen to students. When adults listen to students, they can begin to see the world from those students' perspectives, make what they teach more accessible to students, conceptualize teaching, learning, and the ways we study them as more collaborative processes, even change what they teach and who they are. When students are taken seriously and listened to as knowledgeable participants in important conversations about schooling, they feel motivated to participate constructively in their education. Because they experience daily the effects of existing educational practices, students have unique and valuable views on education that, when elicited and shared, have the potential to transform schools into institutions responsive to rather than disconnected from the modern world.

Over the last decade some educators and educational researchers have attempted to create new roles for students and to challenge traditional notions of who has relevant knowledge about education. These long overdue efforts are important both for the essential ways in which they attend to student perspectives as well as for the ways they throw into relief the work that remains to be done. In the following discussion I evoke the historical images of students that have contributed to their exclusion from conversations about educational policy, practice, and reform. I then outline a variety of attempts to attend to student perspectives on educational practice undertaken over the last decade. I conclude with a detailed discussion of how attitudes and institutional structures need to change if we are to more consistently and fully recognize students among those with authority on educational practice.

HISTORICAL IMAGES OF STUDENTS

Although it is rarely articulated as such, the most basic premise upon which different approaches to educational policy and practice rest is trust—whether adults trust young people to be good (or not), to have and use relevant knowledge (or not), and to be responsible (or not). The educational institutions and practices that have prevailed in the United States both historically and currently reflect a basic lack of trust in young people and have evolved to keep students under control and in their place as the largely passive recipients of what adults decide should constitute an education.

Keeping the young under control and in their place took the form it has to this day after the industrial revolution in the nineteenth century. The national obsession with efficient production in all realms plugged learners into bolted-down desks and lock-step curricula through which they were guided by the teacher-as-skilled-engineer. More progressive, humanistic conceptualizations of learners based on trust in their capacities and inclinations have always run parallel to the impulse to contain and control young bodies and minds, but they have remained alternative, not the norm. Arguments that students should be nurtured and allowed to learn in their own ways at their own pace, child-centered notions of education, and alternative models, such as those in Waldorf and Montessori schools, run counter to but do not displace the dominant view of students and approaches to their education. Even these more progressive approaches do not cede students' authority comparable to adults' in imagining and designing educational opportunities.

A COLLECTION OF EFFORTS TO RECOGNIZE AND RESPOND TO YOUNG PEOPLE'S PERSPECTIVES

Calls to listen and respond to what students have to say about school have sounded intermittently since the early 1990s. Since then, a variety of efforts have been made to attend more carefully and to respond to student perspectives. In the following section I will briefly outline these

efforts. While all of them represent important steps toward recognizing students as authorities, the majority of them unfold within adults' interpretive frames and thus leave ultimate authority on education in the hands of adults. Only a few strive to shift that locus of authority, include students' voices and perspectives in larger conversations about policy and practice, and also have students help define the terms of those discussions.

Constructivist Perspectives

A wide variety of pedagogical practices aggregate under the term "constructivism." I do not detail this variety here but focus rather on what all constructivist approaches have in common: the belief that students actively construct their own understandings. In contrast to the traditional transmission model of education, constructivists carefully observe their students and develop learning opportunities that allow students to explore their ideas and make their own meanings. Many constructivists also argue that teachers can improve their practice by listening closely to what students have to say about their educational processes. Basically, constructivists argue that students need to be authors of their own understanding and assessors of their own learning. Embracing this belief, many constructivists attend to student learning processes and feedback on their learning experiences with the goal of changing pedagogical practice so that it better facilitates that learning. In short, constructivists recognize students as authorities by making space for those students to be agents in their own learning.

Critical Perspectives

Critical pedagogies not only position students as active in their own knowledge construction, they also foreground the political nature of education. Critical pedagogy focuses on critiques of social injustices and inequities and calls for the empowerment of students to develop knowledge that will help them extend their understanding of themselves, of the world, and of the possibilities for changing both. Approaches to teaching and learning based on critical pedagogy are built around adult-generated topics or around themes that are relevant to and which emerge from students' own lives. They often embody multicultural and anti-racist educational theories and practices that have evolved to counter discriminatory and exclusionary tendencies in education. All approaches within critical pedagogy embrace a commitment to redistributing power not only within the classroom, between teacher and students, but in society at large. Thus, critical pedagogies recognize students as authorities by inviting them to see and change societal inequities.

Social critics access student perspectives from a different angle but with a similar goal: their aim is to critique dominant educational policies and practices, but they write as those neither in the classroom nor in the formal role of educator or educational researcher. Writing from the perspective of critic positioned outside the classroom but dedicated to illuminating the experiences of those within classrooms, social critics produce texts that appeal to a wide readership and thus help to inform the general public about students' experiences in school. And because these authors are not perceived by the public as educators—as those with a particular bias—they can present a critical angle on the classroom that could not be offered by educators, and they can be heard by the public in a way that educators cannot be. Thus, social critics call attention to the authority of students' experiences as legitimate grounds for changing educational policies and practices.

Although they share with critical pedagogues and social critics a commitment to challenging and changing current power relations in education, some postmodern feminists nevertheless caution against uncritically or unreflectively privileging student perspectives. Some feminist theorists

argue that calls for listening to student voice as a central component of student empowerment actually perpetuates imbalanced power relations because they do take into sufficient consideration the complex ways that power works within pedagogical relationships. These theorists remind us that for every voice that speaks another is silent, and that we cannot simply assume or act as though our classrooms are safe and inviting spaces. There is empirical research on classrooms in which teachers have attempted to create empowering learning conditions that shows how complex and fraught such efforts are. The cautions articulated by feminist scholars who have analyzed efforts at student empowerment challenge us to examine our assumptions and motives when striving to question or change power dynamics and the structures that support them. Thus, feminist theorists challenge us to carefully consider what recognizing students as authorities really means.

Ethnographic Perspectives

Although there is certainly a significant diversity of perspectives and practices within each of the realms of constructivism, critical pedagogy, and postmodern feminist theory and pedagogy, each group has, respectively, a shared commitment that underlies its members' approaches to attending to student voices. A wide range of ethnographic researchers, those who embrace constructivist, critical, and/or feminist theories and those who do not, strive to access student perspectives from another angle. Positioned primarily outside the classroom but interested in the pedagogical interactions within classrooms, ethnographers of education take a range of approaches to integrating student voices into their own critiques of school and presenting the perspectives voiced as a legitimate impetus for change.

Using their own frames of reference, these researchers seek student perspectives to fill in those frames. They discuss the change in perspective among participants in school communities' reform efforts; they invite students who have been silenced to address issues of identity, difference, and racism; they endeavor to access students' perspectives on what significantly affects their school experiences; they explore what it means to listen to student voices and how to do so. Such work foregrounds the challenges and complexities, as well as the urgency, of efforts to recognize student perspectives. And perhaps most importantly, this work recognizes student perspectives as authoritative by including them in the larger policy- and practice-shaping conversations from which students are generally excluded but which determine their lives in school.

Students' Perspectives

All the efforts to attend to student perspectives that I have mentioned thus far unfold within adults' interpretive frames and thus leave ultimate authority on education in the hands of adults. Another group of educators and educational researchers strives to shift that locus of authority and attend to young people's own interpretive frames of analysis both within classrooms and in conversations about policy and practice. Unlike the other efforts discussed thus far, these educators and researchers employ students' voices and perspectives not only in support of their own agendas as educators and as evidence that change is needed but also as the terms according to which practice and plans for reform should be shaped.

Most striking about these efforts is that those eliciting student perspectives do not have any fixed idea about what they are going to find. Furthermore, the goal of many of these studies and revisions of practice is to inspire students to feel like and be co-researchers. Thus students speak for themselves as well as about themselves.

LOOKING TO ANOTHER PROFESSION: RECOGNIZING CLIENTS' PERSPECTIVES IN MEDICINE

Each of the outlined examples of efforts to challenge the traditional ways in which students have been positioned in relation to their education offers an important dimension to a necessarily multidimensional revision of who should be recognized as an authority on educational theory and practice. These examples offer particularly useful partial answers to questions about the purpose of education, who has the perspective and the power to decide, and how to begin to change assumptions about both. To situate these efforts in relation to other reform efforts, I want to mention briefly recent trends in the field of medicine. The ways in which some medical practitioners have reconceptualized their patients' roles offer us inspiring models in education.

Clients in the medical realm are very much like students in education: they are those whom the profession is intended to serve, but they are often those with the least agency in the service process. For a long time professionals in the medical field assumed, like educators, that they knew best how to conceptualize and deliver service. Over the last twenty years, however, the provider/client relationship and client satisfaction with service delivered have become foci for research and practice. Many doctors now argue that understanding patients' concerns, expectations, and requests is essential for health care practitioners, policymakers, and researchers. Recent research indicates that an increasing number of doctors elicit patients' perspectives both while care is being given and subsequent to delivery. There are even some nascent movements toward including patients' assessments of care in the training of medical practitioners. Because research finds that positive patient/provider relationships and patient satisfaction are positively associated with quality care, many medical researchers advocate not only attending to what their patients want but also promoting patient autonomy built on kindness and respect for the patient as a person. There is, in fact, an international movement toward what has been called "patient-centered" medicine, and research indicates that when patients perceive their care to be patient-centered, the health care provided is more efficient (i.e., there are fewer diagnostic tests and fewer referrals necessary).

These recent changes in the medical field offer evidence that it is possible to change attitudes and practices—even in a profession that has traditionally considered the adult professional to be the only one with legitimate knowledge and perspective.

A CASE STUDY OF RECOGNIZING STUDENT PERSPECTIVES

As someone who has maintained a project for the last ten years that aims to recognize students as authorities on educational practice, I can speak from inside the experience of striving to elicit students' perspectives and of learning to listen to and act on them. The project I have maintained in collaboration with high-school-based educators is called Teaching and Learning Together. Part of an undergraduate teacher preparation course, the project invites both the spoken and the written perspectives of young people into conversations about teaching and learning within the following forums: a weekly exchange of letters between preservice teachers enrolled in the course and selected students who attend a local public high school; weekly conversations among the preservice teachers in the college classroom; and weekly conversations between the high school students and a school-based educator at the high school. Through these forums this project positions high school students as authorities among other authorities, including teachers, teacher educators, and published researchers. My goal is to challenge the preservice teachers to develop beliefs and practices that are guided by what high school students, not only adult authorities on educational policy and practice, identify as critical issues in teaching and learning.

When one tries to alter established educational structures and power dynamics, one necessarily faces a variety of difficulties, which are also opportunities. This has certainly been my experience. There are the logistical challenges of connecting educational contexts (school and college) and of collaboration with school-based educators and high school students who have demanding schedules and numerous commitments. There are the psychological challenges of convincing young adults on the brink of their first careers that they have something to learn from the people they are planning to teach. There are the intellectual challenges of fostering communication between groups of students who have different ways of thinking and talking and who move in different educational cultures. And there are the personal challenges attendant upon any such deep questioning of established beliefs and practices. Before, during, and after each iteration of Teaching and Learning Together, one of my roles is to work through the disruptions such an approach prompts in a way that inspires all participants to keep learning.

These challenges spring from the fact that authority has always been assumed to belong to educational researchers and theorists. It is difficult even for preservice teachers within a project that frames high school students as authorities to learn to listen to those students. As one preservice teacher who had participated in Teaching and Learning Together put it, “being in the [college] environment for four years, I just did not think that I could learn anything from [my high school partner] . . . at the beginning I came in to the . . . project with the idea that she could probably learn something from me.”

The challenge to listen at all is equaled by the challenge to learn to listen differently once one decides to listen. One preservice teacher who had participated in Teaching and Learning Together was deeply frustrated with her dialogue partner until, as she explains, “I realized that I was expecting [my partner] to speak in my language. Amid our discussions of student voice and its value, I had neglected to realize that his learning, his method of articulation, was through experience and concrete examples. I had sought to give him voice while failing to hear the sound of his individual words.” It takes time and continued effort to change what are deeply inscribed ways of thinking about who has authority on education.

Experiences of and responses to published efforts to foreground student perspectives present similar challenges. Most power relationships have no place for listening and actively do not tolerate it because it is very inconvenient: to really listen means to have to respond. Listening does not always mean doing exactly what we are told, but it does mean being open to the possibility of revision, both of thought and action. At a minimum, it means being willing to negotiate. Old assumptions and patterns of interaction are so well established that even those trying to break out of them must continue to struggle. And understanding that is part of what it means to listen.

TOWARD MORE FULLY RECOGNIZING STUDENT PERSPECTIVES

Although each of the efforts I have reviewed this far has an essential element to contribute toward the goal of recognizing students among the authorities on educational practice; we must go beyond what has already been accomplished. Decades of calls for educational reform have not succeeded in making schools places where all young people want to and are able to learn. It is time to change profoundly our notions of students’ capacities and who learns from whom in relationships between adults and young people.

Step One: Learning to Listen

A first step toward recognizing students as authorities on educational practice is learning to listen to those who experience schooling every day. Although students are rarely asked for their perspectives, when they are asked, they offer insights not only for teachers but also for themselves.

High school students who participated in Teaching and Learning Together as part of their teacher preparation commented on how their participation illuminated and sometimes changed their sense of themselves and their experiences in school. One student explained that “[participating in this project] made me step back as a student and just look at how everything was going on in the classroom. It made me look at how I was being taught and how teachers worked.” When students better understand how teachers work—the complement to teachers’ better understanding how students work—they can participate more constructively in the educational process. Reflecting on her participation in Teaching and Learning Together, another high school student described how her sense of responsibility had changed: “It made me think about how to be a better student cause it makes you think that a teacher is up there and they worked hard to come up with this lesson plan and if you’re not going to put in a hundred percent then you’re letting them down in a way.”

When students have the opportunity to articulate their perspectives on school, they not only offer insights into that schooling that are valuable for educators. They also have an opportunity to hone their own thinking—to think metacognitively and critically about their educational experiences. And as a result of this newly gained perspective and investment, students not only feel more engaged but are also more inclined to take responsibility for their education because it is no longer something being done to them but rather something they do.

Of course students, like adults, do not always have helpful things to say. Sometimes they have nothing to say, sometimes they say things they have not thought through, and they always speak from complex positions. It is a challenge both to the students themselves and to those committed to listening to them to learn both to speak and to listen.

Step Two: Taking Action with Students

If we bring together the various commitments that characterize existing efforts to recognize students among educational authorities, we can formulate a place for taking action with students. From century-old constructivist approaches to education we can retain the notion that students need to be authors of their own understanding and assessors of their own learning. With critical pedagogy we can share a commitment to redistributing power not only within the classroom, between teacher and students, but in society at large. Like critics positioned outside the classroom, we can find ways of illuminating what is happening and what could be happening within classrooms that the wider public can hear and take seriously. Keeping in mind postmodern feminist critiques of the workings and reworkings of power, we can take small steps toward changing oppressive practices, but we can also continually question our motives and approaches in taking these steps. Like the few educational researchers who have included student voices in arguments for how to reform education, we can include student perspectives in larger conversations about educational policy and practice. And finally, we can include students’, as well as adults’, frames of reference in conversations about educational policy and practice; we can take seriously their frames of reference and the assertions made within them among other impetuses toward change.

With these commitments, precedents, and nascent efforts as a foundation, we can begin to think about next steps. One possibility is using existing forums. As some of the efforts outlined above illustrate, established forums and publications can expand to include students. When educators and educators-to-be learn to listen to students, they can lead the way for others to change. After carrying on an extensive epistolary exchange with a high school student focused on respect, one preservice teacher who participated in Teaching and Learning Together wrote about how her high school student partner taught her that she has “a *responsibility* to include multiculturalism and diversity in the curriculum.” This future physics teacher reflected that “by keeping silent on this issue, I am teaching that only white students can become scientists.” Another preservice

teacher gained an equally invaluable insight after reflecting on his exchange with a high school student. This student's eloquence and metacognitive awareness had caused the preservice teacher "to underestimate my role in helping him to further explain his ideas"; but, after realizing his misreading of the student, this preservice teacher took into his career as a social studies teacher a new awareness of his responsibility, which can only be truly fulfilled by listening to students. Likewise, two years after participating in Teaching and Learning Together, teaching in a middle school, one graduate explained, "I don't think it always occurs to teachers to ask students about their opinions. But I do it as a matter of course in my classroom."

The changes in attitude and in practice these preservice and practicing teachers model are inspiring calls to more fully recognize and respond to student perspectives. And yet it is important to acknowledge that such accomplishments are not and cannot be the end of the story. We cannot ever learn, once and for all, to listen. We must continually relearn to listen—in every context, with each group of students, and with each individual student. The understanding that each time we will need to learn to listen anew should be as inspiring as it is daunting. It is our opportunity as educators to meet the very challenge we pose to our students: to learn.

Striving to change national contexts for conversation and engage in just this kind of learning, researchers can include students in more presentations at academic conferences and in more publications. The mere presence of those who are generally only talked about changes those conversations. When we as educational researchers and teachers hear directly from students about their experiences of school, we cannot as easily discuss problems in education and potential solutions in abstract or ideal terms, nor can we as easily dismiss the critical perspectives and the suggestions that students offer. Yet both conference forums and publication processes present challenges. The inclusion of students at conferences presents logistical challenges—securing permission to escort minors and addressing questions about who pays for the students' travel and accommodations, just to name a few. Publication poses other challenges, such as tackling issues concerned with who is in charge of the composing and editing processes in student-generated texts. It is not easy to adjust to the changes required. The greatest challenge, then, is how to change the terms of the conversations and practices. Unless students' voices matter and are essential to the actions we take, we run the risk of reinscribing old patterns of power distribution and approaches to change.

A step beyond including students in existing forums is the creation of new forums within which all stakeholders can come together and talk amongst themselves, each bringing a perspective that is valued and respected by all the others. Like the classroom-based projects, conferences, and publications that foreground student perspectives and invite students to define the terms of discussion, suggest directions, and propose alternatives to the status quo in teaching and learning, more forums need to be created within which students' critiques of current practices and visions for other possibilities are put first.

Thus among the most basic implications of this call to recognize students' perspectives is that there need to be sustained contexts and on-going dialogue about the meaning and nature of education. At the classroom level, at the administrative level, at the school and community levels, and at local and national policy levels, every participant in formal education needs to ask him- or herself where the opportunities for this kind of dialogue exist or could exist within his or her context. Where in the classroom? Where in the school day? Where in the administrative structure? Where at school board meetings? Where in district, state, and national forums? Specific questions educators can ask under the umbrella of this overarching question include the following:

- With whom do I speak about how education is working and how it might need to change?
- Where does the impetus for changing a curriculum or a form of interaction in school come from, and how can students be more central to that process?

- What are some important barriers to pursuing this change in attitude and practice and how can we address them?
- How might our school's or system's review and reward structures be revised so that student perspectives are not only an integral part of the feedback elicited but also a legitimate source upon which to draw in conceptualizing revisions of policy and practice?

Underlying the answers to these questions, which would necessarily vary by context, is the obvious need to rethink the logistical challenges posed by already overly constricting schedules within which all members of the school community labor. Some answers might be relatively easy, such as including a question on a standard teaching or administrative evaluation form that asks: Did the instructor make changes during the class that were responsive to learning needs expressed by students? If addressing this question, and providing evidence of change based on its answers, were not only legitimate but also required for review and promotion, the structures that currently support the exclusion of student perspectives from conversations about educational policy and practice would be changed. This move in education would be in keeping with the recognition among medical professionals that they have failed to attend sufficiently to the experiences and perspectives of those they aim to serve and the revision of their professional practices to include clients' perspectives to rectify this failure.

Cognizant of many critiques of power dynamics, I do not believe that power can or should be eliminated from any interaction. What can be changed, however, is who is invested with power and how participants in a class, an institution, or a national debate about education are supported and rewarded for participation. If, as in some of the approaches discussed here, attention to students is not only a mandatory but also a genuine response or follow-through on what is heard, then we begin to see changes in both conceptual and institutional structures.

Challenges will remain that we will not quickly overcome in including students in forums for conversation about education. Almost all the challenges reflect what may be a basic human tendency: to fall back consciously or unconsciously on long-standing assumptions and practices, what is familiar and comfortable—or even familiar and uncomfortable. The tendency to evoke or simply rely on the assumed in classrooms characterizes many researchers' and policymakers' impulse to evoke traditional, and therefore generally conservative, categories of analysis. These evocations are often made with the conscious or unconscious goal of disabling efforts to think and act in new ways in the context of educational practice and reform.

Even as we strive to change the current structures and power distribution in education, we must keep in mind that individual students move on. Just as we cannot once and for all learn to listen, we cannot once and for all consult students. This must be an ongoing process. No particular group of students can or should be invested with the responsibility for shaping educational practice and reform. However, all students should be consulted and their words and perspectives included in deliberations about schooling and school change. It is the collective student voice, constituted by the many situated, partial, individual voices, which we are missing.

CONCLUSION

The recognition of and response to student perspectives for which I am arguing here is not simply about including students as a gesture. It is about including students to change the terms and the outcomes of conversations about educational policy and practice. Such a reform cannot take place within the dominant and persistent ways of thinking or the old structures for participation. The terms of the conversations, who participates in them and how, and the ways we act on what comes of the conversations must be reconstituted. As I have argued elsewhere, to make education a viable and revitalizing process, we must reconceptualize the roles participants play and be

willing not only to change the ways we think but also constitute a new language and a new culture for reforming education.

Like those in charge of the health care system, educators think that we know what education is and should be. It is in part our roles as adults, and thus those responsible in many ways for the younger generation, that condition us to think that way. However, given the unpredictable and unprecedented ways in which the world is changing, we do not know more than students living at the dawn of the twenty-first century about what it means to be a student in the modern world and what it might mean to be an adult in the future. To learn those things, we need to embrace more fully the work of recognizing students' perspectives in conversations about schooling and reform. Education has traditionally been about changing students to make them fit. Perhaps education now needs to be about changing adults to fit students and the future.

TERMS FOR READERS

Authority—An authority is one with rightful power. One who has authority has power and esteem born of others' recognition, one has competency. An authority is one who is appealed to as a legitimate source of knowledge and understanding. An authority, like an author, can create something, can participate in important decision-making processes, can make change.

Listening—To listen is to give close attention to with the purpose of hearing; to yield to advice or admonition. Thus listening is paying attention with the intention of responding, of acting in response. Listening to those who have previously been unrecognized or who have had perspectives and roles without a voice means retuning ears to hear, then being ready to act on what we hear, and then listening again and anew.

Perspective—Perspective means two seemingly different things: on the one hand, a narrow, limited, albeit valid angle or standpoint from which one looks; on the other, a wide and encompassing view. It means both the single angle and the interrelation of multiple aspects of a subject; thus it implies both looking and understanding, individual and collective.

Recognize—To know again, to admit the truth or validity of, to acknowledge. To recognize is to see and acknowledge something one has been ignoring or was not aware of—to see it and acknowledge it either for the first time or again and anew. It carries with it the implication of thinking again, of rethinking, as well as seeing, re-seeing, and seeing anew.

Role—A role is a part, a function, a prescribed piece in a performance, or the expected behavior or participation in a social interaction. A role is constituted by a collection of expectations that others have for a person occupying a particular position. It implies as well a set of rights and responsibilities as defined and approved by the system in which the person acts. In addition, role implies the existence of other roles that have bearing on one another. People occupying different roles are ascribed different degrees and kinds of power. These power dynamics affect interactions and people's sense of themselves, which are closely intertwined. They influence people's thinking about what they are responsible for, what is possible for them, and what is not. Essential here is the notion that roles are not fixed identities but rather socially constructed phenomena that can be revised.

FURTHER READING

This chapter is based on an article I published in *Educational Researcher* called *Authorizing Students' Perspectives: Toward Trust, Dialogue, and Change in Education* (Vol. 31(4), May 2002, 3–14). This

article—which can also be found at <http://www.aera.net/pubs/er/toc/er3104.htm>—offers extensive research support for the claims I make in this chapter. I include below a short list of the texts that have been most influential on my work:

- Dewey, J. (1964). My Pedagogic Creed. In R. D. Archambault (Ed.), *Dewey on Education*, pp. 427–439. Chicago: The University of Chicago Press.
- Duckworth, E. (1987). The Virtues of Not Knowing. In *The Having of Wonderful Ideas and Other Essays on Teaching and Learning*, pp. 64–79. New York: Teachers College Press.
- Freire, P. (1998). *Pedagogy of Freedom*. Lanham, MD: Rowman & Littlefield Publishers, Inc.
- Luke, C and Gore, J. (Eds.). (1992). *Feminisms and Critical Pedagogy*. New York: Routledge.
- Weis, L., and Fine, M. (Eds.). (1993). *Beyond Silenced Voices: Class, Race, and Gender in United States Schools*. Albany, NY: State University of New York Press.
- Welch, S. (1990). *A Feminist Ethic of Risk*. Minneapolis, MN: Fortress Press.

CHAPTER 88

Critical Consciousness and Pedagogy: Reconceptualizing Student-Centered Dialogue as Educational Practice

CATHY B. GLENN

Dialogue, particularly when it is student-centered, is commonly understood by critical pedagogues as the principal communicative means for engaging students and developing in them critical consciousness. This approach to educational practice directly challenges mainstream educational psychology models of education that privilege monologic approaches to pedagogy. As such, a critical approach often assumes that student-centered dialogue—in contrast to monologic lecturing that assumes knowledge can (and ought to) be transmitted to students—is tantamount to critical education. However, dialogue's privileged status in critical approaches to education has been critiqued as not only being difficult to facilitate in some institutional settings, but also as being uncritically appropriated without consideration of its limitations. In this chapter, those limitations are addressed and the possibilities of an alternative critical orientation and practice are explored via an ethnographically oriented case study. Using Raymie McKerrow's theory of critical rhetoric as an approach to teaching that nurtures critical consciousness without privileging student-centered dialogue, I analyze the strategies of one critical educator in a complex institutional setting: a classroom of over 100 students. Expressly, the focus in this chapter is an exploration of a critical communicative orientation that resists mainstream educational psychology models without uncritically jettisoning a lecture format that a critical educator may be called upon to employ in a classroom with a large student population. Ultimately, what is demonstrated in this case study, in contrast to the vast majority of critical pedagogy literature, is that critical education that resists mainstream educational psychology need not privilege student-centered dialogue in order to develop students' critical consciousness.

Mainstream educational psychology embraces a Piagetian formalism, which tends to privilege cognitive assimilation by emphasizing, in teaching practices, students' ability to understand phenomena by fitting it into their existing cognitive structures. Monologic teaching practices, which tend to privilege lecture formats, support assimilationist objectives by situating the teacher as the expert whose task is to deposit knowledge into passive and stable student-receptacles. In this model, when students are confronted with phenomena or ideas that disrupt their constructed reality, a mainstream educator will focus on helping students assimilate the new information into existing frameworks in order to resolve the tension that is created by contradictory information. It is an approach that presupposes the stability and discreteness of existing structures and, thus,

tends to reify and reproduce them while eliding their interconnected constitutiveness. More than this, formalism is an objectivist educational psychology that demands students disconnect their processes of valuing, knowing, and being from each other and abstract or decontextualize those experiential processes from constitutive sociocultural constructs. Put simply, formalist educational psychology reproduces students and educators who have difficulty understanding their roles in maintaining existing constructs and the possibility of their transforming existing conditions.

Critical educators, on the other hand, recognize and embrace a postformal, accommodationist educational psychology. Accommodation, in Piagetian terms, is the move to adjust one's cognitive structures to account for novel phenomena or ideas. Rather than fit disruptive information to existing cognitive structures, a critical teacher helps students develop a critical consciousness—that is, critical educators nurture students' abilities to critically and self-reflexively reconceive their cognitive frameworks in the face of dissonant phenomena or ideas in order to make room for novelty and the possibility of change. Critical accommodation is a subversive practice that takes seriously the constitutiveness of subjectival meaning-making processes: it is a hermeneutic approach that embraces emotion and intuition in relation with intellect and reason; situates students and teachers in sociocultural contexts that are always already historical; is explicitly political in its recognition of interconnected relations and patterns among discourse, power, and identity; and, is future oriented in its anticipatory, yet open-ended and contingent orientation. From this perspective, students and teachers, together, can explore difference in classroom settings as moments of opportunity for radical change. Dialogic teaching practices are often the privileged communicative mode in which critical educators resist mainstream educational psychology's objectivist and abstractive tendencies. Instead, dialogic means are seen as essential in helping students recognize their roles in reconceiving cognitive constructs and creating the possibility of transforming sociocultural conditions.

What is at stake in the debates between mainstream and critical educators is the very psychological health and well-being of students and educators, as well as the possibility for resisting oppressive and inhumane constructs and, in the process, constructing just sociocultural conditions. These stakes are far too high to simply privilege dialogue as the only means to develop critical consciousness, especially when institutional settings may preclude student-centered dialogue. Instead, what is needed are communicative strategies that critical teachers can employ, even in the most difficult institutional settings. To that end, this chapter explores one critical educator's rhetorical strategy to engage, in a lecture format, a large number of students without abandoning her critical approach. First, in the section that follows, is an overview of critical pedagogy as it relates to student-centered dialogue and development of critical consciousness. The second section addresses limitations of student-centered dialogue, troubling the facile dialogue-monologue dichotomy, and clears room for alternatives. McKerrow's praxis-oriented aspects of critical rhetoric, as an alternative to privileging student-centered dialogue, are outlined in the third section. In the fourth section, the case study, the various teaching strategies employed are analyzed via McKerrow's concepts. In the last section, I suggest possible implications for theorizing critical pedagogy when student-centered dialogue is not a viable option. The case study analysis suggests, ultimately, that student-centered dialogue is not the only—nor is it an essential—means for helping students develop critical consciousness.

CRITICAL PEDAGOGY, CRITICAL CONSCIOUSNESS, AND STUDENT-CENTERED DIALOGUE

In general, a principle aim of *critical pedagogy* is the creation of educational conditions—by educators and students in concert—within which students are able to develop their *critical consciousness*. The pedagogical process of developing critical consciousness involves working with

students to recognize, evaluate, and negotiate structures of power and knowledge. The objective of this pedagogical focus on developing critical consciousness is that students will come to understand themselves as active agents, within and as a part of those structures of power-knowledge, facilitating identification and creation of conditions for the possibility of humane change in oppressive sociocultural constructs. As part of this critical pedagogical approach, *student-centered dialogue* is viewed as essential in facilitating the development of critical consciousness. Critical pedagogy, then, is an educational orientation that directly challenges transmission models of learning, which are models that assume and privilege the possibility that knowledge can (and ought to) be transmitted unproblematically (that is, without power considerations) from educators to students. This assumption is confronted, from a critical perspective, by recognizing that knowledge and identity construction is a fluid, negotiated practice that is informed by sociocultural and economic contexts within which that negotiation takes place. A critical approach to educational practices assumes that without acknowledgement of those contexts and the power that constitutes them, their conditions cannot be addressed and their detrimental oppressive influence is reproduced, via transmission model educational practices.

At least three concepts are important to define at the outset: “critical” as it relates to pedagogy, “critical consciousness,” and “student-centered dialogue.” First, “critical” is an adjective that informs those words described by it with a set of assumptions embedded in critical social theory. Those assumptions include, but are not necessarily limited to, the following: (1) language mediates knowledge and constitutes subjectivity; (2) discourse is always already constituted within relations of power, which are historically and culturally conditioned; (3) “factual” knowledge is always already value-infused; (4) subject-object-concept relationships are fluid and influenced by sociocultural and economic constructs; (5) subordination of some in society is reproduced when the subordinated accept their status as natural and/or inevitable; (6) oppression, to be most fully addressed, must be recognized as occurring at multiple intersections (e.g., race, class, sexual orientation, etc.); and (7) traditional or mainstream models of research, teaching, and thought tend toward reproduction of those oppressions. Thus, “critical pedagogy” can be understood as an approach to pedagogical theory and classroom practice that includes sociocultural contextual considerations with respect to both educators’ and students’ positionalities in processes of knowing and knowledge construction. A critical approach to pedagogy, with an aim toward social change through educational practices, emphasizes student potentiality in contributing to transformation of oppressive sociocultural constructs and, thus, moves toward realizing human emancipation. There are various other names for this approach pedagogical theory and practice (e.g., “post-formal,” “liberatory,” “anti-racist,” “emancipatory,” “radical,” “progressive,” “democratic,” etc.), all of which directly challenge mainstream transmission and cognitive models of educational theory and practice.

The second term, “critical consciousness” (what Paulo Freire coined as *conscientization*), is conceived as an ongoing process whereby learners (both educators and students) work together to move toward awareness (and awareness of their awareness) of oppressive sociocultural conditions. Critical consciousness enables recognition, on the part of students and educators, of their roles as active agents in maintaining oppression. At the same time, critical consciousness enables understanding of the possibility of students’ and educators’ roles in humanly reconstituting those oppressive conditions and realizing social justice. Because the approach challenges transmission models of learning and knowledge construction, critical consciousness differs from the idea of consciousness-raising. The latter assumes that educators can (and ought to) transmit preselected knowledge to students, “depositing” it into passive student-receptacles, thus raising students’ consciousness. Consciousness-raising is understood as a top-down process, from active educator to passive student. In contrast, critical consciousness development is conceived as an active process negotiated between students and educators; it is an equalizing educational practice that

understands students as active agents rather than passive objects. As part of the development of critical consciousness, students and educators work together to challenge, disturb, interrupt, and rupture prevailing power and knowledge narratives in order to develop critical capacities to recognize oppression and understand their own roles in both maintaining and reconceiving those narratives. Theoretically, the pedagogical aim of developing critical consciousness, then, is to facilitate recognition on the part of students of their being active subjects rather than passive objects. By extension, the practical objective is to create a classroom environment wherein students' own experience and lifeworlds (rather than preselected curriculum) become central, and wherein students and educators can, together, challenge the seeming "natural-ness" and inevitability of oppressed subjectivities and oppressive circumstances. The process of critical consciousness development is at the heart of current critical educational approaches, and the move toward development of critical consciousness assumes that student-centered dialogue is essential in facilitating that development.

The third concept, "student-centered dialogue," is understood as the intrinsic communicative modality of employing productive critical pedagogical practices. Dialogue amongst learners is most commonly understood, from this perspective, as an alternative to monological or lecture approaches. Ideally conceived, productive dialogical practices are employed as a direct challenge to transmission (or monologic) models of educational practices and are viewed as opening up critical communicative opportunities to students. Thus, dialogical communication practice from this perspective assumes that: (1) all learners (students and educators) are invited as potential communicative participants; (2) interaction among participants can be productively confrontational and/or cooperative in moving toward intersubjective understanding; (3) knowledge is constituted in interaction (rather than discovered) and existing power-knowledge constructs can be critically interrogated; (4) constituting more humane power-knowledge constructs facilitates embodiment of critical citizenship on the part of learners; and (5) critical, student-centered dialogue productively facilitates processes of critical consciousness development. That the dialogue is student-centered, again, challenges transmission models by drawing subject matter from students' own lives, language, and cultures, rather than from pre-existing curricula. It is a bottom-up approach that focuses on students' experiences, identities, and lifeworlds in an attempt to move away from top-down, educator- and text-centered curricula. Student-centered dialogue, then, affords the possibility that learners can constitute critical readings of dominant sociocultural constructs by situating educational practices within their own experiences. Moreover, it provides the opportunity to situate learning in historically informed sociocultural contexts from which learners can envision and enact social change.

LIMITATIONS OF STUDENT-CENTERED DIALOGUE: CONSIDERING ALTERNATIVES

Although the specific means engaged to facilitate student-centered dialogue vary among critical pedagogues who adopt this approach, affording a privileged status to student-centered dialogue currently is understood as synonymous with critical pedagogy and development of critical consciousness. The practical advantages of student-centered dialogue in the classroom have been a focal point in recent educational research and a large body of current scholarship explicates the transformative potential viewed as inherent in this critical approach to pedagogy. Scholars have addressed how dialogue can offer students an opportunity to rehearse social criticism, how sociocultural and identity issues can be addressed during dialogic processes, and how issues related to race, class, gender, ethnicity, and sexual orientation can be critically engaged when dialogue is student-centered. Scholars also point to the constitutive aspects of dialogue with respect to identity formation and this constitutive communication function is viewed as the primary means for helping students develop an awareness of their agency in affecting change in oppressive

circumstances. Moreover, performing as critically thinking and speaking subjects in the classroom provides, for students, the basis for their performing as citizen-critics outside it, as well.

While acknowledging the value of a student-centered approach to critical, dialogic pedagogy, an equal acknowledgement of the possibly problematic nature of taken-for-granted assumptions of such an approach is also important. Critiques of dialogic assumptions include concerns that not all learners may be comfortable accepting an invitation to dialogue when the “rules for engagement” include a confrontational style of discourse or when cooperative or therapeutic objectives require more consensus than students are willing to support or more self-closure than they are willing to offer. Thus, some students may not view dialogue as a benign invitation; rather, they may perceive that the compulsory student-centered dialogic environment acts as a coercive force in demanding their participation in a particular style of educational practice. Without acknowledging the possibility of this reading by students, dialogue may simply reproduce the very normalizing and oppressive tendencies it seeks to challenge. Moreover, the possibility of oppressive power-knowledge constructs developing in student-centered dialogue has been critically addressed by some scholars. Critical approaches to pedagogy are understood as being explicitly political, but the politics embedded in current mainstream critical approaches are viewed as an inherent aspect of approaches that privilege student-centered dialogue. Given the political assumptions of mainstream critical approaches outlined in the previous section and the extension of those assumptions into pedagogical practices by mainstream critical educators, the possibility exists that different ideological versions of “critical” may be marginalized, overlooked, or excluded. Thus, some students (and some educators) may be forced to define their position as “critical” in a manner that situates them outside mainstream critical ideologies and this may reproduce, in dialogue, the very sociocultural and political marginalization and oppression that dialogue seeks to address.

In addition to these sociocultural and ideological concerns, some scholars have questioned whether students are as passive and whether lecturing is as monologic as is commonly assumed by mainstream critical pedagogy theorists and practitioners. Dichotomous understandings of passive-active in relation to monologic-dialogic ignore the complexity of a range of different enactments on both “sides” of those contrasts. As is suggested above, some dialogic styles may be far from egalitarian and may serve to prompt students to withdraw into passivity rather than emerge as active participations, thus, inhibiting development of critical consciousness. At the same time, different styles of lecturing may afford students the opportunity for critically active engagement rather than passive acceptance of knowledge and, thus, nurture development of critical consciousness. A risk of theoretically assuming fixed dichotomies—active vs. passive and dialogue vs. monologue—is that the variety of educational practice options that span a range of both dialogic and monologic styles may be overlooked or ignored. That risk is particularly salient for critical educators who view student-centered dialogue as an essential aspect of their pedagogical practice, but who face considerable practical limitations employing it.

One of the practical limitations of employing student-centered dialogue is class size, an aspect of critical classroom organization that is rarely, if ever, a part of scholarly discussions of student-centered dialogic pedagogy. It should go without saying that each classroom context is unique and each possesses its own promise and potential; on the other hand, each also presents distinctive contextual challenges. This recognition of contextual contingency—specifically as it relates to the number of students in a particular class—is virtually nonexistent in scholarship advocating a critical approach to teaching that uses learner-centered dialogue as the means to develop critical consciousness. Facilitating critical dialogue is not an easy task, even with a relatively small number of students; it is a complicated process that requires constant communicative (re)negotiation. For those critical pedagogues who find themselves in the context of a large classroom, that communication process becomes nearly untenable. It is crucial for those educators, then, to develop specific, situated, and localized strategies in order to retain the critical character of their teaching approach while adjusting their teaching strategies to accommodate a large number of

students. One such strategy is suggested by Raymie McKerrow's theory of critical rhetoric. In the following section, an outline of the praxis-oriented assumptions of critical rhetoric is offered as it relates to the rhetorical role critical educators can play in helping students develop their critical consciousness, particularly when a large class size prohibits student-centered dialogue.

EDUCATOR AS CRITICAL RHETOR: AN ALTERNATIVE TO STUDENT-CENTERED DIALOGUE

Raymie McKerrow's critical rhetoric, as a communicative mode of resistance, subverts mainstream educational psychology assumptions. McKerrow describes critical rhetoric as a theoretical and practical enterprise encompassing divergent critical projects in its overarching critical spirit. Critical rhetoric serves to demystify and connect, through an engaged and subjective critique, seemingly unrelated societal forces of knowledge/power in order to recognize how they can create conditions of oppression and marginalization. In addition, employing critical rhetoric is a normative practice, rendering options for social action and allowing practical judgments about how to take such action. Critique, in this sense, is explicitly political, and the critical rhetor takes an advocacy stance in offering analyses. In particular, a critical rhetoric is concerned with how systems of power and domination are discursively constructed and maintained in order to construct counter-discourses that might interrupt and, potentially, transform oppressive constructs.

It is important to note that critical rhetoric does not point, at the outset, in the direction of a prescribed utopian *telos*. Rather, the critical rhetorician employs this method in an effort to sustain sociocultural critique—it is a practice that recognizes the value of critique and the open-ended nature of the possibilities of its normative outcomes. Thus, because of its nonprivileging nature with respect to outcomes, sociocultural critique employed by critical rhetoricians need not prescribe particular judgments and action. Rather, political judgment and action are contingently related to the process of critical rhetoric.

Criticism, from this perspective, is also a performance and, as such, goes beyond traditional argumentation's focus on critique as an instrument of rationality. The critic, through a critique of collected cultural fragments, performs interpretations of social conditions and, in doing so, argues for interpretations of those fragments. Critical rhetoric is also *performative* in the sense that it is part of instantiating—through repetitive iterative processes on the part of rhetors—a sense of sociocultural consciousness with an audience, thereby creating the conditions for envisioning alternatives to the status quo. Ultimately, this performance of critical subjectivity on the part of a critical rhetor demonstrates, for an audience, a process of identifying and/or creating the conditions for the possibility of humane social change.

As it relates to a critical approach to teaching, particularly with a large number of students, critical rhetoric can be conceived of as a way to foster the development of critical consciousness when student-centered dialogue is not a practical option. In a large classroom setting where a lecture-type format is most suitable, an educator who practices critical rhetoric is able to offer to students' readings of sociocultural circumstances through her/his performance of critical discourse. An educator who lectures utilizing critical rhetoric can embody and invite aspects of dialogue by critically framing sociocultural concerns and positing critical questions that encourage active engagement and multiple interpretations from diverse student populations. Critical rhetors, thus, nurture students' potential to reflect on this critique and help develop their abilities for envisioning alternatives to oppressive status quo constructs. This pedagogical function of critical rhetoric acts as a "model" of critical consciousness for students and creates the conditions for students' own critical engagement without having to prioritize student-centered dialogue in the process.

Also, when situated in a critical pedagogical approach, the open-ended, contingent nature of normative possibilities in critical rhetoric can be particularly effective in engaging students in the

cognitive and affective processes necessary for critical classroom engagement. The nonprivileging normative approach, with respect to the choices created in the critical process, leaves room for students' own sociocultural and historically located analyses and applications. In other words, critical rhetoric employed by an educator *need not prescribe* what students should believe or do. Instead, employing critical rhetoric challenges students to examine the taken-for-granted assumptions that may preclude their own critical reflection on and evaluation of those beliefs or (in)action. It is the process—the *critical rhythm of sustained criticism*—not necessarily the content of the critique that students can begin to approximate when an educator employs critical rhetoric.

The following case study demonstrates, through a specific embodied example of pedagogy, how critical rhetoric performed by a particular pedagogue can foster critical consciousness on the part of a large number of students when student-centered dialogue is an impractical option.

A CASE STUDY

Dr. Michelle Wolf is twenty-year faculty member in the Department of Broadcast and Electronic Communication Arts (BECA) at San Francisco State University (SFSU). She completed her M.A. in Communication Studies at the University of Massachusetts and her PhD in Communication Theory—with a Mass Communications and Educational Psychology emphasis—at the University of Texas at Austin before relocating to California and accepting the position at SFSU. Wolf has been teaching for twenty-five years. Whether teaching thirty students or 150, her provocative style and inherently critical mode of teaching means that theoretical material introduced in class is interspersed with frequently affective, sometimes graphic, and always controversial media, and these cultural fragments are offered with a healthy measure of Wolf's own sociocultural critique. Her obvious enthusiasm for, commitment to, and engagement with students creates a welcoming classroom environment and, although also quite challenging, the environment invites critical exploration of the course material in connection with students' life experiences.

Overview of Method and Classroom Particulars

My observations of Dr. Wolf's teaching strategies, in BECA 422: "Social Aspects of Electronic Media," took place during the fall 1999 semester and consisted of approximately fifteen total hours of logged, in-class observations. The original study from which this chapter emerged employed an ethnographically oriented methodology. Specifically, along with the in-class observations, the students were offered the opportunity to contribute their thoughts and feelings about Wolf's approach and their own engagement with it by responding to a survey utilizing open-ended questions. The original project also included an oral history conducted with Wolf and a parallel autoethnographic account. The analysis section that follows, then, is based in all four methodological sources: in-class observations, students' survey responses, Wolf's oral history account, and autoethnographic material.

The population of students in this study—over 100—reflects the diversity commonly found at SFSU. The ages of students ranged from eighteen to thirty-nine; the class standings ranged from first-year students to seniors; 46 percent of students claimed Caucasian ethnicity, while 54 percent claimed diverse ethnicities; and, the gender breakdown was 52 percent female, 48 percent male.

The size of the class population in 422 significantly limited the possibility for employing student-centered dialogue. Moreover, the setting—a large auditorium-like classroom with fixed, theatre seating—contributed to the difficulties because students were focused on the front of the room and the physical environment was less than conducive to discussion and more so to a lecture

or performance approach. Although some limited discussion was accomplished, Wolf primarily focused on employing other strategies to critically engage her students.

The observations focused on how it was possible that, without the benefit of student-centered critical dialogue, the students in Wolf's class were able to critically engage with the material addressed in lectures and how that engagement facilitated development of critical consciousness. In general, I observed that the level of critical engagement that would usually be reserved for smaller, more dialogically centered classes was nurtured in this large student population. Those means—as illustrated by the categories in the following section—offered the students in 422 an opportunity to critically and actively consider the material without having to frequently vocalize their thoughts in class.

Analysis

This section illustrates three conceptual categories of teaching strategies employed by Dr. Wolf: explicit cultural critique, personal self-disclosure, and spontaneous, provocative participation assignments. I offer an exemplar in each of the three categories and analyze them utilizing praxis principles of critical rhetoric in order to demonstrate its resistance to mainstream educational psychology's assimilationist tendencies in favor of a critical accommodationist approach.

Sociocultural Critique

Today's class is the second part in a unit on censorship. In addition to a lively lecture about censorship precedents and implications, we watch part of a cable program featuring a woman applying lotion to her enormous (silicone) breasts, a graphic and emotional clip from a 1970's Vietnam documentary, and a short videotaped modern primitive performance in which a man recites poetry while impaling his scrotum with needles and filling it with saline. In the last few minutes of class, we watch as a man performs oral sex on his well-endowed male partner while masturbating himself. For a class of approximately hundred students, the room seems unusually silent during the last clip. At the end of the class period, the students begin leaving the room; some are very quiet, others giggle as they make their way to the door, while still others are talking to friends in hushed, somewhat frenetic tones. It's just another day in BECA 422.

Wolf's use of controversial and dissonant media, in combination with the lectures she performs afterward, act as a model or demonstration of sociocultural critique for her students. As a critical rhetor, Wolf unapologetically advocates for and against important sociopolitical issues (censorship, on this day), and her provocative media choices and analyses of them help constitute that advocacy via her sociocultural criticism. The critical rhetorical performances stimulate students' critical engagement and reflection processes and help facilitate development of their sense of critical consciousness. In particular, Wolf's media choices spark students' critical thinking processes by immediately engaging them on an affective level, establishing a sense of investment and commitment to the topic. This direct engagement enables Wolf to prompt her students to think more deeply and critically about those topics and facilitates an opportunity for them to make connections between seemingly unrelated media images and messages and, thus, the power/knowledge constructs embedded in them.

When choosing fragments of media to combine for presentation, Wolf assumes an active rather than passive role on the part of students as audience. As such, her juxtapositions of diverse mediated fragments encourage students to engage critically and be aware of connections between them, particularly as they relate to students' lived experiences. It becomes crucial that students begin to read beyond the surface meanings of individual fragments (e.g., nude bodies, sexual acts, war footage, etc.) and try to envisage how those fragments might be related in and to broader sociocultural contexts. Wolf's choices embody critical rhetoric by recognizing that media fragments may be interpreted as polysemic (containing many meanings), instead of

simply representing the one obvious meaning that requires interpretation. Students are given the opportunity—in engagement with Wolf’s choices and her own critical readings—to offer readings of their own, which may challenge dominant sociocultural meanings by subverting the surface meaning-making processes.

From the perspective of a critical rhetor, description is always already evaluative and processes of understanding and knowing cannot be separated from processes of evaluation. Educators (as critical rhetors or not) choose what they will focus on, what aspects are emphasized, and those choices are always already influenced by what an educator brings to teaching. In Wolf’s case, her critical perspective is always already a part of her media choices, and that perspective explicitly frames the analyses she models for her students. Unlike educators who ostensibly teach from an “objective” point of view, then, critical rhetors explicitly offer their situated points of view and invite diverse interpretations of those perspectives. Moreover, the controversial media choices, by prompting diverse readings on her part and from her students’ perspectives, demonstrate the constitutiveness of meaning making through discursive processes.

Wolf’s political orientation is a starting point for many students’ own opinion-formation processes and critical development. For instance, her explicit capitalist critiques, her anti-censorship stance, and her feminist analyses of mediated body images trigger in her students responses that begin (or continue) the processes of critical consciousness development. Rather than imposing her perspectives on students, Wolf’s analyses often spark critique of them (generally in the form of written feedback). Her students catch her critical rhythm, so to speak, and undertake the act of criticism themselves. More than this, when asked to consider options for changing what can be viewed as damaging or oppressive mediated messages, Wolf’s students offer creatively fashioned alternatives, the conception of which may have been less creative if not for the critical forum in which they are allowed to develop. The criticism rendered from Wolf’s open-ended orientation is, thus, not prescriptive; rather, it is a discursive process that opens space for students’ own decisions about what counts when making critical judgments. Contingently oriented criticism like Wolf’s, rather than fixing a set of interpretations from which to choose seeks, instead, to increase the possibilities for students’ creative interpretations. For the students in Wolf’s class, generation of interpretive options to status quo constructs becomes a creative process of critical invention.

In sum, these aspects of critical rhetoric, performed by Wolf, seem to confirm the notion that the performance of critical readings can act as a way to establish a critical rhythm and create opportunities for students to envision humane transformation of social structures. Wolf’s explication and critique of the controversial mediated messages and images open up previously unexamined areas of analysis for students and foster the kind of critical thinking and reflection necessary for developing critical consciousness. Wolf’s strategies offer a way to engage with students at this critical level without making student-centered dialogue the central aspect of her pedagogy.

Personal Experience and Self-Disclosure

Today’s lecture begins a unit on body image and media representations and Dr. Wolf takes some time to relate her own experiences with body image development. She shares an abbreviated, but emotional narrative of several early life experiences; the first involved an incident of her own painful experience with facial disfigurement as the result of being hit in the face with a baseball bat. The story includes aspects of both her physical and psychological devastation and the sometimes-cruel reactions of her grade-school peers. She goes on to talk about her battles with an eating disorder and the negative self-perception of her own body image as it relates to media representations of the “model” body type and her childhood experiences. The students seem mesmerized; there is not a single student in the room who does not seem completely engaged with Dr. Wolf as she tells these stories.

Critical rhetoric is decidedly, yet self-reflexively, subjective; critique takes a stand either for or against something, often in the context of the critic's lived experiences. In the case of Wolf's self-disclosure with respect to body image and media representation, the performance of critiquing the overwhelming, and sometimes devastating, impacts of represented (and ignored) body types in media serves to model cultural critique as a deeply personal and powerfully political process. Notably, in this context, the level of Wolf's self-disclosure acts as a way to bridge the affective gap between Wolf and the large number of students in this classroom. A sense of intimacy is created when Wolf relates a personal narrative with which nearly all students can relate: feelings of insecurity, marginalization, negative self-concept, and personal pain. They can see reflected parts of themselves in her portrayal of her personal experiences and development. The level of connection this creates with her students enables Wolf to maintain an environment that nurtures a feeling of safety in which her students are free to critically explore various aspects of the concepts presented in BECA 422.

A key aspect of this critique, for Wolf, includes an explicit confirmation that feelings (in contrast to informal logic or reasoning) are a natural and necessary part of the critical process. This aspect of critical rhetoric reflects a move away from the strictly rational and traditional epistemic function of rhetoric based in general, abstract principles. Rather, critical rhetoric includes a *doxastic* sense that expands those standards to include analyses grounded in personal experiences, feelings, and beliefs. The expansion allows for a relationship between knowing and being and, in so doing, provides students with a way to explore how beliefs, knowledge, and truth are constituted. Put differently, the focus shifts away from knowledge and knowing based on abstract foundations independent of subjectivity and toward recognition of the concrete contingency of both knowledge and its constitution by individuals in relation with one another.

Wolf's critical rhetoric, by explicitly demonstrating the power of mediated symbolic representations of body images in her lived experiences, also underscores how those signs come to possess that power. With a personal connection, Wolf's critique connects mediated images with material effects in her lived experiences and, by extension, her students' lifeworlds. In this way, students begin to understand more than what a sign *is*; they come to understand what signs *do* in sociocultural contexts and how they become powerful. The shift in focus helps students connect to the topics addressed in ways that are personally significant and, in the process, prompts a level of commitment to those topics.

In sum, Wolf's use of personal narratives reflects critical rhetoric's acknowledgment that experience, feelings, and beliefs are an important part of the critical process. Her critical analyses of mediated body images also engage students in a way that includes them in the construction of transformative possibilities. By connecting with Wolf's personal experiences as they relate to the subject matter, students are invited to question how that same subject matter affects their lives, as well. This critical engagement lends a sense of immediacy to Wolf's lecture and helps facilitate critical consciousness development for students without dialogue being the central focus.

Participation Assignments

In a unit on news coverage, Dr. Wolf begins the class session with a participation assignment, a current events survey. She asks: How do people in Iraq label their ethnic group? What is the capital city of Iraq? What is the name of one other city in Iraq besides the capital? What does the terrain/land look like in Iraq? What is the weather like in Iraq? Can you name a body of water in this country? What form of government will you find there? Is there a Head of State in Iraq and what is his/her title? What percentage of the population of the Iraqi people lives in the cities? During the process of asking the questions, Dr. Wolf takes on a demanding, almost aggressive tone. It feels as if she expects that her students should know the answers to these questions and that they should have no problem responding to questions about countries that have generated such intense media attention.

After the students finish and pass their survey responses forward, she tells them the answers to the questions. In general, the students appear to be surprised, even stunned, by how little they know about such heavily covered, politically significant countries. After disabusing the students of numerous stereotypes and misconceptions about Middle-Eastern peoples, their cultures, and the countries in which they live, she spends some time explicitly critiquing what seems to be an apparent lack of engagement with and attention to the news media by those who have chosen to devote their academic time to media studies. I look around the room and it seems that every student is listening intently to the not-so-subtle critique of her/himself.

Participation assignments generally consist of either written surveys administered in class and turned in immediately before a lecture, or take-home exercises that ask students to individually connect with and/or engage in a critique of some form of media. An example of a participation survey is related here; outside participation assignments also included visiting activist websites and responding to the content, critiquing new television programming, and writing a viewer/listener response letter to a media source offering a critique about what they viewed/heard. The sometimes spontaneous—and, almost always provocative—participation assignments in this class serve at least two purposes: first, they compel students to focus attention on a subject that they, previously, may not have thought about in much depth. Second, in conjunction with Wolf's critical analyses, they move students from vague feelings about an issue or concept to working through those feelings toward more precise, critically informed thinking and reflection.

In general, Wolf's constant probing for students' thoughts, feelings, and opinions, via the participation assignments, set a critical tone in class that activated an inclination toward students' critical thinking processes. The students, through the written participation assignments, presented the products of those critical thinking processes; they understood this as their opportunity to critically respond to Wolf without extended in-class dialogue. The effect, immediately, was to engage students in the subject matter at hand and, as significantly, enable them to connect their own experiences and knowledge about the concepts and issues to a critical evaluation of the theoretical constructs discussed in the lecture.

For example, the participation survey recounted above allowed an opportunity for Wolf to critique the process of nominalization that occurs in mediated representations of diverse cultures. As part of this participation assignment, she demonstrated for students a way to critique mediated discourses that tend to obscure or neglect aspects of Iraqi culture and that, in the process, locate Iraqis as "deviant" from US-American sociocultural standards. This demonstration, in conjunction with students' participation in the survey, served to highlight how particular mediated representations become embedded in the knowledge constructs most viewers take for granted. The students' inability to name important aspects of Iraqi culture reflects the process of the knowledge construction of US-American media and their own lack of critical engagement with that construction and the assumptions therein. Wolf's lecture session afterward challenges students to re-examine those assumptions that underlie the processes of how they come to understand mediated cultural representations.

Finally, critical rhetors also recognize that absence is as important as presence in constructing knowledge, particularly as it relates to understanding and interpreting mediated discourse. The power to discursively erase the existence, in mediated representations, of different ethnicities, genders, classes, and sexual orientations, is derived precisely from its absence in relation to what is present. Wolf's critique of mediated body images (described in the previous section) also included an account of what is left out of those images and the effects of that discursive erasure. In the context of the participation assignment in this section (along with that in the previous section), the critique served to help her students develop a more sophisticated, critical level of awareness—critical consciousness—when viewing mediated images of cultures constructed as deviant from US-American norms. At the same time, Wolf's performance of that critique

allowed for the development of critical consciousness without the benefit of student-centered dialogue.

SOME IMPLICATIONS AND DIRECTIONS

In this study, several aspects of negotiating critical engagement with a large number of students without prioritizing student-centered dialogue were explored. This exploration suggests several strategies that can help facilitate critical consciousness development on the part of a large number of students (and, perhaps, smaller student populations, as well). Wolf's intentional and risky stimulation of her students through explicit cultural critiques and controversial media choices, open and honest self-disclosure, and spontaneous, provocative participation assignments all promoted critical engagement in diverse and particularized ways in her classroom. Likewise, students' understanding of, and responses to, her intentions and approach indicates that the performance of critical rhetoric, on the part of educators, offers an alternative to privileging student dialogue while maintaining the ability to nurture students' critical consciousness development. Moreover, this case study demonstrates that a critical approach to pedagogy can resist mainstream educational psychology's assumptions without privileging one model of critical pedagogy. Rather, critical approaches to pedagogical theory and practice are diverse. Thus, critical educational practices, variously interpreted, can take the form of a range of schools of thought: post-formal, democratic, Socratic, feminist, hermeneutical, Marxist, neoliberal, and/or post-structuralist. Critical pedagogical theory and practice understood from this perspective, then, is far from a homogenous approach. This case study, in the context of a classroom of over 100 students, provides some promising results in support of this view.

First, the size of this student population uniquely contributed to communicative dynamics in some surprisingly effective ways. The distinctive setting with its fixed seating and large number of students—a setting traditionally considered problematic in terms of critically engaging students—seemed to actually promote the possibility that Wolf's risky, dissonant, sometimes confrontation style would be critically effective. With respect to cultural critique and controversial media, the large room and number of students may have helped to dissipate uncomfortable feelings that, in a smaller classroom, would be more problematic. The forceful approach may be more effective when the environment is not so intimate and the students are allowed to silently explore their thoughts and feelings around the concepts and issues without being compelled to share, publicly, those thoughts and feelings.

Second, with respect to self-disclosure, the personal nature of Wolf's narratives takes on a public performance character that helps alleviate the potential that students will feel personally confronted. In this setting, students were able to disassociate themselves from the personal implications of self-disclosure for Wolf while, at the same time, witnessing a personal narrative in which they felt safe to engage, evaluate, and on which they could privately reflect. In a smaller classroom, the personal-academic boundary may be too blurred for comfort if the students feel too personally confronted by an educator's personal disclosures. In this context, however, that boundary remained in place while still offering an affective bridge to critical reflection.

Finally, with respect to participation assignments, when the survey questions were consistently intended to point out a particular lack of awareness or information on the part of students and that insisted student reconceive their own cognitive frameworks, the larger classroom provided a sense of anonymity thereby fostering a sense of safety within an otherwise provoking environment. In a smaller classroom, this forceful a tactic could prompt students to feel they have an individual responsibility to come up with the "right" answer/opinion/feeling or face public exposure and embarrassment if they offer what might be perceived as the "wrong" answer. In this context, however,

students could recognize and respond to the challenge without being put publicly on the spot to respond to it.

The analysis offered in this chapter begins construction of only a first layer of understanding of one unique and powerful educator's rhetorical strategies for critically engaging a large number of students without the benefit of student-centered dialogue. And, without question, Dr. Wolf's pedagogical strategies are risky and the approach she takes may not be suitable for some educators. Diverse student populations, various classroom limitations, and institutional constraints are but a few of the contingencies with which individual educators must contend when choosing pedagogical strategies, risky or not. Moreover, utilizing intentionally provocative media, personal self-disclosure, and seemingly confrontational participation assignments requires sober consideration of possible student responses to such stimulation. Certainly, Wolf's twenty-five years of experience with this approach assists her in facilitating critical engagement with her students and, by her own account, having "lots of confidence" and "knowing what you're doing" are crucial in fostering the kinds of positive experiences she experiences with students. Clearly, the possibility that students may initially respond negatively can be uncomfortable for others with less experience or, perhaps, less of a tolerance for risk, vulnerability, and uncertainty. However, every teacher takes risks when critically engaging students and, explicit or not, those risks make each one of us vulnerable and render the "outcome" of our pedagogical strategies uncertain. It is within the fertile liminal spaces of that uncertainty that those teachers and students who are willing to risk can create the lush conditions for the possibility of transformation.

Comparison studies are needed, of course, in other settings and with other educators and students. Gradually, the findings could be pulled together and further conceptions and strategies could be added to the tentative categories discussed in this study. Moreover, for educators who approach pedagogy critically, this study offers a starting place for theorizing how it is possible to resist mainstream educational psychology's objectivist and abstractive tendencies and retain critical aspects of their teaching, even in the most challenging institutional settings. The theory of critical rhetoric suggests a framework from which to begin that theorizing work in order to more fully understand how to practically develop students' critical consciousness in diverse classroom contexts that seemingly preclude critical approaches to teaching.

FURTHER READING

- Burbules, N. C. (2000). The Limits of Dialogue as a Critical Pedagogy. In P. Trifonas, (Ed.), *Revolutionary Pedagogies*. New York: Routledge.
- Kincheloe, J. L. (1999). The Post-Formal Critique of Educational Psychology. In J. L. Kincheloe, S. R. Steinberg, and P. Hinchey (Eds.). *The Post-Formal Reader: Cognition and Education*. New York: Garland Press.
- McKerrow, R. E. (1989). Critical Rhetoric: Theory and Praxis. *Communication Monographs*, 56, 91–111.

CHAPTER 89

Homeschooling: Challenging Traditional Views of Public Education

NICOLE GREEN

A FAMILY PORTRAIT: PAUL AND HELEN

I was welcomed enthusiastically as I entered the home of Paul, Junior High student, and Helen, Paul's mother. As I took off my coat and shoes, Paul expressed excitement about the fact that I was interested in his homeschooling experience and, along with his mother Helen, we immediately ventured upstairs to his schoolwork area. Paul invited me to sit next to him at his desk, which comfortably fits a computer and allows enough space for Paul to read and write. Helen showed Paul's timetable and organized subject folders while he began to confidently navigate the school's website.

Paul, Helen, and her husband have been involved in the homeschooling Virtual program for less than one year, following eight years in the public school system. Being enrolled in the Virtual program means that Alberta resources are used and assessment involves regular contact with the teachers and the completion of assignments, unit tests, and projects. Paul has a different teacher for each subject and a support teacher visits twice per year. Helen chose the Virtual program, in which the course delivery is the responsibility of the teacher, because

I can help him out but I can't be his teacher . . . I mean I guess to a certain extent I am his teacher because I am the one who sets out what he does during the day and if he does have any problems he asks. So yeah I guess I am [his teacher] but I try not to look at it like that. Like I said, I am his Mum and that's where as I just as soon stay but I am willing to make the effort and to make the difference . . .

Helen describes her relationship with the homeschooling program positively, stating that the school atmosphere is welcoming and the teachers are very approachable. Helen appreciates the educational support from the school, as well as the opportunity Paul has to enrol in Tae Kwon Do. Helen explains that Tae Kwon Do has provided him with a different side of discipline and respect and interaction with peers. The family also enjoys skating and creek walks as part of the Physical Education program.

As well as experiencing a delightful morning of conversation with Paul, I observed this intelligent young man completing his Mathematics, Language Arts, and Computer lessons his mother

had outlined for him to do. On one occasion he called his mother to the room for assistance, after trying to work out the problem independently by looking in other text resources. By half past eleven, promising that he would read his Science text that evening when his parents were out, Paul's schoolwork was done. When Paul completes his school work, usually by one o'clock, he then has the afternoon to enjoy his favourite TV shows, reading his favourite books about Science, World War II, and the Harry Potter series, and building with his unimaginable amount of LEGO construction pieces. Paul spoke of the desire to become an architect, a goal reflected in his elaborate and detailed LEGO structures he has planned and built over a period of time. Paul also shared his satisfaction with homeschooling throughout the day during our conversations, "the teachers are very nice and helpful. The main expectation is for students to do the best they can..."

INTRODUCING THE INQUIRY

With my interest in examining the narratives of families and children in an effort to understand their experience of distance education in Queensland, Australia, I chose to conduct an inquiry into homeschooling in Alberta, Canada. The purpose of the research was to inquire into three families' experiences of homeschooling and explore issues of teaching and learning by analysing and interpreting their experiences.

The inquiry was carried out in collaboration with three families enrolled in a well-established homeschooling program. Observations and interviews were conducted in the families' homes. I believe it is necessary to highlight that I am consciously taking responsibility for the analysis and interpretation I present. You have already been introduced to Paul and Helen. Throughout the chapter, Christopher, Samuel, Luke and Lynn, and Nadine, Brett and Sarah will also be introduced through a family portrait. There could be multiple perspectives of homeschooling experiences in Edmonton, Alberta, and I am openly mindful about only offering several perspectives on the following pages, remembering that these families' lives did not begin the day I arrived nor did their lives end as I left. This chapter will share some of the themes and patterns which emerged, demonstrating how the families' homeschooling experiences suggest that educational practices in public schools can marginalize students who do not understand behavioral codes, who do not have possession of dominant cultural knowledges, or who fail to reflect the widely accepted norms of learning and development outlined by mainstream educational developmental psychology. Thus, with my interest in issues of teaching and learning, educational psychology themes emerged as important and relevant in the inquiry with families who homeschool, especially in relation to the families' experience with public education prior to their decision to teach and learn with their children at home. The families' public school experience did not adequately address the diverse needs of the students when they used a curriculum and worked within school cultures that represented a modernist perspective of promoting sameness and overcoming difference. From the families' narratives, it appears that curriculum and teaching practices in their public schools reflected an educational psychology focus in which working collaboratively and in context to pedagogically respond to the students' affective and interpersonal lives was not attempted.

THE PRESENCE OF DEVELOPMENTAL EDUCATIONAL PSYCHOLOGY IN ALBERTA

The early twentieth century marked the introduction of the discourse of educational development psychology and continues to greatly influence educational practice today. My observations in Alberta have led me to see that there is an educational movement going "back-to-basics," resulting

in a conservative curriculum. Knowledge is viewed as a commodity where students develop a base of knowledge. This core knowledge predetermines student learning, with the content “stated” as outcomes that are measurable and identify what students are expected to know and do. Concepts develop linearly, from the simple to the complex, and suggest developmental appropriateness based on white, middle-class assumptions. I have heard numerous stories from teachers faced with high stakes standardized testing, which evaluates and ranks students and, eventually, schools and teachers. While the standardized tests assess and interpret student progress, it is important to highlight that they do not measure diverse student characteristics, only mathematical and language and literacy academic performance in grade three and mathematical, language and literacy, science and social studies in grades six and nine. The autonomy of many teachers is greatly lessened as they feel it necessary to adequately prepare students by “teaching to the test” and the outcomes based curriculum, which assumes behaviorist and cognitivist perspectives from educational psychology traditions.

EXPERIENCING EDUCATIONAL DEVELOPMENTAL PSYCHOLOGY

From educational psychology’s perspective, the students in each family in my inquiry did not meet the predetermined ages and stages of human behavior and development defined by the school curriculum and culture of the school and classroom when they were enrolled in public school. It appears that the students challenged the educators’ beliefs and knowledge about dominant modernist views of children and learning. Often this knowledge is engrained as “truth” by educators’ own schooling and socialization experiences.

Paul, Christopher, Samuel, Luke, Nadine, and Brett demonstrated alternative models of cognitive, social, emotional, and physical development, which was not accepted or catered for during their public school experience. In various ways, Helen, Lynn, and Sarah described their children’s abilities as invalidated by the educators in their public schools. The families’ experiences in public school caused them to feel different, defected, or not belonging because the students manifested learning and behavior contrary to the “truth” determined by educational psychology research present in the school curriculum and operating as school culture.

The families’ experiences point to the need to rethink the Western view of intelligence, and physical, social, and emotional behavior, which focuses educators’ attention on the fixed and innate descriptions of what students *should* be doing and how students *should* be behaving in age-defined classrooms.

This chapter will show how the students’ experiences in public school shaped their relationships and capacity to succeed in schooling due to the educators’ uninformed understanding of human diversity. Different aspects of the families’ homeschooling experiences will be discussed, highlighting how they are able to educate within an understanding of human possibility that ventures outside the limitations explained by educational psychology and outlined in school curricular documents. The chapter concludes with suggestions of the ways we can seek alternative possibilities in public schooling where caregivers, teachers, children—school communities—learn to respect, hear, and appreciate each others’ knowings, unknowings, unique abilities, and ways of being in the world.

THE LINGUISTIC DISCOURSE OF ABILITY

During the short time I spent with each family, Paul, Christopher, Samuel, Luke and Christopher, Nadine and Brett demonstrated their individuality, unique personality, personal histories, and hopes. What was interesting from the interviews with the students’ parent (in all cases, this was “Mom”) was the way in which they talked about their children. The parents spoke from

multiple perspectives, of their children's personal and academic abilities, challenges, interests, and desires. Helen spoke for approximately ten minutes to answer my question, "tell me about your child."

Paul is a challenge everyday. He is a very intelligent young man. He absorbs everything that he reads or sees on television that is educational. He loves to learn. My son is also ADHD and that has been a difficult challenge in regards to any type of schoolwork . . .

While the parents' words spoke of a "rich" child, their descriptions of their children's learning disabilities and physical impairments could also highlight a "poor" child. However, they described these needs in terms of their formal education prior to homeschooling. The parents appeared to use language of the dominant discourse to talk about their children as equal but different. By talking about their child/ren in this way, the parents were demonstrating their discomfort with the categories used in school that reflect the modernist view of the child. According to the parents, their children were judged in the school system by measuring them against standardized categories. In contrast, the parents' descriptions were not presented negatively or the children were not described as "needy" —

Of course, Paul is classed as a learning disability but I've never let my son feel that at all. I will not have my son labelled because there is nothing wrong with him. He just has, every so often, short circuits, which can totally make a total different child at one point or the other . . . the Principal at (the) Junior High School is where I first actually got any kind of comment from a teacher in regards to homeschooling. They were the ones that mentioned, well they said maybe you should home school Paul because he doesn't seem to be fitting in.

From the conversation with Paul's mother, it seems that the educators at Paul's school associated his behavior with a lack of compliance and competence, demonstrating a constructed view of human capacity aligned with educational psychology's descriptions of human beings and who they are and should be through different stages of development.

Paul's experience shows how a classification reduces a student's vast capabilities into one label or several words. The coding which occurred in order to label Paul as "ADHD" became the means of removing him from his classroom, peers, and community school—"he doesn't seem to be fitting in." The question needs to be asked, is it the child who should "fit" the school or should the school accommodate each child within a community of learners?

UNDERSTANDING SCHOOLING

Helen, Lynn and Sarah reported that they were the last person they would have thought would homeschool their child/ren. Each parent highlighted the time when they problematized the educational processes their child/ren were a part of. The decision to educate their children at home was not precipitated by a specific incident; rather, the decision took months, and sometimes years. It is important to note that the participants do not object to public schooling as a whole but rather to specific parts of the education system. Typically, the process began with a general dissatisfaction with some element of the public school, which led to an investigation of alternatives. Helen shares her thoughts,

I just seemed to really pay attention more and more of how things worked in the public school. Now I realize that there are a lot of kids and it's hard to cope with. Okay, so I understand the other side too but what about the kids? What happened to the concept of kids? I really became aware of this in the last three years of my

child's stay at public school and I just didn't like it anymore. I thought, no, this is not what I want to teach my son . . . I wanted him to have the opportunity to learn exactly the way he learns best . . .

The parents tried very hard to work with the staff at their children's school, however, in the end, the parents decided that the only way to preserve their children's self-concept and confidence was through homeschooling. Lynn speaks of her experience,

I was reading a book by Dobson, James Dobson, called bringing up boys, and in there he doesn't necessarily advocate homeschooling but he does say in a round about way that, if you are having some trouble, it might be something you might consider. I had never, never, never! considered homeschooling. I was the last person that probably would have ever home schooled but, based on how Christopher was doing and, also after reading the book, I thought well maybe it is something we should consider.

The parents claimed that they have a right and responsibility to protect their child/ren from harmful influences, viewing learning as a journey and only partially related to schools. The decision to homeschool was not easy for any of the parents I conversed with. Sarah explains,

All I have to do is look at the families that are considering it and I see the conflict in their brain, and the way they are talking and the emotion in their voice and how difficult a decision it is. I remember that, it is tough.

Advocacy was a discussion topic in all the interviews with the homeschooling families. The parents spoke of the need to advocate for their child/ren's emotional well-being, and to advocate that homeschooling is not "damaging" their child/ren's opportunities for successful lives and social well-being.

UNDERSTANDING THE INDIVIDUAL

Helen, Lynn, and Sarah spoke first of academic reasons for choosing homeschooling, in different ways, however, by the end of my visit, it became clear that their decisions were based on their children's experiences of negative socialization. The school program and environment were described in terms of the interactions and relationships between children and children, and children and staff, which, in turn, affected the students' emotional well-being and identity, and the parents' relationship with the institution.

If the child and childhood are only knowable in relation to the persons and environment in which they are situated, than the children of the families in my inquiry did not benefit from inclusion in school. One child was isolated and alone in his peer group due to a lack of support in addressing difference; another child's self-confidence was affected due to experiencing a lack of success in school and always failing to fit in. Another child became introverted and shy once she began school; she always thought she was "stupid" in school. The students' experiences highlight that the children were divided among their peers as well as within themselves as they participated in learning environments that failed to recognize them first and foremost as complex and interdependent human beings.

An understanding of identity, both across groups and within individuals, as understood as complex and multiple, fragmented and ambiguous, contradictory and contextualized, reflect the narratives told to me. However, the legacy of the Piagetian tradition remains to delineate that the students' academic performance and behaviors can only be explained by their own individual ability. Rather than using a language of relationship, connectedness, and community, traditional educational developmental psychology distances itself by focusing on learning and development

as an individualistic phenomenon. As the families' experiences demonstrate, the students functioned in their public school classroom environments within communities, in connection with the social environment and within interrelationships, not merely as isolated entities. According to the families' account of their reasoning for choosing homeschooling, the public school educators' understanding and evaluation of the students could be seen as a disconnection with the students' complex interactions of everyday life in varying contexts. While individual students bring a unique disposition to the class, Vygotsky and neo-Vygotskian research, for example, has shown the importance of learning places and the social engagements, which occur in those places to provide the context for learning to happen. Lynn shares her experience,

When Christopher would come home from school, he would just unleash fury. We couldn't control him. He would run over anyone and everything in his path. From 4 o'clock to bedtime was absolute chaos in our house. But after he got home schooling and he realized that it wasn't as fast paced, it was just him and me. There weren't distractions; it wasn't like you've got to get this done today, he calmed down a lot . . . We were able to take the time, longer time . . . If they can't do it in a year, then they don't do it in a year, they take a little longer.

When Paul, Christopher, Samuel, Luke, Brett and Nadine began their schooling at home, it appears that dramatic changes occurred in their learning capabilities. Perhaps a better interpretation, outside of educational psychology's perceptions, would be that the students' learning capabilities were hindered by, or fostered through, the dynamics of the interactions in the educational process.

A FAMILY PORTRAIT: CHRISTOPHER, SAMUEL, LUKE, AND LYNN

Christopher, Samuel, and Luke welcomed me with conversation and gifts as I entered their home. They had many stories to share and toys to show me. Especially proud was Christopher, who enjoys creating different objects from Kinex construction. He enthusiastically showed me his photo album, a record of digital photos taken of his creations. A School Project Fair was approaching and the boys excitedly shared this upcoming experience during different conversations throughout the day, as well as their involvement in swimming and other family experiences.

The boys' school day began when Lynn, their mother, invited us to the kitchen table just after 9:00 am. Each day, the boys start with a music and handwriting program the school is trialling. The structured program has been successful with the three boys as the music encourages a flow in their handwriting and an external motivator to practice the letter formations. The remainder of the day continued with a very strong sense of routine for Christopher and Samuel, both in Elementary, and Luke, in Kindergarten. I had the pleasure of observing and participating in religious studies, spelling, phonics, story writing, report writing, mathematics, science, and social studies. The boys are also learning to play the piano as part of their music program. The day's schoolwork was divided between two recess periods and lunch. Once Luke had completed his one hour of structured writing and math work in the morning, he entertained himself with reading, drawing, and playing with his toys while his older siblings continued with their formal learning. Christopher and Samuel usually complete their schoolwork by lunchtime and all three boys then enjoy outdoor play for a large part of the afternoon with their next-door neighbour.

The family have been involved in the homeschooling program for eighteen months and Lynn describes her experience metaphorically,

For me, as a Mum, I'm thinking it's like jumping off a wall, landing in frozen water, hoping you can swim and then realizing that you can swim, and making it to shore and realizing it really wasn't that bad after all. . . . It's like, oh! I made it, it's not so bad, I can swim back now!

Lynn has chosen to enrol Samuel in the basic program as he is working independently most of the time and is moving ahead at his own pace. By selecting a basic program for Samuel, Lynn assumes 100 percent of the instruction, delivery, evaluation, and responsibility for the program of studies. Samuel's program is supervised by a teacher who facilitates this program through discussion with Lynn and Samuel, visits twice a year and offers resource assistance. Christopher is in the blended program to access extra guidance from a teacher in the homeschooling program. Lynn appreciates the need to be responsible to a teacher and having the extra support while she continues to address the different ways her son's learning preferences and abilities are catered for.

PEDAGOGY OF HOMESCHOOLING

As highlighted, Helen, Lynn, and Sarah pedagogically decided to improve their child/ren's academic and social environment. The ways in which they developed their homeschooling program can be viewed in terms of their own individual constructions of the child and childhood, learning, and education based on their past experiences.

Helen, Lynn, and Sarah placed a very high value on education and alluded to the notion that it was preparation for life and work, reflecting a modernist view of education. For example, Helen spoke often of the importance of achieving success and that success is measured by the need to learn certain knowledge and skills. Helen's narrative speaks of long-term objectives, that the focus they have taken for Paul now will have a long-term pay-off, that is, success later in life,

I think my biggest thing is to be able to know that I accomplished something that makes a big difference in my son's life. That's where I see where my experience is going. And I hope I can do that for him and me, you know, do it in the best way I can so that he succeeds. As long as he does, I know that I have. That's what a parent's supposed to do so I think it's going to be a very big thing when he finishes grade twelve and he graduates . . .

While the parents' energies focused on pedagogy, which improved their child/ren's academic and social environment, their narratives also highlighted that their child/ren are potential contributors of society. However, the parents were not willing to sacrifice their children's present to reach the goal of a successful future. If the future were more important than the present, they would probably have kept their children at school where the "expert" teachers would have given them the "knowledge" they needed to be successful. Sarah shares her experience,

I know that what they learn is from discussion and there is a lot going on in the world now. A LOT going on in the world now and in discussing it and stuff like that and finding out about it, it's how do you make learning interesting? How do you make them want to learn? That's more our responsibility than what they actually learn. It's giving them that desire to learn. . . . And HOW to go about getting your information and stuff like that. If they know that, they're going to learn for the rest of their life and they're going to enjoy it. A lot of kids go through school and they hated learning since they failed one test in grade one, you know.

PEDAGOGICAL KNOWLEDGE

Educational developmental psychology has traditionally focused on transmission from teachers to students. The transmission of facts, societal values, specific skills and attitudes, rather than recognizing topics such as classroom pedagogy, teachers and learners, thinking and learning as interrelational and relevant to psychosocial and cultural processes.

It was interesting that the parents in the inquiry spoke predominantly of learning from their child/ren. From my short time with the families, and what each parent expressed to me in the interview, it appears that understanding and learning from their child/ren meant predominantly understanding their temperament styles, learning preferences, work habits, and personal time rhythms. Helen advises,

I think the biggest thing is it all depends on how your child learns. So, you know, you deal with it that way, look at it that way. Well, how is it that my son, or my daughter, can learn better. Well, I know which way he can so let's see if we can, you know, get it to work out so he's still learning what he needs to learn but his way, or her way, which, for kids, I think makes the most biggest, fun thing of it all is they're doing it their way, nobody's telling them they can't do it that way.

While routine was important for both Helen and Lynn, the routine was based on their child/ren's personal rhythms as they had learned the importance of this aspect of their children's learning style and preference. Time and routine in the families' days allowed for time not to hurry through the curriculum and their child/ren were not expected to continue learning at the one pace.

SEEKING ALTERNATIVE POSSIBILITIES IN PUBLIC SCHOOLS

This section of the chapter suggests that the insights gained from three families' experience of homeschooling may prompt educators in rethinking their pedagogical decision-making, practices, and relationships in students' and families' educational lives.

An Educator's Responsibility

How educators provide learning opportunities and the ways in which they respond to learners is reflective of their beliefs about knowledge, human behavior, and ways of learning. Educators are continually making moral choices, making difficult decisions, however, quite often these are based on observations filtered through a lens of educational psychology they bring with them as a result of their own educational experiences as a learner in public schools and university settings. I believe an educator's growth will be in his or her own personal responsibility first. Educators must reflect on who they are, their assumptions and biases about race, class, gender, and ability, in order to allow their students to be who they really are. In community, this involves educators reflecting on who they are in relation to others. Following this process, educators can begin to destabilize dominant discourses and critique material and challenge teaching/research practices in a more informed context.

Communities of Reconceptualization

I believe seeking alternative possibilities for education in public schools involves communities of pedagogues who have concerns or issues, and who are willing to attempt the development of new ways of thinking and teaching that prepares parents, school educators, and students with the complexities of classroom life. Such issues and concerns may include the ones raised in this chapter by Paul, Helen, Christopher, Samuel, Luke, Lynn, Sarah, Nadine and Brett.

When Paul, Brett and Christopher, specifically, failed to meet the linear expectations described by developmentalism, they were evaluated as students in need of remediation or adjustment. Their public school experience resulted in their social exclusion because their behavioral, intellectual, physical, and emotional selves did not mirror what educational psychology, school curricular, and school culture had deemed as appropriate. The families' narratives spoke of many children and

many childhoods and all three parents pointed to the tension between the concept of development as a universal phenomenon (the dominant view), a predetermined linear sequence that all must follow to achieve full human potential, and the recognition of their child/ren's diversity, competence, and complex and interrelated personalities. The success of the students' homeschooling education indicates that the educators in the public school setting supported a narrow and limiting perspective, while the parents could see alternate ways of viewing their children and thinking about the educational experience.

Stating that Paul does not seem to fit, speaks to me of the educators at Paul's school possibly not being able to rely on the authority and certainty of developmental psychology they had in the past relied on. The alternative could have been to use this knowledge of Paul as a beginning to further understanding of the realities of his familial and educational life, and to collaborate in providing ways his classroom and school can be more inclusive of *all* students. In all the families' experiences, the students demonstrated that they had capabilities the educators would not have thought possible. If all the students in this inquiry could have also been involved in democratic dialogue and decision-making when issues and concerns arose at their community school, perhaps their experience of public school would have been different.

Discussing the importance of individualizing learning, or planning for each child's preferred learning styles and routines, or the importance of children developing a love of learning, speaks to me of the parents and public school educators willingness to work with and accept, without questioning, a school curriculum and school culture, based on educational psychology, which states the "best" schooling processes and outlines what is developmentally appropriate. The alternative could have been to use the families' experiences as a beginning to constantly and persistently look into how "truths" are produced, to open up new possibilities, to ask new questions, and to challenge old beliefs. Rather than focusing on individuals, one possibility could have been for the parents and educators to uncover any shared common commitments and discuss ways the school curriculum and school culture can contextualize learning for children and the expectations we have of them.

The conversation with the three parents uncovered that they do not reject modern knowledge as a whole; for example, they are continuing to use Alberta curriculum resources, and they are focused on their children's future contributions to society. However, the parents did construct and deepen their understanding about how things really were in school for their child/ren rather than conforming to a standard of acceptance. Thus, the inquiry has drawn attention to the insights and knowledge parents have and the ways in which these insights and knowledge are valued in leading to a deeper understanding of children. In homeschooling programs and public school communities, it is of importance to explore parent's image of the child/childhood more directly as a way of constructing and deepening their understanding of their own pedagogical work. Furthermore, the inquiry has caused me to realize the necessity to include youth in inquiries of reconceptualizing alternatives to education in public schools. As one of the students reminded me so articulately during the observational visit, "*if you interview my Mum, you have to interview me. You can't know everything about homeschooling if you don't talk to the kids.*" The parents' also spoke of the many ways they learned from their children, highlighting that community conversations would not be a complete conversation without youth's participation, visibility, and inclusion.

A FAMILY PORTRAIT: NADINE, BRETT, AND SARAH

I arrived early and had the pleasure of joining Nadine, an elementary student, Brett, a high school student and Sarah, their mother, for breakfast. The 'school day' began at around 9.30 am when Brett's hired support and family friend Julie arrived. The two disappeared downstairs to work on Brett's high school social essay, while Nadine stayed at the kitchen table and began

working on phonics, followed by mathematics. Nadine worked through her elementary textbooks as Sarah and I talked about some of the experiences they have had with homeschooling. Sarah has been homeschooling her children for eight years and explains that the virtual program meets her needs,

very well . . . things I want my kids to know, I teach them. And they give me a lot of flexibility in the virtual program too, which is good. And another thing which makes it so neat is that it takes all the discipline out of the teacher's job description, they don't have to do any of that stuff so then you have this really cool relationship with these kids where the teacher is assisting in the learning and that's it . . . I like having them come out, they seem like really neat people.

I also had the opportunity to observe Brett and Julie before lunch and left with a sense that these two make a great team. As they discussed, edited changes, listed choices, made decisions and searched for definitions, they continued open and friendly conversations. Julie supports Brett three days a week for four hours per day. As well, Brett drives into town to be tutored in Mathematics two days per week and spends an afternoon with a mentor. Brett is a mature young man who has faced many physical challenges in his life. He enjoys weekends with friends playing computer games and is involved in work experience at his Church, providing the PowerPoint presentations to accompany the service. I was also fortunate enough to view his incredible artistic work designed with computer technology. Brett has two dreams for his future, working with computers and becoming a pastor. Nadine loves to sing and dance and I felt welcomed by her smiling nature throughout the day. She attends drama and choir and will begin swimming in the spring. Nadine enjoys her afternoons and is able to keep herself busy reading and working on the computer with the mathematics, phonics, and musical programs. At present, she is following her interest in George Washington and American history and shared with me a book she is reading on the topic.

On the day I was visiting with the family, they were excited about two concerts being held, one that evening and one the following, in which both Nadine and the family's eldest daughter (who is attending college), would be involved. Sarah's husband took the afternoon off work for the occasion of the concerts and we enjoyed lunch together—and my first taste of homemade rhubarb and strawberry pie!

Places and Spaces for Seeking Alternative Possibilities in Public Schools

The families' experience in the inquiry has emphasised how important it is for educators to continually question the existence of constructions so greatly influenced by educational psychology, and to be increasingly attentive to our own wisdom and intelligence which results from experiences of being in relation with learners, families, colleagues, and community members. I believe problematizing developmental educational psychology knowledge and the processes in our educational system, which are quick to recognize the "poor" or deficient child, is a long process of reflection, making connections and considering possible alternative ways of viewing education, learning, and development. It involves risk-taking and an engagement with the body of knowledge informed by educational developmental psychology in relation to school communities' lives.

In Italy, the municipality of Reggio Emilia makes possible forums, which bring children and all pedagogues (parents, teachers, and other community members) together for understanding and planning for the experience of education. We cannot begin to replicate a practice which exists in a cultural and political setting on the other side of the world. However, the inquiry has suggested that we, too, can be continually asking, in a discourse of meaning making, what do we want for our children here and now and in the future without relying on the language of progress which was born during the Enlightenment period?

From my teaching experience, parents want to be involved in the formal education of their child/ren, as do the families I spent time with. In my own experiences of talking with people from my different work and social communities, I have had conversations with individuals expressing concerns that supporting homeschooling means de-legitimizing public school teachers' knowledge and professional skills. If home educators are viewed more effective than public school educators, then public education will be further compromised. This was not the sense I received from the homeschooling program the families were enrolled in. From our conversations it seemed that Helen, Lynn, and Sarah believed that both they and the staff desired each other's involvement in the homeschooling experience. All three parents valued an open relationship with the staff working at the homeschool program and appreciated the support which was provided. There appeared to be no one privileged voice of authority, in fact, the parents highlighted their own learning from their child/ren, learning from the staff of the homeschooling program, learning from the curriculum, and continual lifelong learning. The parents began on a steep learning curve; however, with experience and the support of the staff in the homeschooling program, they shared a strong pedagogical relationship and appeared to value coming together, with the child, in learning.

Helen, Lynn, and Sarah did struggle with the image of themselves as teacher and themselves as parent and the difference between the two. Perhaps this struggle comes from the language we use in education to describe the relationship between children, parents, teachers, and the classroom learning, in particular, the language that distinguishes the role of teacher and the role of parent. Language such as "parents as partners," "parents as first teachers," "the school and community in partnership," and "parent helpers" was used throughout the interviews to describe different roles and relationships, and also the same roles and relationships.

Helen, Lynn, and Sarah spoke of themselves as parents knowing their children best; that they are a big part of their child's education whether in public or homeschooling, provoking thought about the extent to which staff in schools accept and act upon the possibility that many parents/caregivers have close knowledge of their children's educational lives, despite the fact that they have no formal teacher training. Furthermore, does this language affect a parent's involvement in their children's educational lives in formal schooling? How is this view formed? What role do parents see themselves as having in school communities? Why do we separate the role of teacher and parent? Are we not all pedagogues? How could children benefit from the educational insights of both professional educators and parents on school landscapes?

CONCLUSION: THE CONTINUAL NEED FOR RECONCEPTUALIZATION

The three families in the inquiry provided the opportunity to have another view, a different perspective, of curriculum and teaching practices in public schools through the sharing of their experience of homeschooling. When school practices focused on typically developing students, the public school educators of the students in the inquiry could be described as failing to see, or choosing to ignore, that intellectual, physical, emotional, and social ability takes many forms and involves many different aspects. In critique of educational developmental psychology, this chapter has argued that educators need to seek a more informed understanding of students' abilities and educational and familial lives so that learning and development, in all its complexity, can be better facilitated.

Past history and experience has shown that many pedagogues prescribe to a long and linear list of principles of child development and learning. In attending to the inquiry's findings, I believe it is so important for school educators to seek an alternative, in which dialogue is open and ongoing with families and youth. Rather than accepting many children fail to succeed in education without inquiring into individual and cultural differences in students' learning and

development, pedagogues can come together in communities of reconceptualization using a language that encourages continual dialogue and critical inquiry in an attempt to undermine the assumptions, biases, and preconceived abilities of students outlined by educational psychology.

TERMS FOR READERS

Homeschooling—There were approximately 60,000 to 95,000 elementary and secondary homeschooling students in Canada during 2000–2001. In the homeschooling program in Edmonton, parents choose this form of schooling over other schooling options for a variety of reasons. Within Alberta, there are three organizations offering different support and services to homeschooling families: Alberta Home Education Association, Alberta Distance Learning Centre, and the School of Hope.

Considerable research on homeschooling in the United States has clarified the historical development of home education, parents' reasons for choosing a form of education other than traditional schooling, comparisons of home education to public or private education, and home education demographics, yet there has been very little inquiry into learning at home in Canadian contexts.

Modernist Education—This education system is shaped and influenced by industrial production and economic market processes. Education is viewed as providing training in certain forms of skills, sensibilities, values, and knowledge, in the process of preparing individuals in their role as contributors to society. Thus, it is believed that the more educated the society, the more rational individuals within society are, the more progress that is possible.

Neo-Vygotskian Research—Research focusing on an attempt to understand the cognitive processes of the individual within an environmental context. Rather than focusing on outcomes, sociocultural accounts of learning and development attempt to understand the processes that occur in specific learning contexts.

Pedagogue—Someone who educates. Dahlberg, Moss, and Pence (1999) propose the notion of pedagogues and children as citizens and co-constructors of knowledge, identities, and values. This is contrasted with the idea of educators as technicians, cultural transmitters, and facilitators in age-appropriate activities. Pedagogues are informed by, but not determined by scientific knowledge and technical processes.

FURTHER READING

- Arai, A. B. (2000). Reasons for Homeschooling in Canada. *Canadian Journal of Education*, 25(3), 204–217.
- Cannella, G. S. (1997). *Deconstructing Early Childhood Education: Social Justice and Revolution*. New York: Peter Lang Publishing, Inc.
- Dahlberg, G., Moss, P. and Pence, A. (1999). (Eds.). *Beyond Quality in Early Childhood Education and Care: Postmodern Perspectives*. London: Falmer Press.
- Kincheloe, J. L. (2004). Into the Great Wide Open: Introducing Critical Thinking. In J. L. Kincheloe and D. Weil (Eds.), *Critical Thinking and Learning: An Encyclopedia for Parents and Teachers* pp. 1–52. New York: Greenwood.
- Kincheloe, J. L., Steinberg, S. R. and Villaverde, L. E. (1999). (Eds.). *Rethinking Intelligence: Confronting Psychological Assumptions about Teaching and Learning*. London: Routledge.
- Mayberry, M., Knowles, G. J., Ray, B. and Marlow, S. (1995). *Homeschooling*. California: Corwin Press, Inc.

CHAPTER 90

Activity Theory as a Framework for Designing Educational Systems

PATRICK M. JENLINK

INTRODUCTION

The field of educational psychology has made significant progress in the study of individuals' learning; much has been learned about basic structures and processes of individual cognition (O'Donnel and Levin, 2001). However, paradigmatic arguments concerning cognition challenge existing assumptions that promote considering the individual learner in isolation. Relatedly, cultural-historical activity theory (CHAT) has been moved to the forefront as a theory of learning, which elevates the focus from learner in isolation to learner at the level of collective activity. The purpose of this chapter is to examine cultural-historical activity theory in relation to systems design of learning environments. The concern of design, as Brown (1992) notes in her discussion of "design experiments," is a multilevel and multifocus activity in which psychological, curricular, instructional, interpersonal, activity, organizational, and often also physical aspects are jointly considered with the purpose of constructing viable learning environments. Salomon (1996) in arguing for a reconfiguration of the field of educational psychology's main mission, explicates in particular that the mission should be to "explain, guide, but particularly *design*." It is this focus presented by Brown and Salomon on "design" that instructs, in part, the purpose of this chapter.

Cultural-historical activity theory will be introduced as a framework for analyzing and designing educational systems—analyzing human activities that take place in cultural contexts, mediated by language and other symbol systems and designing educational systems as goal-directed systems in which cognition, behavior, and motivation are integrated and organized by goals and the mechanisms of self-regulation. The approach used in this chapter will distinguish between short-lived goal-directed actions and durable, object-oriented activity systems; explicate the function of consciousness and its relation to related cognitive activity (noting the unity of consciousness and behavior in terms of inner mental concepts and dynamics), and elaborate a framework informed by cultural-historical activity theory that can illuminate our understanding of the nature of learning as well as animate the design of educational systems toward that understanding and the transformation of educational processes and activities.

SYSTEMS DESIGN AND ACTIVITY THEORY: A CULTURAL-HISTORICAL SYSTEMS PERSPECTIVE

Systems design is largely communicative in nature, depends on discourse as a semiotic tool for mediation within the cognitive, cultural, and creative activities essential to overcoming deep sociohistorical patterns of learning that are woven into the fabric of human activity and educational systems. The use of cultural-historical activity theory (CHAT) as a framework for designing educational systems, learning systems in particular, represents a sociocultural and inquiry-oriented perspective that illuminates the relationship between design as a human activity system and the sociocultural context in which the design activity unfolds. The design activity, as described in Banathy's concept of systems design (1996), is mediated by conversation and language forms of semiotic mediation. Mediation of design, through the use of cultural artifacts like discourse and language, represent actions within the human activity system of design. The mediational role of conversation and use of other symbol-based systems in systems design is supported by cultural-historical activity theory, which presents a systemic view of design activity (Engeström, Miettinen, and Punamäki, 1999). The semiotic nature of discourse and language within communities of design practice, as well as learning communities, enables participants to transcend formal cognitive and cultural patterns that often marginalize and disadvantage voices of difference. Essential to the design of complex activity systems for learning is the ability of participants to acknowledge the dialectical contradictions that have emerged in their past or present activity system(s), while also acknowledging the importance of creating dialogical relationships toward the goal of designing new systems.

Discourse and language systems—semiotic tools of mediation—underlie the process of both learning and systems design. The framework of cultural-historical activity theory suggests that mediational artifacts such as language and discourse do not exist inside or outside of individual consciousness; rather they reside on the borderline between oneself as designer and the others who are also designers and users. Learning, as is the case with designing learning activities, is “a process of social negotiation or collaborative sense making, mentoring, and joint knowledge construction” (Zhu, 1998).

CULTURAL-HISTORICAL ACTIVITY THEORY AND HUMAN ACTIVITY SYSTEMS

In society, the nature of, and capacity for, human activity is endlessly multifaceted, mobile, and rich in variations of purpose, context, content, process, and form (Engeström and Miettinen, 1999). The social structure of society is not characterizable as something standing alone, apart from the activity and people that created it. Rather, “society forms the individuals who create society; society, that is, produces people, who produce society, in a continuous dialectic” (Bhaskar, 1989). Human activity forms systems that, with their particular social languages and other cultural artifacts such as discourse and physical tools, do not operate independently one from another. They interact dynamically, forming systems of interrelated and interdependent activity, with particular goals and purposes. The meaning of activity as related to social systems design and activity theory will be examined, using the idea of educational systems design as a context and referent. Human activity systems related to educational systems design will be explicitly referenced to further contextualize the meaning of activity.

Human Activity Systems

Checkland (1981) suggests that human activity systems may best be understood as structured sets of activities that are notional, expressing some purposeful human activity that could be found

within the real world. Banathy (1996), elaborating on Checkland's perspective of human activity system, posits the example of idealized system design as a type of human activity system that is purposeful in nature and which can be used to create a new system that could exist in the real world. Relatedly, Checkland and Scholes state that

The emergent property of a defined human activity system is the ability, in principle, to pursue the purpose of the whole . . . within its activities and structure concerned with communication and control so that the [human activity system] could in principle (were it to exist) adapt and survive in a changing environment. (Checkland and Scholes, 1990).

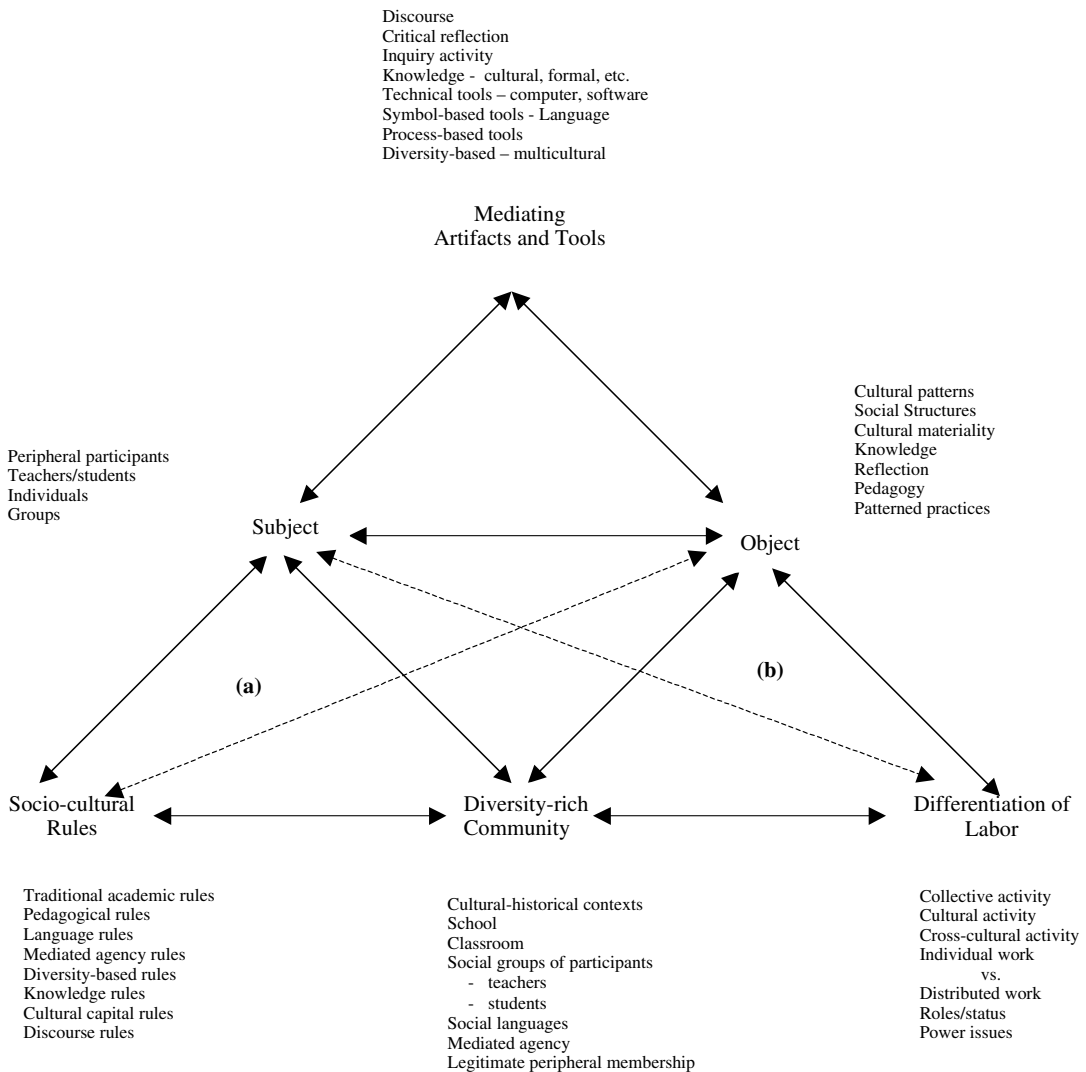
Individuals are active participants in multiple activity systems, often in complex arrays of roles and responsibilities. The idea of multiple roles in various activity systems is made more problematic by the fact that activity systems constantly interact with other activity systems in a complex dialectic of boundary work. The complex dialectic of the boundary work found in human activity systems pervades conscious human activity, often giving rise to tensions that drive changes in an activity system and its participants, individually and collectively. Because activity systems constantly interact with other activity systems, and because as noted, "participants themselves have many affiliations (identities, subject positions) with many other activity systems, ongoing social practices constantly change as tools-in-use are appropriated across boundaries and eventually are operationalized . . . to transform activity systems" (Russell, 1997). The notion of transforming activity systems gives support to Banathy's (1996) ideal of social systems design as contributing to the transformation of society through transcending old systems. Activity may also be understood from the viewpoint of activity theory (Engeström, Miettinen, and Punamäki, 1999).

Cultural-Historical Activity Theory

Cultural-historical activity theory (CHAT), with its philosophical and historical roots in the classical German philosophy (from Kant to Hegel), in the writings of Karl Marx, and in the theorizing emerging from the cultural-historical school of Russian psychology most often associated with the research of L. S. Vygotsky, A. N. Leont'ev, and A.R. Luria, presents a framework of understanding activity in human systems. Recent work with activity theory in the fields of human cognition, cultural psychology, and communication through the research of Michael Cole, Yrjö Engeström, and Ritva Engeström draws attention to the similarities in social systems and educational systems design and the sociohistorical and sociocultural foundations of activity theory.

Through the framework of CHAT, in the context of educational systems design, participants in a human activity system are guided by object or motive-based expectations of creating an ideal educational system. The creative activity is mediated by use of cultural artifacts that might be any combination of rule-based, role-based, symbol-based, cognition-based, discourse-based, process-based, and technology-based tools. A primary example is the use of ideal systems design technology, systems language, and design conversation in the design of an ideal educational system. Also critical to the framework, which guides the systemic change process, are sociocultural rules that are aligned with the object or motive based expectations. Essential in this framework is membership in a community of stakeholders seeking to design a new ideal for the educational system—a design community. Membership in the community by the facilitator and stakeholders is balanced through a division of labor that seeks to authentically engage all participants in the systemic change process. Serving, as center for this framework, is a set of beliefs adopted by the participants that serves to provide social coherence for the design community.

Figure 90.1
Cultural-historical Activity Theory as a Framework for Design



Cultural-historical activity theory, as a framework for understanding the meaning of human activity systems, is based on a relational dynamic between the subject, object, mediational artifacts (or tools), sociocultural rules, division of labor, and community structure of a human activity system (see Figure 90.1 for an elaboration). Community refers to those who share the same general object; rules refer to explicit norms and conventions that constrain actions within the activity systems; and division of labor refers to the division of labor of object-oriented actions among members of the community.

As a sociocultural theory of human activity and learning, activity theory focuses on interaction among and between people as a primary source of communicative action resulting in objectivation of human subjectivity through social action. Activity systems are complex interrelated sets of actions and activities or practices, situated within sociohistorical and sociocultural contexts.

The top triangle in Figure 90.1 represents an element of the activity system that defines the subject, object, and mediating artifact(s) relationship. The subject(s) of any activity is the person(s) for whom the activity is created. The object is the motive or intentioned outcome implicit and explicit in the activity. The mediating artifacts or tools are cultural in origin and serve to mediate the subject's actions and activities as the object is transformed through objectivation, and human subjectivity (social languages, forms of economic and political organization, cultural and ethical norms, ideals for social systems) is embodied in the intentioned outcome or product. The second triangle in the lower left of Figure 90.1 represents an interrelated element of the activity system. This element depicts the relationships between the subject(s), the sociocultural rules of the community (related to the object, goal, outcome—see (a) in Figure 90.1), and the designated community made apparent. The third triangle in the lower right of Figure 90.1, represents the relationship between the object(s) or intentioned outcome(s), the community in which the subject is a member, and the division of labor respective to the particular activity. The division of labor might be thought of as role differentiation by subject(s) within the community (see (b) in Figure 90.1). The community's culture produces, uses and transforms artifacts as individuals and the collective engage in activities. Connected, the three triangles form a framework for analyzing and designing human activity systems such as educational systems. In this framework, activity theory is elaborated as a complex set of interrelated and situated relationships that enable participants to accomplish a goal.

Cultural-historical activity theory explains an activity, (such as those related to educational systems design, design of learning environments and experiences, and cognition and learning), as a unit that is instructed by a socially defined goal and animated by the execution of some specific actions that have evolved or have been created to attain that goal (Cole and Engeström, 1993; Leont'ev, 1978; Russell, 1997). As such, activity involves patterns of communication with others related to the setting and the goal, and thus, mastery of a set of symbolic tools (such as systems language), discourse tools (such as communicative action and design conversation), or perhaps process tools (such as educational systems design). In an activity, each of these elements influences the individual's and the collective's actions, practices, and understandings. It is important to reiterate that the various components of the activity system do not exist in isolation from each other. Rather, "they are constantly being constructed, renewed, and transformed as outcome and cause of human life" (Cole, 1995).

Through the integrated lens of activity theory and human activity systems, society may be seen to exist only in virtue of human activity, activity that is conscious. Consciousness gained and expressed through activity brings about change, though social changes need not be consciously intended. Importantly, Bhaskar notes that "society, then, is an articulated ensemble of tendencies and powers which . . . exist only as long as they (or at least some of them) are being exercised . . . via the intentional activity of human beings" (1989, p. 79). People, in their conscious participation in activities and social practices, "for the most part unconsciously reproduce (or occasionally, transform) the structures that govern their substantive activities" (Bhaskar, 1989, p. 80). Production and transformation are related to the externalization and internalization of activity in society.

Externalization and Internalization

Integral to understanding the importance of cultural-historical activity theory and the design of educational systems are two basic processes of externalization and internalization, explained as operating continuously at every level of human activity. Internalization and externalization focus on the production and transformation of culture and society. Engeström and Miettinen explain that "Internalization is related to reproduction of culture; externalization as creation of new artifacts

makes possible its transformation. These two processes are inseparably intertwined” (Engeström and Miettinen, 1999). Relatedly, the principle of internalization/externalization suggests that the shaping of external activities results in shaping internal ones. The importance of these two concepts and their inseparability is further explained by Bhaskar as he examines society as already being in existence, and thus “any concrete human praxis, if you like, act of objectivation, can only modify it; and the totality of such acts sustain or change it. It is not the product of their activity (any more than their actions are completely determined by it)” (1989, p. xx). When considering the design of an educational system—that is, learning environments and the learning experiences therein—within society, it is important to see society as already existing, and that an educational system already exists. But society or an educational system as a social system within society exists only by virtue of human activity. Therefore, “people do not create society, for it always preexists them. Rather it is an ensemble of structures, practices and conventions that individuals reproduce or transform. But which would not exist unless they did so. Society does not exist independently of conscious human activity” (Bhaskar, 1989, p. xx). Relatedly, designing learning environments, and more specifically the learning experiences that animate the cognitive development of students, requires an understanding that internalization/externalization processes regulate human actions/interactions within cultural activities. The use of semiotic tools (language, discourse) and other intellectual or psychological tools to mediate design serves to instruct the design imperatives for creating alternative levels of consciousness in the learner, facilitate higher levels of mental activity, and transform existing systems.

Importantly, if we apply this understanding of conscious human activity to the design of learning systems, we become aware of the critical role that designing activity systems of learning play in transforming existing learning experiences, rather than reproducing them. As Bhaskar explains, social structures are products of social activity, they may be viewed as objects of transformation through conscious human activity. “And because social activities are interdependent, social structures may be only relatively autonomous. Society may thus be conceived as an articulated ensemble of such relatively independent and enduring structures; that is, a complex totality subject to change” (Bhaskar, 1989, p. 78).

DESIGNING EDUCATIONAL SYSTEMS—LEARNING ENVIRONMENTS/EXPERIENCES

Designing educational systems, for purposes of this discussion, focuses on the design of complex learning systems or learning environments, and the various learning activities that enable individuals to learn. Returning to Brown (1992) briefly, design in relation to cognition is concerned with multilevel and multifocus activity, and the creation of alternative learning experiences that consider the whole learning environment and the social interaction of individuals within the environment as well as through the interconnected activities that situate learning experiences. In this sense, design, as a form of social systems design, is a communicative process among individuals that enables collective action(s) of learning, creating, constructing knowledge, mediating meaning and understanding, etc. These actions lead to the creation of change in and/or of the social system; the transfer of the conception of a new or alternative system into action. Banathy further elaborates that the designer’s main tool is subjectivity, which includes social practice, community, interest and commitment, ideas and ideals, the ethics of the system and the moral idea, affectivity, faith, and self-reflection” (Banathy, 1996, p. 164).

As identified in the examination of cultural-historical activity theory (CHAT), the embodiment of participant’s subjectivity is a critical element of the social change or transformation process. Subjectivity as a design element enables the object of design to be realized, particularly when the object is to create a complex social system for learning.

A defining characteristic of systems design is that the design process is inquiry oriented and is a form of discourse, practical in nature and based on social language or symbol systems. This discourse is communicative in action, seeking to bring participants into inquiry-based activity that is focused on creating an alternative or new system. Banathy defines systems design, in the context of human activity systems, as “a future-creating disciplined inquiry,” an inquiry that “people engage in design in order to devise and implement a new system” (1996, p. 42). Again, returning to Brown (1992) briefly, the idea of creating an alternative, viable learning system, that is multilevel and multifocus is concerned with a disciplined approach to inquiry in the experimenting of design and cognition.

Educational systems design is based on an ideal systems design approach. Incorporating Banathy’s notion of the “ideal” as a focal point, the new educational system is created by “those who serve the system, those who are served by it, others who have a vested interest in it, and all those who are affected by it” (1996, p. 195). The characteristic of users creating or designing the ideal system—user-designers—is a critical component of designing learning systems. From this perspective of systems design, the subjects, that is, the learners, of the design activity (see Figure 90.1) are the same individuals who are the vested owners/users of the system. Therefore, systems design reflects an authentic participation of learners/users in “the design because they genuinely and deeply care about the future state of their system” (Banathy, 1996).

An examination of ideal systems design as delineated by Banathy suggests five interrelated and interdependent design spaces that are critical to designing a new system. Each space represents a design space in which participant inquiry and design conversation are situated, and includes the following: exploration and image creation space, design information and knowledge space, design solution space, evaluation and experimentation space, and modeling space. Jenlink (Jenlink, 1995; 1999, June) provides a contrasting yet complementary view of systems design in suggesting that the process includes: contextualization of the system, design of new system and system implementation processes, implementation of system, and critical inquiry and system learning. Together, these form a multidimensional design space in which design activity unfolds. Also critical in this view of systems design is self-renewal and evolution of consciousness as critical processes implicit and explicit in the design; contributing to the participant’s ability to transform social structures and transcend existing systems as the ideal is created and realized through the actions of participants. During the design process, consciousness moves through, or perhaps more accurately along, a developmental and evolutionary path reflecting different types of consciousness in social action including: perspectival, interpretative, critical, ethical and moral, self-reflective, integrative, creative, collective, self-renewing, and evolutionary (Jenlink, 1999, June). Each type of consciousness relates to different design activities, with particular focus on forms of conversation, objects of the design process (see Figure 90.1), design maturity of stakeholders, particular social language, and sociocultural rules that govern or influence the social action of participants engaged in design activities.

Systems design of a whole, complex learning system, such as a classroom, requires a focus on the ideal learning experience for each student, inclusive of the cultural-historical, epistemological, pedagogical, ethical and moral considerations for all learner(s) (this can be compared to sociocultural rules in Figure 90.1). Issues of equity, social justice, and caring provide a constant tension in the design process to create the ideal educational system. The dialectic boundaries set by interacting activity systems, the concern for continued reproduction versus transformation of social structures, and the need to address issues of moral, intellectual, and social responsibility in an increasingly problematic society affirm the importance of using an ideal systems design approach to creating new educational systems. The importance of conversation and language as semiotic tools in the processes of designing complex learning systems, requires designers to see learning/design of learning through multiple perspectives of cognition, as well as understand the

nature of existing societal structures, the dialectic boundaries of activity systems, the cultural and cognitive patterns of the participants and their communities, and the sociohistorical and cultural artifacts implicit/explicit therein, while simultaneously contextualizing the design of the learning system and/or interrelated sets of activities and experiences.

SEMIOTIC MEDIATION: CONVERSATION IN/AS DESIGN

In the design of learning systems, mediation is the instrument of cognitive change. This mediation can take the form of the textbook, visual material, classroom discourse patterns, opportunities for second language interaction, types of direct instruction, or various kinds of teacher assistance. Regardless of form, mediation is embedded in some context that makes it inherently sociocultural processes (Engström, 1991; Tharp and Gallimore, 1988). Semiotic mediation, as Mahn (1999) explains, is the “mediating function of language and other symbolic systems.” Designing learning systems and activities in which learning experiences are shared by students, requires mediation through the use of discourse as medium of design and the use of language as a semiotic tool necessary to mediating cultural-historical activities and the design of new activities. Semiotic Mediation is integral to designing learning systems; it situates itself in both the design of the system as an integral design feature of the system. In this sense, the use of semiotic mediation enables designers to examine the ways that individuals appropriate social symbol systems and to reveal that internalization was transformative rather than transmissive. The semiotic mechanisms (including psychological tools) mediate social and individual functioning and connect the external and internal, the social and the individual (Vygotsky, 1981; Wertsch and Stone, 1985).

In this sense, conversation as semiotic mediation is different from other forms of tool-mediated action in number of ways. First, while conversation (i.e., dialogue, discussion, etc.) require utterances and use symbol systems (i.e., language), the action that is performed is one of “meaning,” making or exchange. Second, it is not the coparticipants who are the object of the “speaker’s utterance act,” except in the sense that what is spoken is directed toward other participants. Third, conversation that is significant to the design of learning systems is a constructive process that results in a socially constructed design experiment for learning, which must be implemented to determine its viability.

Through semiotic mediation, the dynamic development of learning systems/experiences and the recognition of learners’ immediate development needs are clarified through the concept of zone of proximal development. This concept highlights a central tenet in sociocultural theory—the interdependence of individual and social processes in the coconstruction of knowledge (John-Steiner and Mahn, 1996).

Semiotics and the Zone of Proximal Development

The goal of design, instructed by cultural-historical activity theory, is for learners to experience learning through activity-based experiences concerned with growth and development of cognitive capabilities, and transformation consciousness. Designing learning systems, and therein learning experiences that support learners’ development of capabilities so that they can learn to do without assistance things that they could initially do only with assistance, requires, as a design consideration, an understanding of the Vygotsky’s (1978) notion of the zone of proximal development. Formally, this approach comprises designing learning experiences within the learners’ zone(s) of proximal development (ZPD).

Zone of proximal development (ZPD) refers to the “distance between the actual developmental level as determined by independent problem solving and the level of potential development as

determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978). Within the zone of proximal development, learning is focused not on the transfer of skills to the learner but on collaboration between an expert person and the learner that enables the learner to participate in sociocultural practices (Lave and Wenger, 1991). From this perspective, “the development of cognitive structure happens when the individual internalizes a complexity that was formerly distributed over the system that she/he operates within.” (Hansen, Direkinck-Holmfeld, Lewis, and Rugelj, 1999).

Design is a formal learning activity, requiring semiotic mediation, much that same as the mediation required learners in the zone of proximal development. Just as peer interaction is crucial to learning because it set up circumstances in which learners perceive an internal need to reconcile different perspectives to resolve conflicts of interpretations, peer or coparticipant interaction in designing learning systems shares an internal need to reconcile different perspectives of cognition and learning. As designers of learning systems, there is a need to design learning experiences that meld the cognitive and social aspects of learning without subordinating either to the other (Rogoff, Radziszewska, and Masiello, 1995).

Conversation and Design Semiotics

Conversation as semiotic mediation in design, draws from the work of Banathy (1996), Jenlink (1995; 1999, June), Jenlink and Carr (1996) and Horn (1999). Conversation, in the context of designing learning systems, is viewed largely as a communicative action, providing a medium through which participants in the design process may engage in a multidimensional inquiry leading to the creation of a new system of learning activities. Design, and therein conversation, acknowledges multiple forms of social discourse. As such, design conversation is viewed, in of itself, as a dynamic system comprised of different forms of discourse, each with a particular purpose and mediational importance as semiotic tool in the system design activity.

Design conversations occur as socially constructed processes of communicative action, situated within multiple interrelated design activities. Bringing this social action into being requires something more to be exchanged within the discourse than just those intersubjective understandings (or misunderstandings) that belong to the flow of the discourse. “That ‘more’ consists of what is being talked about, the referential and semantic contents of communication.” (Engström, 1995). In the design of a learning system, the social languages and coconstructed meanings as well as the ideals generated serve as the referential and semantic contents of communication.

When examined through the lens of activity theory (see Figure 90.1), the communicative action, practical discourse, and inquiry-based orientation of design conversation reveals a deeply complex array of rule-based social actions. These actions are mediated and governed by discourse and social language that is politically and cultural charged in the contexts of its origins. Returning to Brown (1992), design, as a series of communicative and social actions, occurs within the larger dynamic of the design activity system, and is concerned with the whole of the learning environment. Design, in of itself, is an activity system with the purpose of designing learning environments and activity-based learning experiences. It is comprised of interrelated and interdependent events, activities, actions, and processes. Each event and activity of the system seeks to transform a particular object into an intentioned outcome—creating the ideal educational system. This transformation or objectivation, using stakeholder subjectivity as a tool, draws into play issues of social justice, equity, difference, voice, consciousness, and ethical and moral responsibility.

The semiotic mediation of design through conversation or discourse requires an understanding of different forms of discourse as mediational tools. The “meta” nature of design conversation reflects a dialogic “betweenness” that connects various disciplinary perspectives as well as the recognition of differences that populate social systems. Critically evaluating the complex nature

of systems design, and examining the sociohistorical and sociocultural context in which the design process is situated problematizes systems design. Given the socially charged nature of discourse and language that influences the activity systems of schools, the forms of conversation, communication, and language systems needed for designing learning environments/experiences must be aligned with the needs of the learners. This becomes even more apparent when considering the need to overcome or transcend the patterns of cultural reproduction that seek to maintain social structures that reify educational systems. To accomplish the design of learning systems, four forms of discourse are examined in relationship to design conversation as a meta-conversation.

Discussion. Perhaps the more common discourse found in social activity, discussion is often more pragmatic, giving way to patterns of advocacy, political posturing, and a fragmentary boundary (Jenlink and Carr, 1996). Discussion discourse is more subjectively influenced by opinion and supposition, and often characterized by patterns of rigidity and being closed to sharing personal or professional viewpoints for scrutiny by others. Discussions are often rule revealing, positing nonnegotiable viewpoints in adversarial and debate like interactions. Through this relation, social rules are surfaced by the participants as each attempts to win the other over this her/his point of view. Sociocultural rules that often come into play include competition, move-oppose, conversation as battle or aggressive confrontation, non-listening, non-suspension of assumptions, and active judgement. As Isaacs notes, “the challenge of this space is to change the meaning of the trauma that arises, both individually and collectively.” (Isaacs, 1999). Patterns of conversation often reflect boundary setting, political posturing, defensive routines, and heated exchanges. The language of discussion is often positional, politically charged with advocacy for personal positions, unilateral control, and aligned with social structures that are familiar and provide safe ground from which to argue a particular position. The consciousness that seems to dominate this type of discourse is positional, fragmentary, and advocacy in nature.

Discussion discourse provides a transitional discourse between monologue and the more dialogic types of discourse. The importance of discussion, as a rule revealing discourse, is that participants, individually and collectively, are brought to a level of conscious awareness of the unique perspectives that each person has. This perspectival consciousness is important to the evolution of the design conversation, particularly as the importance of difference is brought into play in the designing of the ideal educational system. The danger with discussion is that if participants remain in the discussion cycle too long, fragmentation and loss of collectivity is often experienced as rigid boundaries set in motion dialectical opposition to sharing and honoring differences.

Dialogue. Dialogue, as a form of discourse, is critical to the systems design process. Whereas discussion is perhaps the more pervasive form of discourse found in social activity and educational settings, dialogue is crucial to bringing the participants to a level collective and transformational consciousness in the systems design process. Dialogue is differentiated into two types by Isaacs (Isaacs, 1999) who sees reflective dialogue as rule reflecting, and generative dialogue as rule generating. Banathy’s (1996) identification of strategic and generative dialogue as foundational to design conversation builds on the notion of generative dialogue as rule generative, noting that generative dialogue “is applied to generate a common frame of thinking, shared meaning, and a collective worldview in a group” (p. 215). In contrast, Banathy states that strategic dialogue “implies communication among designers that focuses on specific tasks of seeking solutions.” (1996, p. 215).

Each type of dialogic discourse encourages and sustains relational patterns in the larger conversation, patterns essential to creating an integrative and collective consciousness in the participants and across the social activities of systems design. In dialogue, the social language reflects respect, diminishing of dialectical and positional boundaries, sharing meaning and knowledge construction, collective identify and acceptance of personal worldviews. Patterns of conversation move to openness toward others, listening deeply, suspension of judgment, disclosure of personal beliefs

and assumptions, caring, concern for equity and justice, and a focus on community. Sociocultural rules are cultural-historically bound systems, that is, they are situated in and bound by cultural and ideological systems of belief that have a temporality, a historicity. As such, in consideration of designing complex learning environments, and relatedly the learning experiences that animate the system, rules must be examined with respect to the origin and/or ideological or theoretical boundedness of their origin. Relatedly, in designing new or alternative systems for learning, rules are coconstructed and collectively respected as communicative and social action that inform the design activity as well as become imprinted in the learning activities that form the educational system. Dialogue as form of discourse, in each of its types, is a critically important social discourse that enables the design conversation to serve as the creative and generative medium through which the user-designers create the ideals. As Isaacs further explains, the generative dialogue, while the rarest of dialogic discourse, “is the one where people cross over into the an awareness of the primacy of the whole . . . this is the space where people generate new rules for interaction, where they are personally included” (Isaacs, 1999). Dialogue serves as a critical nexus in the forming of systems design as meta-conversation.

Ethical. Ethical discourse is a governed by social rules of right and wrong. As Banathy states, ethical discourse is focused on “values, morals, and ethics . . . among the stakeholders” (1996, p. 181 and 215). Stakeholders, as user-designers, must focus not only creating the ideal educational system, they must engage in explicit discussion, aimed at finding common ground and developing consensus. Ethical discourse replaces the aggressive and often conflicting discussion discourse with an “informed and value-based exchange of ideas and perspectives.” (1996, p. 181 and 215). Ethical discourse sets boundaries by mutual agreement as to what the ideal system should or should not embody. The social language of this discourse is characterized by personal and collective codes of right and wrong, equity, social justice, and consideration for difference. The conversation patterns of ethical discourse are reflected in Banathy’s statement that “we each bring with us to the ethical discourse a wide variety of values and moral attitudes. Although this creates a more complex discourse, it also empowers the conversation with the capacity to deal with increased complexity” (1996, p. 181 and 215). Ethical discourse in design creates reflects a social awareness of variant cultural-historical conditions that shape individual and collective identities of students, and which define equity in learning. Sociocultural rules, in ethical discourse, set boundaries of what is right or wrong (socially and culturally as well as epistemologically and pedagogically), and reflect concern for such issues as related to social justice, equity, and related issues of diversity. Semiotic mediation of design, using CHAT as a framework, would reflect a concern for the learner and her/his needs in relation to the objective of the activity being designed.

Postformal. Postformal discourse “includes an expansion of the awareness of self in relation to others, and a critical awareness of the communication process in relation to how it emancipates or constrains our relations with others” (Horn, 1999, p. 364). Grounded in the postformalism of Kincheloe and Steinberg (1999), postformal discourse is a dialogue about power, “a dynamic investigation of our selves, our relations with others, and the political implications of the type of conversation in which we are engaged” (Horn, 1999, p. 364). This form of discourse shares a similarity with dialectical discourse in that it is grounded in a critical perspective of responsibility for social and cognitive activity, guided by inquiry into social structures of culture based on a critical hermeneutic of power relations. Postformal discourse surfaces a critical consciousness on the individual and collective level of design activity. This critical consciousness is concerned with issues of social justice, equity, diversity, etc., similarly to ethical discourse, however it draws to the foreground of design activity the cultural-historical origins of cognition and learning, focusing on the processes, contexts, and etymological origins of knowledge.

Postformal discourse is guided by the four elements of a postformal structure including patterns, process, etymology, and contextualization. Conversational patterns in postformal discourse

include facilitative, constructive, collective, critical voice, and a focus on sociohistorical and sociocultural relationships that exist between knowledge, knowledge construction, and user-designers. In postformal discourse, the elements of dialectical and discursive discourse surface as participants engage in examining personal perspectives and individual worldviews. This serves the meta-conversation of design by creating an awareness of perspectives, thus leading to a perspectival consciousness essential to generating a quality and energy essential to ensuring that voices of difference are included in the design of an ideal system.

Semiotics and Responsive Design

As a tool for semiotic mediation, design conversation is a complex discursive activity that embodies multiple forms of discourse, and which must be culturally responsive to the needs of the audience for whom the design is targeted. As a culturally responsive practice, design requires a focus on both the design of learning environments, broadly speaking, as well as learning experiences situated within, to support learning. As such, design conversation necessarily focuses on the cultural-historical contexts in which learning is situated. Culture is central to design, as is language, in that contemporary perspectives view learning as changes in the quality of participation in cultural practices (Cole, 1996; Rogoff, 1990; Wenger, 1998). These practices are historically inherited, and are also socially mediated and negotiated through interpersonal relationships among individuals in pairs and in groups (Lave and Wenger, 1991; Rogoff, 1994). Semiotic mediation of design must consider the language systems and other cultural-historical artifacts of the learner, as information in design of the learning experiences. As designers, a primary challenge is to learn and understand the cultural contexts of origin, the cultural worlds of students (Lee, 2003).

DESIGNING LEARNING ENVIRONMENTS/EXPERIENCES: ACTIONS AND ACTIVITY

The design of a learning environment or learning experience, in relation to creating a human activity system, defined, is defined in part by the nature of actions that are illustrated in the design. In cultural-historical activity theory, the distinction between short-lived goal-directed actions, that is, the actions that animate or otherwise give life to an activity, and the more durable, object-oriented activity is of central importance. Design, mediated by conversation as a semiotic tool, is focused on the independent actions as well as the activity system. To further explicate, an activity is comprised of sets of actions that the participant (designer or learner) engages in to accomplish each activity, often simultaneously with other actions and activities. An action is a set of interrelated processes that enable the participant to mediate their work in systemic change while creating the ideal system. A process may be understood, then, as a set of procedures and principles that a participant uses as part of each process, again, often times simultaneously with other procedures, principles, processes, actions, and activities. Finally, a procedure may be understood as steps that the participant take toward completion of a procedure, and principles may be understood as causal relationships that help one to understand phenomena and make decisions necessary to perform processes well. Activities, from a cultural-historical perspective,

A historically evolving collective activity system, such as denoted by a learning environment, seen in its network relations to other activity systems, is complex. Goal-directed actions, within an activity, are relatively independent but subordinate to the activity, and eventually only when interpreted against the background of entire activity systems. Activity systems realize and reproduce themselves by generating actions and operations, as part of a culturally bound system (Engeström, 2000).

REFLECTIONS ON CHAT AND DESIGN

The design of complex whole learning systems, such as a classroom, as well as the learning experiences within that system, requires a concern for the learner as s/he is situated within the cultural-historical nature of the “whole” system. Cultural-historical activity theory offers a framework for understanding the complexity of design in relation to cognitive development and the design of learning experiences that provide the learner, within her/his zone(s) of proximal development, with the psychological as well as cultural tools necessary to mediating learning.

Designers of learning environments and learning experiences may guide the design processes by drawing on cultural-historical activity theory as a framework for responsive design. As semi-otic mediational tool, design discourse is socially and culturally charged with the rules and social languages of the respective contexts of origin. Stakeholder subjectivity is recognized as a primary tool in the generative process of creating an idea system. The critical and developmental role that discourse takes in mediating the creative process is made apparent as human subjectivity challenges the existing beliefs and social structures that represent the old system. Mediating tensions as well as overcoming dialectical boundaries set by interacting activity systems further informs the importance of design conversation in educational systems design. Taking on the responsibility of the main mission of educational psychology, that of *design* as Salomon (1996) argues, brings to the foreground the importance of adopting new perspectives of cognition, such as cultural-historical activity theory, and engaging in new as *design experiments* for learning.

FURTHER READING

- Banathy, B. H. (1996). *Designing Social Systems in a Changing World: A Journey Toward a Creating Society*. New York: Plenum Press.
- Bhaskar, R. (1989). *Reclaiming Reality: A Critical Introduction to Contemporary Philosophy*. London: Verso.
- Brown, A. L. (1992). Design experiments: Theoretical and Methodological Challenges in Creating Complex Interventions in Classroom Settings. *Journal of Learning Science*, 2, 141–178.
- Checkland, P. (1981). *Systems Thinking, Systems Practice*. New York: John Wiley & Sons.
- Checkland, P., and Scholes, J. (1990). *Soft Systems Methodology in Action*. New York: John Wiley & Sons.
- Cole, M. (1995). The Supra-Individual Envelope of Development: Activity and Practice, Situation and Context. *New Directions for Child Development*, no. 67, 105–118.
- Cole, M. (1996). *Cultural Psychology: A Once and Future Discipline*. Cambridge, MA: Harvard University Press.
- Cole, M., and Engeström, Y. (1993). A Cultural-Historical Approach to Distributed Cognition. In G. Salomon (Ed.), *Distributed Cognition: Psychological and Educational Considerations*, pp. 1–46. Cambridge, UK: Cambridge University Press.
- Engeström, R. (1995). Voice As Communicative Action. *Mind, Culture, and Activity*, 2(3), 192–215.
- Engeström, Y. (1991). Non Scolae Sed Vitae Discimus: Toward Overcoming the Encapsulation of School Learning. *Learning and Instruction*, 1(3), 243–259.
- Engeström, Y. (2000). Activity Theory As a Framework for Analyzing and Redesigning Work. *Ergonomics*, 43(7), 960–974.
- Engeström, Y., and Miettinen, R., (1999). Introduction. In Y. Engeström, R. Miettinen, and R. Punamäki (Eds.), *Perspectives on Activity Theory*, pp. 1–16. New York: Cambridge University Press.
- Engeström, Y., Miettinen, R., and Punamäki, R. (1999). *Perspectives on Activity Theory*. New York: Cambridge University Press.
- Hansen, T., Direkinck-Holmfeld, T., Lewis, R., and Rugelj, J. (1999). Using Telematics for Collaborative Knowledge Construction. In P. Dillenbourg (Ed.), *Collaborative Learning: Cognitive and Computational Approaches*, pp. 169–196. Amsterdam, The Netherlands: Pergamon.

- Horn, R. A (1999). The Dissociative Nature of Educational Change. In J. L. Kincheloe, S. R. Steinberg, and P. H. Hinchey (Eds.), *The Post-formal Reader: Cognition and Education*, pp. 351–377. New York: Falmer Press.
- Isaacs, W. (1999). *Dialogue: The Art of Thinking Together*. New York: Currency.
- Jenlink, P.M. (1995). Educational Change Systems: A Systems Design Process for Systemic Change. In P. M. Jenlink (Ed.), *Systemic Change: Touchstones for the Future School*, pp. 41–67. Palatine, IL: IRI/Skylight Training and Publishing, Inc.
- Jenlink, P. M. (1999, June). *Crossing Boundaries, Changing Consciousness, Creating Learning Communities: Systems Design as Scholarly Practice in Educational Change*. Paper presented at the ISSS Conference, Asilomar, California.
- Jenlink, P. M., and Carr, A. A. (1996). Conversation As a Medium for Change in Education. *Educational Technology*, 36(1), 31–38.
- John-Steiner, V., and Mahn, H. (1996). Sociocultural Approaches to Learning and Development: A Vygotskian Framework. *Educational Psychologist*, 31(3/4), 191–206.
- Kincheloe, J. L., and Steinberg, S. R. (1999). A Tentative Description of Post-formal Thinking: The Critical Confrontation with Cognitive Theory. In J. L. Kincheloe, S. R. Steinberg, and P. H. Hinchey (Eds.), *The Post-formal Reader: Cognition and Education*, pp. 55–90. New York: Falmer Press.
- Lave, J., and Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge, MA: Cambridge University Press.
- Lee, C. D. (2003). Toward a Framework for Cultural Responsive Design in Multimedia Computer Environments: Cultural Modeling as a Case. *Mind, Cultures, and Activity*, 10(1), 42–61.
- Leont'ev, A. N. (1978). *Activity, Consciousness, and Personality*. Englewood Cliffs, NJ: Prentice-Hall.
- Mahn, H. (1999). Vygotsky's Methodological Contribution to Sociocultural Theory. *Remedial and Special Education*, 20(6), 341–350.
- O'Donnell, A. M., and Levin, J. R. (2001). Educational Psychology's Healthy Growing Pains. *Educational Psychologist*, 36(2), 73–82.
- Rogoff, B. (1990). *Apprenticeship in Thinking: Cognitive Development in Social Context*. New York: Oxford University Press.
- Rogoff, B. (1994). Developing Understanding in the Idea of Communities of Learners. *Mind, Culture, and Activity*, 1, 209–229.
- Rogoff, B., Radziszewska, B., and Masiello, T. (1995). Analysis of Developmental Processes in Sociocultural Activity. In L. M. W. Martin, K. Nelson, and E. Tobach (Eds.), *Sociocultural Psychology: Theory and Practice of Doing and knowing*, pp. 125–149. New York, NY: Cambridge University Press.
- Russell, D. (1997). Rethinking Genre in School and Society: An Activity Theory Analysis. *Written Communication*, 14(4), 504–554.
- Salomon, G. (1996). Unorthodox Thoughts on the Nature and Mission of Contemporary Educational Psychology. *Educational Psychology Review*, 8(4), 397–417.
- Tharp, R. G., and Gallimore, R. (1988). *Rousing Minds to Life: Teaching, Learning, and Schooling in Social Context*. New York: Cambridge University Press.
- Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.
- Vygotsky, L. S. (1981). The Instrumental Method in Psychology. In J. V. Wertsch (Ed.), *The Concept of Activity in Soviet Psychology*, pp. 124–144. Armonk, NY: Sharpe.
- Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*. Cambridge, MA: Cambridge University Press.
- Wertsch, J. V., and Stone, C. A. (1985). The Concept of Internalization in Vygotsky's Account of the Genesis of Higher Mental Functions. In J. V. Wertsch (Ed.), *Culture, Communication, and Cognition: Vygotskian Perspectives*, pp. 162–179. New York: Cambridge Press.
- Zhu, E. (1998). Learning and Mentoring: Electronic Discussion in a Distance-Learning Course. In C. J. Bonk and K. S. King (Eds.), *Electronic Collaborators: Learner-Centered Technologies for Literacy, Apprenticeship, and Discourse*, pp. 233–259. Mahwah, NJ: Erlbaum.

CHAPTER 91

Reconnecting the Disconnect in Teacher–Student Communication in Education

B. LARA LEE

Thinking beings have an urge to speak, speaking beings have an urge to think.
—Hannah Arendt

INTRODUCTION

Most educators enter the classroom environment trained to teach within their designated disciplines. Unfortunately, far too many are unprepared to engage their students in authentic dialogue grounded in equity, justice, and respect for differences. What makes such a condition most grievous is that educators are first and foremost interpersonal communication practitioners in the classroom serving as social agents within a moral domain. In other words teachers are expected by “society” to teach “right from wrong.” Meaningful communication is often absent from the classroom environment denying students opportunities to critically dialogue about vital social issues that impact their lives, or to explore and develop a healthy sense of Self, build experienced social interaction with others, as well as question and discover the world that they must live and successfully navigate in. The consequence is a disconnection in teacher-student communication.

This chapter emphasizes the implementation of a more expansive interdisciplinary approach toward the field of educational psychology and specifically preservice training for educators that joins together curriculums and curricula that integrate psychological, educational, and multicultural approaches. Such means allow for the investigation of existing assumptions that have been traditionally understood and explored within the field of educational psychology, but that now require a significant shift to respond to more contemporary rapidly changing social climates and diverse student populations.

In this chapter, I demonstrate how human alienation is attributed to a communication disconnection within the teacher-student dynamic in education. My purpose is to address the current communication disconnect, discuss the pivotal role of communication in education as well as convey two progressive, democratic teaching approaches grounded in dialogue and critical inquiry or dialectic engagement for reconnection within the teaching and learning process and teacher-student relationships. Altogether, a teaching grounded in transformative communication is

examined and advocated. This approach encourages positive self-fulfilling prophecies for student success; educator vitality while discovering common-bond experiences tied to authentic human dialogue, ways of knowing and being to transform existing standardized mechanisms based on institutional academic talk and scripted teaching and learning processes that oppress both teacher and student.

In sum, I argue for radical change within existing preservice teaching and learning, educational theory, and classroom practice that denies the pivotal role of communication and dialogue in teaching and learning. Transformative communication and teaching can revive the human spirit and necessitate dead teaching, lifeless teacher-student communication, and unmindful learning. The sacredness of teaching must be recovered.

DISCONNECTION

Missing Communication Preparedness

All educators, no matter the pedagogy or praxis must negotiate and traverse various borders, barriers, and intersections of communication and human interaction while attempting to create a learning environment conducive to individually unique students with their own particular lived experiences, frames of reference and human expression. Both teachers and students must confront their fear of self-disclosure and verbal intimacy to engage in more meaningful communication in education.

Many educators learn either explicitly or implicitly to maintain a safe emotional distance regarding the lived experiences of their students as well as critical social issues that may become too personal, emotional, or controversial. Students quickly understand and see the wall that is built between themselves and their teachers. What occurs, then, is a *communication disconnect*, or gap, within the teaching/learning process and relationship. The disconnect causes a stifling or suppression of human emotions, memories of lived experience, and voice for all concerned. Communication training is at the epicenter, at the very core of the radical shift needed to prepare educators.

Here is the challenge, within this collaborative environment—hard-hitting, tough issues, questions, and conversations must be tackled to strengthen critical thought processes, cognitive development, and engaged learning by allowing teachers and students to get involved in real dialogue about social norms, beliefs, rituals, and customs that dictate what can or cannot be said and done in everyday life. Meaningful teaching and learning cannot happen, if students are not encouraged or allowed to communicate their genuine thoughts, feelings, and experiences, or teachers are silenced by administrative policy.

Communication, dialogue, and critical inquiry encourages educators to become transformative intellectuals that make teaching and learning come alive through mutual participation, collaboration, and discovery—rather than be dulled and limited by educational systems that practice rote teaching and learning that silences student voices and expression of individual lived experiences. Part of the dulling that occurs in educational preservice training and practice is attributed to the exhaustive rules, regulations, and punishments that are routine in schools, and all of which, silence dialogue and critical inquiry.

The classroom should be a wide space for a community of learners to practice peaceful social relations and democracy by embracing diversity in education and society in such a way that individuals have the freedom to be fully human, to speak their lives, and to live with greater dignity as unique human beings. Teachers and students need the freedom to make errors and corrections throughout the learning experience. Education must feed the soul, or rather the mind, body, and spirit—the entire person. If not, learning becomes prepackaged, lifeless, and

begins to numb thinking, feeling, being, and without doubt, harms collaborative teacher-learner relationships. Any hope for meaningfully successful student outcomes within and outside of the classroom are greatly reduced or lost, altogether.

Teacher–Student Dissatisfaction with Education

Too often the teaching–learning dynamic is one suspended on alienation, mistrust, false competition, and disrespect while cresting on the diminishment of the Self. I have taught students of Business, Communication, Education, Gender and Women’s Studies; and within single-sex and coeducational environments. Amazingly, students share similar feelings about their right to speak and be heard in the classroom. Surveying students over the years, the response is frightfully consistent in conveying that teachers are authority-centered, egotistical, and have no care or regard for student thoughts, views, or counterpoints on any given topic.

My experience has been that students fear not being heard, listened to, or stated differently, they fear social and intellectual rejection by other students, and importantly, by their teachers. Another area of enormous complaint by students is that they claim existing educational requirements and course content have little bearing on their real lives, experiences, and aspirations. They see no connection between what is being taught and what is being lived.

Consequently, learning must be relevant to the popular culture, race, class, and gender issues as well as familial, friendship, and relationships that so dramatically influence student’s lives. Otherwise, they will tune out and turn off. We make a grave error in education, if we deny the compelling, external, larger world influences that have the power to preoccupy the minds, attentions, and interests of our students. Education must represent the lived world and be dedicated to promoting social and academic competence and in developing sociocultural understanding, if the field of educational psychology is to successfully meet the rapid changes in society, and student lives.

Simultaneously, teachers feel unheard, undervalued by administrators and unappreciated by students and their families or caregivers. They claim that their students range from listless unresponsiveness to aggressive hostility, with only the occasional interested and prepared student. Still further, educators are enslaved by mechanized educational systems that forbid creative, groundbreaking, or pioneering dynamic teaching. Subsequently, educators become disillusioned with the profession and, with their ability to affect meaningful learning and teaching for positive social change. The consequence then becomes that a high number of potentially qualified, dedicated teachers leave the field for more lucrative and lesser stressed-filled careers to be replaced by oftentimes inadequately trained teachers, or by those entering the field laterally from other vocations without the necessary educational grounding.

In sum, tensions arise in the classroom when teacher aspirations collide with student expectations—making the need to talk openly—profoundly imperative. We must discontinue teaching methods and approaches that are practiced in isolation and without understanding of the impact of every day lived experiences and realities. If not, we close off important possibilities for wider social awareness, recognition of common-bond experiences, and social-human development for students. Inadequate guidance and socialization frequently prevails in teaching through communication barriers.

Politics, Power, and Hierarchy of Language

In this section, I provide only a few, yet dramatic examples of the power of language and social interaction. Language is rooted in politics and social hierarchy wherein hegemony or dominant viewpoints, and beliefs are publicly broadcasted, taught, and adopted as if these biased

assumptions were completely normal, appropriate, and relevant to everyone's lived experiences. Such power in language demonstrates how systematically and administratively, diverse perspectives in lived experiences or cultural expression can be made invisible or altogether erased. The field of Education is not exempt from such a condition of power imbalances. As teachers, we should not accept a dominant discourse that refuses to recognize or denies the social and political elements taught in education and within the larger society.

Educators must be aware, and teach their students that a politics of language controls people and their roles in a given society. Most often politics are based upon a social framework grounded in capitalism that divides individuals according to financial and material wealth, education, race, sex, and class privilege. Similar politics of power resides in the classroom. Human beings consciously or subconsciously carry around the fear of rejection or loss of face in social interaction.

Since the educator's primary role is that of communication practitioner, I draw from the work of Brown and Levinson wherein they demonstrate that politeness in communication is used when there is the perception or belief that unequal positions of power and authority are present in social relationships. The teacher-student dynamic is such an example. Traditionally, power is marked in education by teachers speaking, and acting with authority contrasted by students listening, inactive and passive participants. Such politics serve to maintain unequal positions of power in education and perpetuate conflicts.

Language is so powerful that it can maintain grievous social inequities, racism, sexism, homophobia, and hatred for difference regarding any kind of cultural identity and experience. The politics and power of language dictates that who is given authority to speak and be heard while others remain muted or silenced. Public discourse conveys who holds a privileged status and power within institutions and society.

For example, feminist theory reminds that women have long had to negotiate and resist silence imposed upon them by the dominant class. Significantly, women's ways of learning, living, and being reflect their own unique speaking style and patterns that have been historically defined and stereotyped as being weak, and less authoritative and credible than the male standard used to measure or analyze effective communication.

Another example is that people of differing cultural and ethnic diversity suffer at the hand of dominant expectations in communicative practice. Students who do not demonstrate skill in the English language are labeled as ESL or students whose second language is English. They often experience discriminations or missed opportunities due to biased evaluations of their intellectual and academic ability. Such prejudiced evaluations undermine the self-worth and human potential of many students.

The politics and power of language is maintained through social hierarchy. Customarily those holding power and status are viewed as possessing superior abilities and importance than those occupying positions lower down on the social hierarchy. Such events can even occur in education, if we fail to practice democracy of dialogue in teaching and learning.

Rejection Anxiety: Race, Class, Gender, and Sexuality

The existing fragmented approach toward race and ethnicity within mainstream education must be carefully examined to reveal the levels of often male, (but also female) Eurocentric and heterosexual class privilege that ignores the presence and value of diversity and multicultural experiences. This effort to reproduce a singular view of cultural and ethnic identity must be addressed and corrected through education. As the United States rapidly expands its landscape of culturally diverse citizens, no educator should be ill-informed or unprepared to address issues concerning the politics of race, identity, and culture. Nor should they be ill-equipped to communicate and socially interact with a wide range of student lives and experiences.

Eurocentric or predominately white privilege continues to dominate the vastly diverse student terrain. Educators and students don't enter the classroom environment free of preexisting frames of reference, biases, and prejudices. In actuality, each person contributes to the learning environment either negatively or positively based upon individually adopted ideologies that regulate thinking, communication, social interaction, and behavior that tend to follow along the lines of some embedded or adopted belief system. Significantly language and communicative styles reflect those interior or personal values and assumptions learned during early childhood development and are engrained over the years unless otherwise challenged by social consciousness or educational awareness.

Consequently, the classroom dynamic becomes filled with a diversity of Selves, thoughts, words, modes of being, and lived experiences. Such a potentially volatile climate requires that educators have interpersonal communication competency to negotiate through a wide range of issues; and possess the capacity to respond to classroom interactions and student interactions with an emotional intelligence and maturity involving the human spirit of compassion, care, and tolerance for difference.

As educators, we cannot simply declare an awareness of diversity among our students, without applying communicative action supportive of such a claim. A reform of thinking and practice must occur, beginning with how educators are trained, how they project their identities; and how they allow a diverse population of students to project their identities.

The Hidden Curriculum in Education and Society

Supporting the existence of the politics, power, and hierarchy of language within education is what is often referred to as the hidden curriculum in education. This undercurrent of dominant power and ideologies is found, if not in all, at least most, educational institutions wherein the beliefs and values of a dominant group are broadcasted or transmitted to students through specific administrative missions and regulations, mandated curriculums and approved curricula.

This is the case, whether the classroom is single-sex or coeducational, the hidden curriculum is grounded in cultural hegemony. Cultural hegemony impacts and shapes beliefs that influences our identity, sense of self, and place within the social hierarchy. Educators must be trained to be aware and understand its power to construct a particular and intended worldview that may advantage some students, while disadvantaging others. What makes cultural hegemony so potent in its influence is that over time, the messages broadcasted eventually are perceived as natural and normal—worthy of our teaching and support.

Awareness of the hidden curriculum should serve to remind us that education cannot be imposed upon students through mechanized, rote processes without their active participation and voice. The hidden curriculum in education suppresses the questioning of the role of education as a moral agent dictating beliefs, values, and ideologies as well as constructing social identities. Still further, intelligence is ruled, controlled, and constructed according to manufactured IQ tests and scoring that reduce student ability to a number, while labeling them as being intellectually superior or deficient without giving consideration to the potentially many intelligences that students possess that cannot be empirically measured.

Finally, as educators we must become skilled in recognizing how we have been shaped and influenced by a hidden curriculum in education and society that is grounded in social class, patriarchal or male-privileged hierarchy rooted in cultural hegemony. Even our ways of knowing, believing, learning and living are replete with the residue of the hidden curriculum in education. Considerable attention and effort is given through education in maintaining the status quo that may mask oppressive power and inequality. Healthy and competent communication begins to repair the breach of disconnection addressed throughout this chapter.

COMMUNICATION

What Is Communication?

Communication is not an innate or rather automatic quality. We are not born with the ability to communicate verbally and particularly, to communicate with effectiveness and competence, but rather it is a learned process that continues throughout our lives. There is a never-ending human drive to speak and be heard. Communication is how we as individuals attempt and struggle to make sense and meaning in our lives. As translated from the Greek, communication literally means to share, have fellowship, and communion with others to form community. Significantly, to form communion requires that the act of mindfully, present, listening be part of the communicative interaction. This crucial detail is often ignored or overlooked within communication practices and relationships.

At its basic, original starting point, communication affirms the humanity of others and ourselves; as well as impacts the quality of our lives, daily. Communication is not simply a process of sending and receiving messages, but rather, it is continuous transactional human engagement that involves the entire person—mind, body, and spirit and significantly, personality and emotions.

Underpinning our need to communicate and experience human verbal contact and intimacy is the want to belong, be loved, and to love others. We must tell our lived stories to discover, build identity, and claim selfhood. Through the projection of our voices, we claim empowerment that our thoughts, experiences, and lives do matter and have meaning in the larger social community. Significantly, communication and social interaction are tied to the hierarchy of human needs that range from simple to complex. To be alive, is to hear our words and voices resonate within our physical beings, thoughts, and actions; and to gain feedback and reaction to those sensations and experiences from others. Communication signals our presence in the world.

COMMUNICATIVE SOCIAL INTERACTION

We create and maintain social identities, images, and Selves through an exchange of words or interpersonal communication. We have often heard that each of us wears a mask that covers the real Self to protect egos from harm. Such devices are used because we clearly understand that all citizens must abide by civil, legal, and social rules that dictate our movement in society. From a sociological perspective, daily living is bound up in rituals that regulate our individual and collective behavior. Over time and with experience, these rituals and moral rules begin to mold our human identity.

Social interaction oftentimes reflects the politics of language and hierarchy of power in society. Interestingly, much of the role playing and maintenance that we engage in daily, is wrapped up in a social construction of reality that is often imposed upon us by dominant social powers. In other words, oftentimes, we tend to abide by, and obey rules, regulations, and dictates of personal interaction that have been socially constructed, or manufactured; and we internalize these constructions as they were absolute, unquestionable truth.

Functional Conflict

A profoundly important element of communication and social interaction that is often under-addressed, ignored, or misunderstood is the role of conflict in the course of human social interaction. Conflict does indeed have a constructive place within our communication lives. However, to remain in a state of conflict is destructive. Let me explain. Communicative conflict can raise important issues and actually connect diverse people moving them on the path to achieving harmony

and community. It can help to bring issues and problems out in the open for deeper discussion that could lead to resolution or reconciliation.

For example, educators have aspirations for their teaching and students have expectations about their learning such mixed goals can create a site for potential conflict. Communication drives social interaction and too often, the paths of intent for teachers and students run parallel without actually meeting and connecting because neither truly knows and understands how to genuinely talk and listen to the other, but only to argue their viewpoint. We must next examine how communication and social interaction impacts individual lives or Selves.

UNDERSTANDING THE SELVES

Considerable research bears out that we are not comprised of one Self, but of many Selves making us highly complex beings that at times defy definition. Every person has undergone environmental and relational experiences that involved elements such as styles of attachment with significant caregivers ranging from positive, healthy, constructive familial relationships to negative, destructive, and unhealthy caregiving. From a psychological and sociological perspective, through these relationships we learn and adopt social roles, receive and adopt social labels, and come to understand our sexual biological anatomies and gender-role expectations. We then see ourselves in relationship and context with others.

Each of these stages of development and experience is accompanied by our communication practices and those received by others in our lives that range occur within various communication climates that range in a continuum from highly constructive or highly destructive influences on the development of the Selves. Through early, mid, and late adolescent experiences and relationships we should have learned how to express emotions, develop kinship, build healthy identities and experience affection and love. But as we know, childhood experiences can be fraught with dysfunctionality, varied hardships as well as toxic communication climates.

All of these factors directly impact how we elect to engage in self-disclosure and relational intimacy, which can be highly open or purposefully hidden to others. Our approach clearly depends on our ability to give and build trust with others. Based upon those unique variables within the human condition, each of us perceives, interprets, and evaluates messages sent and received, otherwise known as communication. Grounding each of these human elements is the various methods of communicating, that each of us adopts to frame and project our sense of Selfhood, identity, and persona that we want others to see and accept.

FEAR OF SELF-DISCLOSURE AND VERBAL INTIMACY

Most members of a given society fear rejection. So as stated earlier, they tend to engage in acts of communication politeness to avoid having their face or Selves attacked, embarrassed, and reduced in any way, socially. Altogether, individuals generally try to function in public with minimal face loss, when communicatively interacting. For this reason, we construct and maintain communication boundaries to help us regulate the impact of incoming and outgoing communicative messages. Importantly, boundaries may appear to be invisible, but when they are crossed or violated—misunderstanding and conflict can erupt.

Our levels of communication intimacy and disclosure are grounded in early childhood experiences; as well as our ongoing need to protect our identities. Most individuals become skilled at maintaining social distance or developing masks that protect them from psychological, social, emotional, and even physical harm. The existing educational system and teaching methods frequently invade the protective mechanism that both teachers and students adopt for emotional safety. Yet, self-disclosure is absolutely necessary toward building a community of engaged

learners, a space where progressive teachers and students teach and learn through a discussion of sharing lived experiences.

Two fears generally emerge in the classroom. First, most educators do not want to be placed in a position wherein they appear to be less than academically prepared and knowledgeable. They already work within a vocation that provides precious little respect, without engaging in self-sabotage by inviting students to further demean them. Therefore, many teachers will guard their Selves and their space to ensure that their intentionally projected identities and images are out of harms way. Such a need for safety and protection adds to the alienation and disconnection that customarily comprises the teacher-student relationship. Teachers elect to lecture from scripted, well-planned, and rehearsed material to avoid challenge and potential discredit. Granted, there are indeed exceptions, but I am speaking of the rule.

Second, students are in an environment that is constantly testing, evaluating, and measuring if they have intellectual acuity thereby inciting hostile competition for the right to be affirmed by the teacher and deemed to be a good student. Oftentimes, students opt not to participate rather than be made to feel “dumb” and incapable by other students and specifically, their teachers. Learning is a process of trial and error, yet too often there is a pretense of a false perfection that stops teachers and students from being themselves for fear of embarrassment or humiliation if they may behave in human ways and make mistakes. Unfortunately, conventional, nonprogressive education is not an arena conducive to self-disclosure and verbal intimacy.

RECONNECTION

Bridging the disconnection gap within the teacher–student dynamic requires three transformative elements: communicative practices grounded in democracy of voice and human agency, democratic/progressive and anti-oppressive/liberatory teaching methods, and approaches known as critical pedagogies that use dialectic discussion. I have demonstrated the importance of genuine, meaningful communication and dialogue. Now let us examine two transformative models of education that promote reconnection among teachers and students.

Progressive Democratic Education

John Dewey grounded his progressive model of education in the conviction that individuals should have the right and opportunity to participate within the social consciousness of society. All should practice and participate in democracy. A progressive teacher attempts to meet students where they are in their learning and lived social experiences, and seeks to transcend socially imposed distinctions of classism, race, and gender. Dewey believed that the greatest freedom one could possess was freedom of the mind and the right to obtain and experience freedom of intelligence, choice, and action. Ultimately, he held the commitment that education must reflect the lived experiences of the outside world connecting psychological and sociological processes, of which, both held equal importance.

Liberatory Anti-Oppressive Pedagogy

Dewey’s fundamental model has been enlarged and expanded through the work of Paulo Freire, which also advocated democracy and freedom in education and society. He was opposed to the banking method of education, which he found to be an oppressive pedagogy or approach toward teaching. This is a method of teaching that reduces students to depositories or receptacles of information lectured or banked into the minds. Such a model discourages critical inquiry and

human agency. Students are reduced to objects of teaching rather subjects in command of their learning.

Many oppressions exist within society, however, anti-oppressive education deals with those explicit and implicit lessons found in a hidden curriculum that perpetuates intolerance, hatred, and teaching that contradicts democracy and freedom in learning and impedes social justice. By contrast the progressive model of education proposed is one grounded in dialogic encounter and dialectic engagement. These models of education function to promote human dignity and social justice. To implement the two models of education proposed above, I recommend the following.

DIALOGIC ENCOUNTER

Learning is enhanced through active student participation. This communicative practice promotes co-agency in building community, collaboration, and understanding of cultural difference and experience. Yet, much of teaching today silences student voices. As conveyed earlier, the primary role of an educator, in my view, is that of communication practitioner facilitating a dialogue rooted in dialectic interaction or critical inquiry to engage in self-reflection in order to reach higher levels of understanding and seek personal truth, on a given issue. Together teachers and students learn through a dialogue that assists them in naming and understanding the larger world with all of its diversity and complexities.

Dialogic encounter moves beyond just dialogue and gives us an opportunity to address the interior memories of our lived stories; and provides us opportunities to reflect upon the exterior social influences that impact our individual lives. Such an element of dialogue functions to convey a more complete text of lives. This form of dialogue best occurs when a community of learners attempts to build an environment of trust. The progressive educator earnestly attempts to bridge the gap that separates individuals from genuine connection and understanding.

DIALECTIC ENGAGEMENT

The dialectic encourages the classroom to be a location of democratic practice and freedom of expression in interrogating critical social issues that impact daily living, opportunities, justice, and so forth. Dialectic engagement supports transformative teaching and learning through serious intellectual thought and discussion. This approach allows us to question if teaching and learning is coerced, enforced, and objectively positioned, or if it is fully participatory and highly proactive in questioning prescribed, systematic, and authorized knowledge.

Dialectic engagement or critical inquiry helps students name and question their world and life; while verifying and determining the correctness, validness, and credibility of eternal, authoritative, knowledge that students are expected to adopt and internalize. The outgrowth of such efforts is enhanced participation, humanity, and dignity. Such a partnership increases student efficacy of voice and action while reducing uncertainties that evoke predatory competition, distrust, and alienation. Significantly, dialogic encounter and dialectic engagement counteract the forces of the hidden curriculum, political power, social hierarchy, dominant ideologies and hegemony that are implemented to maintain the dominant status-quo and culture that suppress and silence views of difference and dissent.

CONCLUSION

In this chapter I have earnestly tried to demonstrate the communication disconnect that exists among teachers and students in education wherein communication can either cause disconnection or reconnection. I provided concrete examples of the sources, reasons, and practices that

cause disconnection and dividedness. These examples were followed by conveying fundamental elements of human communication, social interaction, development of the Selves and the human fear of rejection. Two key models of education grounded in democratic/progressive and anti-oppressive/liberatory education were proposed that poignantly address as well as be pragmatically implemented through in preservice training that is grounded in communication, revised educational theory and classroom practice that implement dialogue and critical inquiry wherein both teacher and students are active participants in the educational process, while remaining communicatively connected.

My hope is to convey and demonstrate that such an education can encourage teachers and students to compose lives of meaning, connection, and truth. Preservice and established educators, I encourage you to consider the following possibilities so that you and your students can stave off the disconnection that can so easily disrupt harmonious teacher-student relationships. First, investigate and promote preservice training courses and labs in Interpersonal Communication and Conflict Resolution. Second, require service learning in areas of educational emancipation, social justice, and civil equity. Third, commit to ongoing professional development in emotional and spiritual intelligence involving an ethic of compassion, care, and tolerance.

TERMS FOR READERS

Anti-oppressive Education—Educational pedagogy and praxis that specifically deals with those explicit/implicit lessons found in a hidden curriculum that perpetuates intolerance, hatred; and teaching, contradicts democracy and freedom in learning, and impedes social justice.

Dialectic Engagement—Critical inquiry that interrogates or examines social issues, dominant ideologies, and hidden lessons in education and society.

Dialogic Encounter—An environment and approach that promotes community and collaboration in teaching and learning to discover differences and common-bond experiences in everyday lived experiences

Emotional Intelligence—An appropriate level of emotional (and communicative) response to a given issue that arises in communication that does not violate, harm, or destroy the Self of another.

Hegemony—Dominant social norms, frames of reference, ideologies, and mandates imposed on the less powerful that are eventually internalized and adopted as natural.

Hidden Curriculum—The implicit/explicit social norms, values, beliefs, and regulations that are transmitted to students through education.

Multiple Intelligences—A vast number of human capacities that cannot be accounted for through standardized measurement and assessment.

Progressive Education—Educational ideology and practice founded in dialectic engagement and dialogic encounter in the promotion of social justice and equity.

Spiritual Intelligence—Ability to practice compassion, care, and tolerance for differences in human uniqueness and experience.

Styles of Attachment—Relationships practiced and adopted in adolescence ranging from highly positive to highly negative communication and social interaction.

FURTHER READING

- Anderson, M., and Collins, P. (2004). *Race, Class and Gender*, (5th ed.). Belmont, CA: Thomson-Wadsworth.
- Dewey, J. (1916). *Democracy and Education*. NY: MacMillan
- Freire, P. (2001). *Pedagogy of the Oppressed*. NY: The Continuum International Publishing Group, Inc.
- Giroux, H. (1988). *Teachers As Intellectuals*. Westport, CT: Begin & Garvey.
- Goffman, I. (1967). *Interaction Ritual*. NY: Pantheon Books.
- Goody, E. (Ed.). (1978). *Questions and Politeness*. NY: Cambridge University Press.
- Greene, M. (1998). *The Dialectic of Freedom*. NY: Teachers College, Columbia University.
- Noddings, N. (1992). *The Challenge to Care in Schools: An Alternative Approach to Education*. NY: Teachers College Press
- Palmer, P. (1998). *The Courage to Teach*. NY: Jossey-Bass.
- Wood, J. (2003). *Interpersonal Communication and Everyday Encounters*. (3rd ed.). Belmont, CA: Wadsworth Publishing Company.

CHAPTER 92

The Rise of Scientific Literacy Testing: Implications for Citizenship and Critical Literacy Skills

MARY FRANCES AGNELLO

INTRODUCTION

Given the movement of standardized testing and more frequent testing of students during grades K–12, it can be taken for granted that testing and literacy testing in particular are normal, to be expected, and should be part of the educational and social routine of students in the United States. Higher stakes and expectations of educators and students have exerted demands on the curriculum and the work day of teachers and students that might be expected if we assumed that the testing of reading and writing and other academic skills is and should be taken for granted. This article sets forth four movements that have contributed to the rise of scientific testing in general and scientifically based reading instruction and research. These four movements include (1) the movement of psychology toward a verifiable human science, (2) the development of intelligence quotient and other forms of testing and measurement, as well as the study of reading and reading instruction within the field of psychology, (3) the exertion of power over teachers as technocrats within bureaucratic schools, and (4) the political demands for teacher and student accountability.

Much has been said about the inequities of testing, the racial bias of testing, and the irrelevance of testing to life and even many aspects of schooling. However, what is *not being said* may be as important as that which is. Or perhaps, there is dissent about testing practices that is not being acknowledged by policy makers and lawmakers. The manner in which little or no attention is being paid to the important “other discourse” about the expense of testing, the reduction of education to test preparation, the irrelevance of one exam to life problems, and the loss of excitement about learning and education helps to ensure that compliance with the social practices of testing contributes to the stability of economic and political structures formed by and for special interests. Michel Foucault advocated the discovery of how such practices came to be taken for granted through a normalization process that occurs across social structures, throughout organizations, and in the discourses that emanate from these various institutions. So, how did we come to these places in our history and society where testing is taken for granted and learning to read and write across the curriculum is geared toward the tests that show success or failure of

teachers and students engaged in the work of teaching and learning? I propose that we can better understand the rise of scientific literacy testing by understanding the development of science, the history of psychology that led to scientific legitimacy of measuring human capacities, the bureaucratization of schools and control of teacher work, and finally the manner in which testing satisfies through scientific verification the accountability of educational services rendered and received.

The following discussion will address these four areas of social and educational progress as grounded in European scholarship and the six values (progress, Republican virtue, nationalism, faith in reason, natural law, and freedom) held dear by the founding fathers who put governance and social structures into place in the late eighteenth century. The framers of the Constitution had knowledge of the writings of John Locke, whose influences are present in letters of Thomas Jefferson and John Adams. Newtonian physics and other scholarship by George Berkeley, James Mill, and other philosophers' writings contributed to both philosophy and psychology as we know them today. Writings by Aristotle, Rene Descartes, Wilhelm Wundt, Francis Galton, Ivan Pavlov, John B. Watson, Alfred Binet, and Charles Darwin cannot be underestimated in their influences on the study of the connection of the mind and body, experimentation, mechanistic views of human functions, the intelligence movement, and evolution of man as an organism. The following sections will synthesize the contributions by some of these and other scholars whose works, synchronized with the power and influence of policy makers, have led to our present-day practices of scientific literacy testing.

THE MOVEMENT TOWARD PSYCHOLOGY AS A VERIFIABLE HUMAN SCIENCE

Philosophers whose studies spanned the gamut from spiritual topics to natural sciences to governmental theories were curious about human reflexes and the senses. Aristotle wrote about the objects that were perceptible by each sense in the *Five Senses* (384–322 BC). As opposed to Plato, who believed that truth could be found in the mind rather than in the world of matter, Aristotle found truth and matter to concretely exist in the real world. He could separate himself from that which he was attempting to understand. For him the world could be studied through the sensory perceptions that man could formulate about the reality around him. Modern-day assessments of Aristotle's contribution to psychological process point to his explanation of the powers of the rational soul to understand, constituting the highest level of existence. Aristotle is credited with an all-inclusive view of man's existence including physical, psychological, and moral as a unitary system, unrivaled until the seventeenth century. His view of studying reality constituted the foundations for psychological study until the use of empirical science emerged during the Renaissance.

During the Renaissance, as the authority of the Church was being challenged, scientific discovery unraveled the truths of the deistic-centered universe. Copernicus studied planetary motion to arrive at his heliocentric theory, later verified through empirical observations by Kepler, Galileo, and Newton. As the de-centering of humanity and the earth in relation to the rest of the universe and to God along with Charles Darwin's theory of evolution removed mankind from the center of earthly existence, scientists attempted to understand the species of man as one of many found in the natural order. This order could best be explained through scientific observation.

The reliance on reason as a source of knowledge found efficacious scientific practices involving observation. Such observation became the basis of empiricism. Francis Bacon's work was seminal in organizing the approach to scientific study, involving careful and controlled observation. Isaac Newton's method relied on observations to explain causal events. Psychologists emulated Newton's views of the orderly universe, transferring the thought that mental activities must be ordered by the same system of laws. Rene Descartes taught that the study of bodily processes was

the province of physiology and the study of the mind belonged to psychology, thus first defining psychology's subject matter as the mind. This concept is also important when we discuss the view of learning and learning literacy specifically as a mental activity divorced from the external world in which we learn or become literate. A whole body of scientific study grew up around the psychological processes of reading, later to be confronted by Deweyian and Freirean scholars, as well as sociolinguists and anthropologists who viewed reading and writing as socially grounded. Among other thinkers who concerned themselves with sensory specification were Isaac Newton, John Locke, Charles Bell, Ernst Weber, Hermann Ludwig Ferdinand von Helmholtz, and Edward Titchener

In addition to being credited or blamed with carrying forward the dualism of Aristotelian separateness of the mind and body, Descartes studied visual perception, the interaction of the mind and brain, and mechanism in human action. James Mill, also interested in the concept of mental mechanics, wrote an essay of that title in 1829. John Stuart Mill wrote an essay called "Mental Chemistry" in 1843. These philosophical and psychological players were concerned with the brain—its thinking, responding, and control or connection to human activity. The view that the mind worked mechanistically helped to establish the view of the human body as a machine, "an automaton" that could be stimulated and controlled, and eventually its component parts were studied in controlled experiments legitimized by their scientific rigor.

Scientific rigor, as it interfaced with the tenets of classical liberalism, established a formidable basis for the power and knowledge relations that have come to dominate American/Western thinking. A brief overview of the six tenets of classical liberalism puts into perspective the views of nature and man's *progress* toward perfectibility. An understanding of these six tenets is helpful for understanding the ease with which science would come to dominate in social theories and practices informing education, democratic government, and economy. The view of natural law to explain the order of the universe and the world, and particularly as *natural law* was informed by reason and later science, as well. Natural law was adapted by the early American philosophers to describe the relationships of human beings as not subjugated one to another. It was natural to those seeking the bourgeois revolution to break from the politics of the monarchy in the quest for human *freedom*. Such freedom was embraced by the American Revolutionists to question the place of the individual in the new political system. As the freedom of the individual from the whimsical policies of the King became the priority of the founding framers of the new Constitution and Bill of Rights, natural law was invoked as based in *reason*. Later science would replace reason as the legitimate framework within which social theory would operate. The confidence that the founding fathers had in their *Republican virtue* as their moral guide gave them the impetus with which to strive for a good life and a good society, invoking the powers of the Protestant godhead to found its identity within the international community. *Nationalism*, or love and dedication to country, became a more widespread phenomenon in the contexts of the nation state. The rise of science inspired by Enlightenment thought gave leaders with goals of social control, capitalistic gain, and development of the frontier a fertile laboratory in which to conduct the governmental experiment in republican democracy within the new nation state. Although the political ties of the United States and England were redefined, the intellectual thought of the English philosophers remained an American mainstay. Similarly, English thought would lead to the rise of psychology and the furtherance of psychology as a science.

THE RISE OF PSYCHOLOGICAL SCIENCE AND DEVELOPMENT OF INTELLIGENCE QUOTIENT TESTING

The mental mechanism model of the brain and nervous system in writings by George Berkeley, David Hume, David Hartley, James Mill, and others led to "psychophysics" and "new psychology." These schools of thought believed in careful measurement of human responses

to various stimuli. Eventually, a split between those psychologists who would or would not discuss “consciousness” (in some ways similar to the same split between advocates of whole language and phonics reading philosophies) contributed to become the mainstay of psychological debate. Yet, work by Charles Darwin, William James, and Sigmund Freud muddled the scientific waters of the field. Darwin’s work had far-reaching effects in all areas of study; James’s work as religious, spiritual, and related to consciousness was difficult to categorize; and, of course, Freud’s work, subjected to scientific scrutiny, withstands as well as falters in some areas. However, scholarship leading to “Gestaltpsychologie” and the advent of behaviorism brought psychology, particularly from the perspective of John B. Watson, into experimentation based on learned and unlearned responses. Although B.F. Skinner’s work was often more philosophical and utopian than psychological, he is also credited with the stimulus/response explanation of human behavior.

As the desire to sort human beings and the view of the “survival of the fittest” promoted capitalism and its practices, including the establishment of a meritocracy and a ruling class, Darwin’s theory of evolution was embraced. Such synchronicity occurred because American ideology ascribed to the self as creator of success and the need for the individual to take care of oneself and one’s business. An extension of this perspective to human productivity and potential for perfectability became normalized as psychological testing became a predictor of student success at school. Student learning was invoked as a way to measure human achievement and success. Later, *assessment*, often associated with property value, was applied to student achievement. Student accomplishments were reified as the “worth” of students was indicated by their test scores: the nineteenth-century work by Galton, and several who worked on test development—James McKeen Cattell on Mental Tests, 1890; Hermann Ebbinghaus on the Completion Test, 1897; Stella Emily Sharp on a Test of Mental Testing, 1899; Charles Edward Spearman on General Intelligence, 1904; William Stern on the Mental Quotient, 1912; and Binet on testing of students in Paris to determine the probability of their school success and studies of memory, 1894.

The layering of the concept of the evolution of the species, as well as the possibility of better understanding intelligence by its measurement put into place, essay by essay, the building blocks of the foundations of broad-based social applications of testing that would be done in the Army through the use of the Alpha Beta test in 1904. Much of the development of the tests was done by Arthur S. Otis, whose work was published by the World Book Company in 1921.

Harcourt, another big name in test publishing, was founded by Alfred Harcourt and Donald Brace, who were friends at Columbia in New York. The duo emerged as publishers of world-renowned writers, as well as a leading textbook publisher. Focused on publishing high school textbooks, the company merged with World Book, whose expertise was in the elementary school market. What became Harcourt Brace Jovanovich acquired The Psychological Corporation in 1960 through the World Book Company, and became one of the foremost producers of testing materials. In late 2003, the company changed its name to Harcourt Assessment Inc., uniting its two divisions into one operating company. The name PsychCorp will remain the brand imprint for certain testing products. The growth of this company, as well as other publishers and their connections to the power of large corporations, helps to steadfastly solidify the commercial power of testing. The union of the power of psychology as science to create, to innovate, and to legitimate in psychological testing with the commercial success and stability of the publishing business is a large component of the rise of scientific literacy testing.

Also important to the understanding of the rise of scientific literacy testing is a comprehension of the development of the study of reading within the field of psychology. The area of scientific reading research has been said to have originated with Javal’s work in 1879. He was actually interested in eye movement during reading and contributed a body of work to what is essentially

at least a part of the physiology of reading. Later Frank Smith said if the light would go off, the stuff of reading would still remain in the mind, insinuating that the eye is not the key to understanding reading. Of course, there is reading for the blind and disabled through the Braille system, among many other areas of studies of unusual and/or problematic reading issues.

As we know, sociologists and anthropologists also have contributed significantly to expanding the meaning of literacy as well as to the notion of literacy as sociocultural phenomena that can be determined and nurtured in one's social environment according to one's needs. Others, like Paulo Freire and the second-generation criticalists, approach literacy as politically grounded, determined, and mandated. I will withhold the sociocultural and political discussions of literacy for another occasion and attempt to focus on what appears to have been important landmarks and names in the development of the *science* of reading, especially in the field of psychology, in what will not begin to do justice to the field of study. The remainder of this part of the discussion will attempt to touch on what are deemed important strides in the study of reading from a psychological perspective.

In a centennial dedication to the scientific study of reading, Harry Singer (1985) described four areas of groundbreaking study in the field of reading as perception, cognition, components of reading, and patterns of ability. Javal's studies found that the high school student's eye is in motion only 6 percent of the reading time, while the remainder of the time is spent on fixation pauses. His view was that the more quickly and efficiently that the reader could process what the eye had perceived into long-term memory, necessarily involving interaction between the reader's knowledge and text data, the better reading would be achieved. Cattell (1886) postulated that a component in the speed of reading is the size of the unit of perception. Work in cognition done by Huey (1908) demonstrated that as readers mature, they perceive verbal relationships across sentences, referred to as "chunking." Important in these findings is that verbal relationships across sentences remain in long-term memory, determining the meaning a reader makes of text. Thus, while analysis of syntactic structures is important, it is not as consequential as the reader's comprehension of text. The study of the components of reading later focused on comprehension and speed of reading. In 1921, Gates published a study that found these two components to be related yet separate functions. His studies led to later theorizing that processing print at a rate where words are identified automatically enables better comprehension because more time can be spent on understanding than doing what has recently been called *decoding*.

As more studies and theories were formulated, patterns of ability came to be an important area of inquiry. Findings were mixed and evolved a view that readers vary their speed and style of reading based on the kind and difficulty of the material being read, as well as on the purposes for the reading. Further investigation led Gates (1927) to diagnostic tests that subsequently gave way to a view of the importance of different types and processes of reading and a multiplicity of factors studied by Monroe (1932). Holmes was the first to test this hypothesis statistically; his finding was that two students could be equally successful in reading by using different combinations of abilities. Later the view that reading was developmental from the primary through the high school grades led to graduated difficulty of reading instruction throughout the schooling years.

In the 1960s and 1970s, learning theory and reading theories and research intersected to concentrate on comprehension and instructional strategies. The SQ3R strategy included Survey, Question, Read, Recite, and Review as a way to tackle text. Other strategies promoted included advance organizers, hierarchical organization, directed reading activity, questioning strategies, mathemagenic behavior (a term coined by Rothkopf meaning learning processes), summarization of text, and teacher attitudes. As many students of teacher education advance through their course work, they learn these and other strategies for reading instruction.

Other knowledge areas affected the way that scholars implemented the study of reading and reading instruction. Contributions from several academic areas include input from psycholinguistics, sociolinguistics, and linguistics. *Phonics*, or the relationship between letters and sounds, cannot be underestimated in its effects on reading instruction. Susan Glazer (1998) describes “political undertones” three decades ago to do phonics instruction. Because she understood the political importance placed on phonics, she said she knew she had “better” teach phonics although she had some misgivings about such an all-inclusive view of how reading instruction should occur. The same phonics movement has resurfaced as part of scientifically based reading instruction in the early twenty-first century. In the era of No Child Left Behind, teachers presently are under the same pressure. They know they must teach letter-and-sound correspondences and sounding out of words or they will incur the wrath of school officials. The disciplining of the hierarchy of educators occurs from mandates for educational excellence articulated by President George W. Bush extending down from the education bureaucrats who decide which school districts will receive No Child Left Behind reading grants to the State to the Regional Educational Centers to the Independent School District Administration to the local campus administrator to the reading department to the reading teacher.

With the history of educational research and instructional strategies developed from the tip-of-the-iceberg-of-psychological studies mentioned here over the last century through the present, there has indeed been a normalization process of educational testing for normal, abnormal, and special students across the United States. The practice of testing is not only definitive in its determination of those who have succeeded in learning what they need to know, but also in diagnosing the placement of students who have been deemed abnormal, and even gifted or supranormal. Testing is a logical outcome of reliance on science, industry, and progress in the United States. Testing within states, across states, within nations, and across nations helps to fuel the fires of international competition, in many ways more important than the Olympics have been historically to gain glory for the state or nation.

TEACHERS AS TECHNOCRATS

To be able to discuss the relationship of teachers and bureaucratic educational practices often associated with the rise of industrialism, centralization, and hierarchization of the disciplines associated with the educational profession, it is important to understand the rise of modernity. With the increased legitimacy extended to science, scientific principles, and psychology as the science that would help lead an evolving population toward desired goals of progress, and Taylorism (scientific principles of management), teachers found themselves on the bottom rung of the ladder of expertise to make decisions regarding the implementation of educational policy. As workers on the assembly line of education, they were expected to pour knowledge into the empty heads or vessels of their clients. In the modern industrial world, where output, production, and profits are the priority, education’s workers in the trenches, the teachers, were to be held accountable for their work. “Good” management and goal-oriented materials that would be tested helped to assure that the prescribed curricula would be taught.

In the Freirean view (1970), teachers were expected to do banking education entailing the deposit of knowledge into students’ accounts. When the test or the audit for accounts showed a balance or near balance between what the teacher had deposited and that which the student could verify existed in the student account, successful learning had occurred. If such a balance did not appear, the teacher had not done the work. Most recently teachers’ jobs are on the line if their students do not perform at least satisfactorily on the grade exit exams in Texas. So, in essence, the teachers’ accounts must now also measure up to the deposits made by higher echelon educational officials’ mandates for curriculum focus. With a centralized exam and curriculum that ensures success on that exam, teacher and student work could be efficaciously controlled.

The early movement toward centralization of public state-controlled education was implemented by the efforts of Horace Mann, who argued that women, because of their nurturing roles as mothers and caregivers, would be the best school teachers. It was no accident that the economic plan he proposed would pay these female teachers salaries equivalent to one third of what their male counterparts would earn. The concern in Mann's early to mid-nineteenth-century centralization project also aligns along industrial progress at about that time.

Big business and corporations developed similar kinds of urban landscapes that Thomas Jefferson had found so abhorrent in the late eighteenth-century Europe and England. For Jefferson, the yeoman farmer would have been the economic backbone and a stabilizing force in the political culture of the United States. Fifty years later, the notions of social progress fueled by capitalism and special-interest politics found the United States in similar situations with urbanized areas, with a revolutionized economy built on the factory system. As the goals of profit making drove the industrial world, business owners looked for more and better ways of managing workers and their production for maximum earnings. Frederick Winslow Taylor, champion of scientific management principles, stated his views for removing the expertise from the workers' domain, thereby simplifying the necessary work to produce the desired results. He stated his aims as removing all decision making from "the shop" and determining from above in the work hierarchy what should be done and how long it should take to achieve it.

Similar business management principles guided the thinking of school policy makers. During the centralization of the nineteenth and early to mid-twentieth centuries, small one-room and autonomous schools consolidated, and management of teachers, students, and knowledge that was to be taught was overseen by the administration. The history of teacher education encompasses the rise of the science and business management principles. Formerly an entity unto itself occurring within the normal school of Horace Mann's age, teacher education found itself part of the teachers' college and later the university, usually in lower-status position to educational psychology and administration.

Despite the formation of teachers unions and the rhetoric calling for professionalization of education and the good work that many teachers do, teachers are still managed, reformed, and essentially have little decision-making power about school administration or the curriculum. The mandates of No Child Left Behind, 2001, and other formal and informal policies put the exam into place to ensure "failsafe" success of teachers. If basal readers, packaged education programs, practice tests, the test, and a curriculum overrun with testing strategies and preparations can determine student success, teacher intelligence and professionalism do not matter. The teacher is merely an instrument for passing the knowledge along to its recipients. This view of education has been shown time after time to be efficient for test score achievement but not necessarily for teaching and learning that might be considered most important in a caring, empathetic, democratic, and egalitarian society. Postmodern criticalists, descended from feminist and critical scholars, promote a kind of literacy advocated by Freire called critical literacy. Such literacy would engage students and citizens in political discussion and decision making that could help to transform the lives of those least educated, usually the impoverished in a society.

THE ACCOUNTABILITY MOVEMENT

Historians of education often point to the Russians' launching of Sputnik (1957) as a turning point in American education. Because the Russians had superceded Americans in their space exploration, U.S. education policy makers changed the focus of education to math and science, with little attention given to the liberal arts. Within a utilitarian framework that informs mainstream educational policy, education is associated with worker preparation and national security. Advocates of utilitarian education (and liberals would argue the conservatives who wish to dismantle public education) find testing to be the manner in which student, teacher, administrator,

school, district, city, and regional success at teaching and learning can be measured accurately. As technology moves to the forefront of human, business, and international communication and production, discourses promoting technological education predominate in discussions of educational attainment. Essential elements of teaching and learning prescribe teacher lesson plans. Practice tests, test preparation, and curriculum that prepare students for testing success have become the emphasis in educational attainment of late. Critical thinking exercises with multiple-choice answers respond to the need for critical thinkers in our work society. Little, if any effort, is put on citizenship development, as discourses to achieve on tests and obtain high credentials for entrance into the best schools and universities drive education machinery.

Such a delimitation of educational discourse narrows the scope and discussion, “Of what purpose is education?” The delimitation of literacy as related to the discourse of scientific reading further reduces the scope of education. The manner in which such limits on the discussion of education is further amplified becomes clear when we consider how scientifically based reading research was a requirement in the application for federal reading grant monies by low-achieving schools. In the No Child Left Behind grant application, the verbiage for teaching reading to youngsters was required to reflect phonics, phonemic awareness, and scientifically verifiable methods of manifesting that student success had been achieved in reading. The power and knowledge arrangements described by Foucault to determine certain knowledge as truth and to favor certain discourses is a helpful analogy to invoke here. Power and knowledge arrangements of corporate power and money, the politicians who are vested in the webs of the publishing business, and the discourses that prescribe to the public what kinds of literacy, reading and writing, and education, in general, are to be implemented, remind us that testing is an ubiquitous obstacle to education for purposes other than testing. The importance of literacy to Jefferson was directly connected to citizenship. In the present day, literacy is taught in the academic area of language arts; it is not taught in the social studies, where government and citizenship are purportedly taught. Literacy as the exercise of and articulation of personal and communitarian desire for social justice, inclusion, and access is lost as literacy becomes the ticket to test success.

The rise of scientific testing of literacy has been a gradual development. It begins with the following and is implemented at all levels of teaching and learning: the rise of science, the rise of psychology as science and the study of reading as a psychological endeavor, the regard for reading as a psychologically testable skill, the de-professionalization of teachers, and the rise of high-stakes testing as the determining measure of educational success. Accountability tests are staged at every step to ensure that proper teaching and learning occur. We indeed are being disciplined by the test, by science, by reading instruction, and by scientific reading instruction. Educators and concerned citizens feel the need to ask how we got this way and what can be done about it. I have attempted to explain how we got this way; now we as a collective must decide what we will do about it.

TERMS FOR READERS

Critical literacy—literacy that is focused on community and political involvement, the exercise of political power, the use of reading and writing to contribute to one’s social community and/or to transform one’s world.

Literacy—Reading and writing in general. The focus here, however, is on reading specifically.

Scientific testing—Of or related to standardized testing with a history grounded in psychological study, development, and implementation in educational institutions.

FURTHER READING

- Cattell, J.M. (January 1886). The time it takes to see and name objects. *Mind*, 11, 63–65.
- Freire, P. (1970). *Pedagogy of the oppressed*. New York: Seabury Press.
- Gates, A. I. (September 1921). An experimental and statistical study of reading tests. *Journal of Educational Psychology*, 12, 303–314.
- Huey, E.B. (1908). *The psychology and pedagogy of reading*. New York: Macmillan.
- Monroe, M. (1932). *Children who cannot read*. Chicago: University of Chicago Press.
- Singer, H. & Ruddell, R.B. (Eds.). (1985.) (3rd edition). *Theoretical models and processes of reading*. Newark, DE: International Reading Association.

CHAPTER 93

What Are We Measuring? A Reexamination of Psychometric Practice and the Problem of Assessment in Education

MARK J. GARRISON

Whether one is in college to obtain a bachelor of science degree in psychology, a superintendent preparing a report to a school board, or a university admissions officer, data collected from educational and psychological tests are typically emphasized. The results of IQ tests are said to measure student intelligence, achievement tests are presented as measurements of subject mastery, and entrance exams are given as measurements of ability to succeed in college, to take only three common examples. The words *measure*, *measures*, or *measurement* appear, by my count, at least 135 times throughout the federal *No Child Left Behind Act*, the provisions of which rely more than in any other time on the results of standardized tests. It is widely believed that this law represents a fundamental change in the structure and function of education in the United States, with test scores constituting a key mechanism to bring about and justify this change.

But what if educational and psychological tests and the data they yield are not measurements at all? This essay explores this possibility and the profound implications it has for debates surrounding the validity of educational and psychological tests and the problem of assessment more generally.

THE NEED FOR AN ALTERNATIVE PERSPECTIVE

As the role and significance of standardized testing increases, especially in education, debates about the validity of this technology are once again highlighted in both academic and lay circles. Yet, an assumption typical of both critics and supporters of standardized testing is that such tests *measure something*. This belief is evidenced by the frequently heard question, what is being *measured* by an IQ or a standardized achievement test? And while some object that scores on standardized academic tests are proxies for knowledge and acceptance of the dominant Western middle-class outlook, others advocate that educational tests measure social and emotional domains critical for success in life, in addition to more traditional measurements of academic prowess. In both cases, again, the assumption is that something (culture, ability, personality) is being, or should be, measured.

The assumption that psychological and educational tests measure *something* is as old as the tests themselves, and it is an assumption that is rarely if ever challenged, although it is noteworthy that Alfred Binet, the inventor of what is known as the IQ test, acknowledged that his test was not in fact a *measurement*. Yet, he nonetheless continued to speak about and present his instrument as just that: a scale for the measurement of intelligence. Foreshadowing arguments of future psychometricians, he justified this inconsistency by claiming—without explanation—that it was of practical necessity.

That an entire field (what is referred to here as psychometry) could be handed over so much authority and financial support, in part at least, on the basis of measurement with evident uncertainty of what is being measured is in fact baffling, and perversely irrational in my view. How is it that so many of us have taken for granted that measurement is taking place when there is so much disagreement over what is being measured? It may in fact be the case that this assumption of measurement has enabled psychometric practice to withstand periodic, intense, and what now appears to be mounting criticism. Constructing alternatives to psychometric practice may, in turn, depend on efforts to reexamine the significance and legitimacy of psychometry's claims to measurement and the nature of assessment more generally.

Popularized critiques of testing are typically predicated on the assumption that a key problem lies with the *misuse* of educational and psychological tests and specious interpretations of the *meaning* of test scores. For example, so-called hereditarians use the same standard—the IQ test—as so-called environmentalists do; the rub is in the *use* and *interpretation* of *scores*. One group posits the primacy of genes in differential academic performance between so-called races; the other retorts that such group differences in test scores prove the negative impacts of poverty and discrimination on intellectual development. Psychometric practice has actually flourished in this context, eagerly developing concepts and methods—such as construct validation—for determining the proper use and meaning of test scores, a project that garners further institutional and fiscal backing. Psychometry's response to these challenges over the past four decades has also served as a basis upon which to maintain its legitimacy as a science and thus its instructional power.

In this essay, I suggest a different direction. I argue that psychometry fails to meet its claim of *measurement* and that its object is not the measurement of nonphysical human attributes, but the marking of some human beings as having more worth or value than other human beings, an act central to and part and parcel of the legitimacy of a particular kind of hierarchical social system known as meritocracy. Psychometry's claim to measurement serves to veil and justify the fundamentally political act of marking social value, and the role this practice plays in legitimating vast social inequalities.

DEFINITIONS OF PSYCHOMETRY

According to the *Oxford English Dictionary* (*OED*), psychometry literally means measuring the soul, or “mind measuring” (“psycho” refers to mind while “metric” refers to measurement). The first reported use of the word, the *OED* continues, appeared in 1854, where psychometry was defined as the “faculty of divining, from physical contact or proximity only, the qualities or properties of an object, or of persons or things that have been in contact with it.” The *OED* gives sense 2 as follows: “The measurement of the duration and intensity of mental states or processes” with the following quote from Francis Galton, an early eugenicist and proponent of differential psychology: “Psychometry . . . means the art of imposing measurement and number upon operations of the mind, as in the practice of determining the reaction-time of different persons.” (Galton's choice of the word *imposing* should not go unnoticed.) And finally, the *OED* offers this definition of psychometrics, a definition with more contemporary flare: “The science

of measuring mental capacities and processes; the application of methods of measurement to the various branches of psychology.”

The literal, etymological meaning of psychometry is a useful place to begin. What would it mean to *measure mind* (let alone soul)? Is mind (or soul for that matter) the kind of thing one has more or less of? Or, to start with the more contemporary definition, are all mental capacities such that they exist in gradation, such that they come in different amounts? For example, is it correct to say that one is thinking or not thinking, or are there different degrees of thinking? Is a theory of mind needed in order to determine if mind can be measured and, if so, how metrication—the basis upon which numbers are assigned to phenomena—can take place? The issues raised here are fundamental from the point of view of both the theory and practice of measurement, and addressing them serves as a useful starting point for deliberating on the nature of measurement and the status of psychometry as a science.

Possibly one reason for the absence of a broad discussion among academics and the public concerning measurement of nonphysical entities is that the limited amount of material available on this question is highly technical. Fundamental problems in the philosophy of science such as the nature of knowledge and scientific objectivity are at issue; ability to contend with complex mathematics is also typically required. Yet it is, I think, possible to develop a broad and accessible discussion of measurement. It is also the case that psychometricians generally avoid the problems posed by measurement of nonphysical entities in the name of being practical. But we must ask what practical problem rendering psychological and educational tests as measurements solves? In this regard, it is absolutely necessary to go into the nature of measurement if so much of educational reform is contingent upon the results of what are given as measurements. A final difficulty with this topic is the language itself, where the word *measure* has numerous meanings and uses in the English language; *measure*, for example, can refer to the results of a measurement, or simply any standard, whether used in measurement, assessment, or comparison.

THE NATURE OF MEASUREMENT

Measurement deals with the dialectical relationship between quantity and quality. The central theoretical concept of measurement is *magnitude*, defined as the property of relative size or extent. Simply stated, measurement deals with the question of *how much*.

The common expression “how much” suggests the dialectical unity of quantity and quality in measurement. A magnitude (which is represented by a standard) is a known quality that is also known to exist in degrees. Measurement is integral to determining points at which quantitative changes lead to changes in quality, for example, the point at which an increase in heat transforms water into steam. Psychometric efforts to determine at what point scores on a particular test make a person qualified represent this *logic*, even if the reality is that what are known as cut scores are in fact arbitrarily determined.

A standard is a tool used in assessment, comparison, and measurement. Common, everyday standards of length and weight represent known magnitudes. Yet, a standard (say the meter) must be theoretically and technically fit for the measure of objectively existing properties of a thing or phenomenon. Once accomplished, this allows for *different* objects, processes, or phenomena to be compared in relation to the same magnitude, such as weight, length, heat, et cetera. It is also the standard that allows for equivalence, or calibration.

It is important to emphasize that while a standard is necessary for measurement, at least initial theoretical work is presupposed for it to be able to accurately represent magnitudes. For example, there needed to be a conception of the qualitative aspect of heat before its measurement could take place. Once such theoretical knowledge is at least initially established, measurement becomes possible.

Contrary to what seems to be conventional wisdom, the key issue here is not that of precision. The claim to measurement is the claim that laws governing quantitative and qualitative change can be accurately represented mathematically. This is the criterion of being *isomorphic*. For a measurement system to be valid there must be a correspondence between elements, relations, and operations of the mathematical and substantive system in question. This correspondence is exemplified with the additive principle “One can take 10 feet and add it to 10 feet and obtain 20 feet.” Notice that individual test items cannot be shown to be equivalent in this manner. While there are exceptions to and debates about the universality of the additive principle for measurement (e.g., with heat phenomena) the example stands for my purposes here.

Psychometry, in contradiction to this definition, renders measurement as the mere application of number systems to objects, processes, or phenomena, a process that has no necessary reference to the empirical world. This is the notion of measurement as social convention. Many critics have thus designated psychometry as “measurement by fiat.” Without too much difficulty, one can find psychometricians admitting that the ability of test scores to truthfully reflect quantities of a characteristic of interest is suspect.

If this definition is accepted as the basis for practice, any rule-based assignment of numbers to phenomena could claim measurement. Common practice in the social sciences has it that a questionnaire, for example, in which the respondent expresses his or her attitude with the aid of numbers, is as an instance of *measurement* of preferences.

In addition to the idealist assumptions underpinning psychometry’s definition of measurement is the field’s tendency to imbue data with properties of the testing procedure. One cannot assume a scale to be a property of that which is measured if that scale is a necessary consequence of the method of analysis. The relevance here to educational and psychological testing is striking. It is not permissible to argue that intelligence (or any purported characteristic of individuals) is normally distributed in a population on the basis of the normal distribution of scores, for such a distribution is demanded by the statistical methods most commonly used in test construction and analysis.

Most important for our purposes here, theoretical work determines if the property or quality under investigation *can* be measured. The development of measurement has generally progressed from classification based on quality, to topology or the comparison of qualitative aspects of phenomena, to metrication and thus measurement. Classification concepts such as “cold” become topological when comparisons are used, such as “colder *than* . . .” Such concepts not only establish sameness (or difference), but also make it possible to compare at least two objects that possess a given property; this in turn makes it possible to arrange such objects into a sequence. Given the difficulties associated with their methodology, questionnaires—to continue with the above example—are at best topological in nature.

While topological concepts provide a transition from classification to measurement, it is important to note that classification (or differentiation) itself is not measurement. This is contrary to what is commonly asserted in contemporary textbooks on psychological and educational testing. The ability to differentiate and rank on the basis of common properties does not in itself allow one to claim that the extent of that property can be determined. In this way, the common presentation in social science texts of levels of measurement—nominal, ordinal, and so on—makes the fundamental error of presuming mere classification to be a form of measurement.

Thus a key problem, one pointed to above with the definition of psychometry as *mind measurement*, is the assumption that the mind or a purported faculty or function of mind is a property capable of gradation. There are, however, many properties that do not permit gradation (i.e., they are *not* magnitudes) such as *Pilsner*, *feline*, *wooden*, and *human*. In other words, the psychometric dictum of E.L. Thorndike (the famous early twentieth-century psychometrician) that if something exists it must exist in some amount is patently false.

Yet, Thorndike's premise may have great social and political significance. We know that human history is riddled with cases of some human beings designated as less human, or not human at all; *humanness* has been given as something individual persons and groups have *more or less of*—a key presupposition of the eugenicist's project of a "master race." The U.S. Constitution made this presumption when it rendered African slaves and Native peoples as only holding a fraction of the value of white Europeans. Such designations are based on the claim that some human beings have less intelligence, ability, or otherwise valued attribute, than other human beings, and, on that basis, they have been rendered less human, of less value, and in some cases, a threat to civilization itself. Such designations are to serve as justifications for the inequalities and crimes bound up with slavery, colonialism, and capitalism more generally.

Most readers will accept at some level, however, that education is something that can be graded. Clearly some students learn more of a particular subject matter than others, and clearly people obtain, both officially and in practice, different levels of education or expertise in different fields, and so on. In this way, measuring educational achievement seems less problematic than measuring mind or intelligence. Defining content areas such as math and delineating levels of mathematical knowledge seem relatively simple by comparison.

The project of measuring academic knowledge in practice, however, appears particularly fixated on ranking *human beings* and less on determining degrees of knowledge *per se*. For example, norm-referenced achievement tests offer results in terms of percentile ranks, not delineations of what a student does or does not know about a given field of study, let alone diagnoses of the cause of any difficulty. Put another way, scoring in the 70th percentile only indicates how well one did relative to the norm; it does not indicate 70 percent of required material was mastered. Thus the test remains at the *topological level*, where percentile results indicate only that, for example, Sue performed *better than* Joe; the preceding semantics suggest that the object is in fact the ranking the worth or value of persons, and not what they know or can do as such. It is not uncommon to hear educators move seamlessly from reporting student grades to designations of students as "good" and "bad" suggesting that differential academic performance reflects some moral order. Using the above example, when one says *colder than*, the comparison is in terms of *temperature*; to say *better than* suggests comparison is in terms of *worth*, where grades and tests scores are the currency by which such value is negotiated and ultimately exchanged.

The same problem exists with so-called measurements of ability. By virtue of being norm-referenced, such tests only provide rank-order information on the basis of students' ability to furnish what are considered correct responses to test prompts. This ranking does not in any way permit the claim that "cognitive ability" is therefore being measured because ranking is itself not measurement. In this way, present-day achievement and ability tests cannot measure any property of individuals or groups: their object is to rank-order the value of individuals and groups.

A further difficulty lies in the fact that there is no evidence that the numbers produced (test scores) correspond to (are isomorphic with) what we understand to be laws governing mental processes and functions, or the dialectical relationship between qualitative and quantitative aspects of these processes or functions. It appears to me that the level of theoretical knowledge we do have is both at odds with psychometric assumptions—ones derived from the discredited notion of *faculty*—and insufficient to permit measurement, should that indeed even be necessary for advances in educational psychology.

STANDARDIZED TESTS: TOOLS FOR MARKING SOCIAL VALUE

The above analysis suggests that standardized tests are not tools in measurement. Here I advocate that they be explored as standards for assessing or marking social value. But before the

notion and significance of social value is explored relative to assessment, it will be important to explore the significance of the distinction between measurement and assessment, especially as the latter has developed in education.

Assessment and Measurement

While it is common to suggest that measurement is simply a more precise form of assessment, not to mention that the words *measure* and *assess* are given as synonyms in many thesauruses, the latter is in my view a distinct although certainly related undertaking. According to the *OED*, the words *assess* and *assessment* have been, for almost the duration of their 600 years in use, bound up with notions of taxation, tributes, and fines. It is not until the nineteenth century that assessment is used in the general sense as a synonym for estimation or evaluation. And it is only as a manifestation of the fields of education and psychology in the twentieth century that the now common meaning of assessment is derived. Thus the *OED* gives the fifth sense of the word as, “The process or means of evaluating academic work; an examination or test.” Interestingly, the word assessment is presented as almost synonymous with the word examination or test. And the increasingly practical role psychology played in contemporary institutions gave rise to notions of assessment as this one: “To evaluate (a person or thing); to estimate (the quality, value, or extent of), to gauge or judge.” Examining the development of the use of the word we find this quoted from the Office of Strategic Services’ 1948 publication, *Assessment of Men*: “A number of psychologists and psychiatrists attempted to assess the merits of men and women recruited for the Office of Strategic Services.” In this way, assessment has historically related to judgments of *value* (originally in the form of taxation) with the more recent developments specific to judging the value or deservedness of human beings. Furthermore, assessment seems focused on determining quality (as in designations of good, authentic, etc.) not *how much* quality. Even the notion of *good enough* appears as qualitative in nature, and is recognized as an assessment, not a measurement.

Further examination of the word suggests that not only is it bound up with judging human value in particular, but that it also explicitly recognizes social hierarchy as a variable. *Assess* is a form of the Latin verb meaning to “sit with.” In an educational assessment, the assessor *sits with* the learner and *assigns value*. In this way, assessment is predicated on human relationships in a way that measurement is not. The word’s alternative meaning clearly suggests the importance of social position when it states that this person who “sits beside” (as in an assistant-judge) is one who “shares another’s rank or dignity” and who is “skilled to advise on technical points.” It is also then important to point out that assessments are now bound up with what is called professional judgment.

Standards

Standards are the foundation of both assessment and measurement. In measurement, the object of the standard is magnitude, the abstract expression of the extent of qualities of things or phenomena. The object of the standard in assessment is value; the *relation* here is between subject and object. With measurement, the magnitude makes possible the grasping of the *relation* between quality and quantity. Standards in assessment make possible the judgment of value by stipulating boundary points as indicators of quality (merit, worth, goodness, authenticity). In fact, official educational assessment operates on the basis of establishing desired qualities and their vertical classification, or placement in vertically structured category systems with the assistance of numbers. This is what is being delineated when it is said that the task of validity is to determine the meaning (value) of test scores. The validity discourse about test score meaning relative to testing purpose is based on value not residing in things or phenomenon themselves, *but in their*

relation to subjects. Length, however, is a property of an object. It might be useful to delineate standards in measurement as *absolute*, while standards in assessment are *relative*.

The confusion between measurement and assessment is not insignificant, having both scientific and ideological importance. Scientifically, the confusion over what is measurement is bound up with confusing properties of objects with properties of numbers (a good example being the normal curve) and social relations and the properties of those objects or phenomena in the relation (a good example confusing individual ability with competitive standing). These mistakes are functional for masking the workings of the values system in official testing practices and the power involved in designating some human beings as more valuable than others.

THE ASSESSMENT OF SOCIAL VALUE

This notion of social value, derived from one of the founders of sociology, Emile Durkheim, signifies how value is socially attached to groups as well as to structural positions via status duality (good or bad) and spatial duality (high or low). This duality of the *good* and the *bad*, the *high* and the *low*, constitutes the two levels of value duality within a system of vertical classification or ranked categories. Within such a system all individuals and groups are then placed in either the *sacred* or the *profane* position; theoretically, they are mutually exclusive categories.

It seems to me that marking virtue (good or bad) and talent (high or low) constitute the object of standardized test-based assessment within a hierarchically structured social system premised on the idea of merit—that one's position in the hierarchy is earned or deserved. With this understanding, educational testing appears as an elegant example of vertical classification. Because students do not typically come to school with official labels, in part as a presupposition of public education for all, academic achievement and ability are constantly assessed, assuming great social significance. Herein lies one reason for the ubiquity of testing and the basis for it being equated with opportunity.

Ranking human worth on the basis of how well one competes in academic contests, with the effect that high ranks are associated with privilege, status, and power, suggests that psychometry is premised not on knowledge of intellectual or emotional development but on Anglo-American political ideals of rule by *the best* (most virtuous) and *the brightest* (most talented), a *meritocracy*. Marking virtue gives rise to status duality, marking talent gives rise to spatial duality; the linkage to social structure is the argument of social value. Western political thought since the eighteenth century postulates talent as concomitant to virtue, and thus its signifier. As just one example, Southern Europeans were once barred from immigrating to the United States, in part on the basis of their low IQs; the argument of the psychologists was that those who lack intellectual capacity inevitably gravitate towards immoral and criminal behavior. A high score on an IQ test, however, suggests a student is worthy of being trained to play social roles with high status and power—the high score suggests the high status, worth, or virtue.

It appears that assessment—the use of standards in the judgment of value—is a feature of the earliest forms of stratified human society. Sociologists point out that there have always been arrangements for formally recognizing the capacity to perform important social roles and to exercise their associated social status and power. Notice that there are in fact two capacities at issue here. The first is the capacity to perform the role itself (functional competency), and the second capacity is to exercise the role's *associated social status and power* (what might be called social competency). It is this second ability, which may be the ultimate object of assessment via standardized tests in education, a conjecture that is supported by the relatively strong correlation of test scores with socioeconomic status (note the uncritical replication of social value in the notion socioeconomic status) compared to the relatively weak correlation of ability and achievement tests with performance outside academe.

Precision as Value

In addition, economic historians have shown that the precision of a standard signifies the degree to which a thing or phenomenon is valued. For example, in societies where land was relatively abundant, the system of area measures tended to be poorly developed. The same tendency is observed with measures of weight. Thus the more valuable the object, the finer the standard employed; as the value of the object increases for a culture, the finer its standard.

This general proposition can be seen at work with social value if we take the example of driving a truck versus becoming a physician. Driving a truck can be said, on this basis, not to be of great social value, for the standard to obtain such a license is not very fine, or precise, even though the safety of millions of travelers and billions of dollars worth of products are at stake. One either passes or fails the relevant tests; unlike with the SAT and ACT no elaborate hierarchy exists. Academic achievement and ability, the standards for entering medical school, are thus highly valued, reflected in the fineness of their measure. The great effort towards precision is not aimed at measurement, but instead constitutes a means by which to identify and produce value; for example the value of a credential can be inflated simply by making it more difficult to obtain. That there is a great deal of fineness in the standard of the second and not in the first suggests which is held in more esteem by the dominant culture. We might expect this situation to change radically if truck drivers somehow got themselves involved in making transportation policy. That is, those who are deemed to occupy sacred positions (good character, high ability) are fit to make decisions, to decide on the all important questions of who, what, where, and when.

Thus notions of ability, of capacity, are bound up with social positions, for ability must have a place for it to be manifest. This *quality or state of being able* manifests itself in the “physical, mental, or legal power to perform,” according to Webster’s. Note that ability can signify both a power inhering in persons (functional competency) as well as legal power, or being formally allowed to do something (social competency). It is in the context of the present society that mental power stands as one justification for legal power. It is significant that the etymology of *ability* is from the Middle English *suitability*. In this regard, standardized test-based assessment can thus be thought of as the judgment of individual worth relative to a structural slot or social position—what is deemed of value and who is deemed of value—the meeting place of which is variously achievement or ability. That is, achievement and ability signify both places and persons, as in someone (an individual) who becomes rich (a social position). Note as well that *suitability* can take individuals or positions as its object—is the individual suitable to the position, is the position suitable for the individual.

The emphasis on abstruse academic exercises, I think, are aimed at judging the ability to exercise a role’s attending social status and power—for example, is the person capable of “good judgment”—and not so much the functional capacities demanded by the role. Employers often prefer a college to a high school graduate for jobs requiring minimal formal education on the assumption that a college degree signifies the virtues of perseverance, honesty, and so on. That is, official educational assessments seem overly concerned with the second capacity identified above. Because the role of truck driver currently has little associated status or power, licensure procedures need only focus on the functional ability itself.

Exercising status and power demands a particular set of aims and values, or else the stability of that status and power is threatened (it is this stability of the status quo that seems to be the referent of “good judgment”). Abstruse academic exercises constitute values that reflect a definite world outlook. For example, within Euro-American thought, written competitive exams reveal a person’s ability to delay gratification. Proponents of written competitive exams often put considerable stress on the moral argument at both the individual and the national level. Examinations are a test of common sense and of character as well as of basic academic knowledge and skill. It was assumed

that success on such exams demanded perseverance and good character, all of which would in turn bring legitimacy to institutions that employed such exams. In fact, much of this discourse is found in the infamous 1983 U.S. Department of Education report, “*A Nation at Risk*,” with its talk of “excellence” and “commitment to a set of values” as the basis of “the learning community.”

SUMMARY AND IMPLICATIONS

The long-standing debate as to whether standardized tests accurately measure *merit* (worth) is simultaneously a frank admission that standardized tests aim to assign value to human beings—to determine who is worthy of what type of education—and a block to grasping fully the significance and implications of such a project. Standardized tests are not designed to accurately and fairly select, certify, and monitor via measurement of specific competencies or abilities, but rather to legitimate the hierarchy and inequality that results from such acts via the *assessment of social value*. Thus it may be more useful in analyzing psychometry to view it as political theory, as a formal justification for a system where, in the words of the famous psychometrician E.L. Thorndike, “the argument for democracy is not that it gives power to men without distinction, but that it gives greater freedom for ability and character to attain power.”

Possibly the first implication of this understanding is to reject any form of assessment that functions to differentially value *human persons or groups*. Let me be clear: the issue is not in recognizing that humans differ in their abilities, interests and so on (although such difference are not, in my view, the problem they can be made out to be). The problem emerges when such differentiation is systematically linked to a hierarchical social structure and the reproduction of that structure. In this way, it is racist practice to rank the value and worth of *human beings*.

Thus there is a need for assessment in education to establish a new starting point, one predicated on the equal worth, dignity, and rights of all human beings and human cultures. Those working to develop assessments in the service of education must vociferously reject the linking of academic prowess with notions of bad or good, fit and unfit to govern. A student’s worth as a human being does not turn on whether or not they can perform this or that academic task. In this way, the link between assessment and social value must be broken. The institutional arrangements standing behind talk of *good students* must be replaced with arrangements where the *work* of teachers, students, and the community as a whole is judged by teachers, students, and the community as a whole on the basis of whether or not this work is serving to prepare youth to solve the problems they and their society face, to contribute to society. Ranking some human beings as being smarter and better than other human beings contribute nothing to education or society; it merely serves to justify and exacerbate the various forms of inequality that are now intensifying. Thus, the slogan here might be evaluate *work*, not *people*; people have inherent dignity and rights irrespective of their ability to carry out this or that type of work. Because work is ultimately social, it is work undertaken together that should be evaluated both by those who engaged in and are affected by such work.

This is in my view some of what the above analysis suggests about the basis upon which assessments should take place. In fact these starting points may be evident in recent efforts towards alternative or authentic assessment, in particular those inspired by the notion of multiple intelligences which recognizes and values a broad range of human abilities and achievements in nonhierarchical terms. Possibly this is the reason that the powers that be have so consistently thwarted such efforts.

The analysis presented here also has profound implications for the present standards and accountability movement, especially as embodied in the *No Child Left Behind Act 2001* (NCLB). It suggests to me that strategies opposing NCLB on the basis that it does not provide enough funds to meet legal requirements misses the fact that NCLB, and in particular its testing mandates,

are in themselves attacks on public education and those who attend and work in public schools. By marking so many of the nation's schools as failures, the law is functioning to devalue public education. This discrediting is necessary if new arrangements are to be put into place, such as charter schools and voucher schemes. Efforts to alter the sense of the value of public education might function to assimilate Americans to a lower standard of education, not to a higher one. For if the society does not organize for universal public education—publicly financed and publicly controlled—the overall level of education will decline. In this way, standards in educational assessment not only are bound up with attempts to differentially value human beings and thereby justify inequalities, but are presently serving to devalue the notion of public education itself by marking the institution as a failure.

SUGGESTED READING

- Berka, K. (1983). *Measurement: Its Concepts, Theories, and Problems* (A. Riska, Trans.). Boston: Kluwer.
- Nash, R. (1990). *Intelligence and Realism: A Materialist Critique of IQ*. New York: St. Martin's.
- Ward, A. W., Stoker, H. W., and Murray-Ward, M. (Eds.). (1996). *Educational Measurement: Origins, Theories and Explication* (vol. 1). Lanham, MD: University Press of America.

CHAPTER 94

Curriculum, Instruction, and Assessment in a Reconceptualized Educational Environment

RAYMOND A. HORN JR.

INTRODUCTION

How are curriculum, instruction, and assessment different in a reconceptualized educational environment? The best way to answer this question is to first provide a brief summary of how these three aspects of teaching and learning are done in traditional classrooms. This summary will be followed by a discussion of how these three aspects of pedagogy are manifested in a reconceptualized environment, and then the chapter will conclude with an example of a lesson or student activity that reflects reconceptualized educational theory and practice. This discussion will focus on curriculum, instruction, and assessment; however, to better understand how these aspects of teaching and learning are manifested in different educational environments, the roles of those involved in the teaching and learning process also will be examined.

CURRICULUM, INSTRUCTION, AND ASSESSMENT IN A NON-RECONCEPTUALIZED EDUCATIONAL ENVIRONMENT

Before the No Child Left Behind Act (NCLB), an analysis of curriculum, instruction, and assessment would find significant variation in how these three were done from school to school. However, the federal mandate has had a normalizing and standardizing effect on pedagogy. The most significant normalizing agent is the mandate for the use of standardized tests to measure student achievement. Even though there is not a national curriculum assessed by one national testing system, to meet NCLB requirements so that they can keep receiving federal educational funds, the states have had to develop statewide curriculum in certain disciplines. Student achievement of this curriculum or disciplinary standards is measured by standardized tests that have met federal guidelines. The result has been the implementation of statewide standardized curriculum and assessment, and in a less formal way, a move toward the development and assessment of a national curriculum that has resulted in a technical rational definition of curriculum. In addition, the federal government has required states to develop specific accountability structures for student achievement. Most significant are the highly qualified teacher and average yearly progress requirements. Accompanying these accountability requirements is the imposition of

stringent penalties for noncompliance. Another significant federal requirement is the promotion of quantitative research-based practice as the basis for decisions about teaching and learning.

In a standards and accountability environment as fostered by NCLB, the ultimate accountability mechanism is the standardized test score. Student scores are used to determine the effectiveness of students, teachers, and schools in meeting the state mandated levels of test scores. Essentially, the test scores are to tell the whole story of pedagogical effectiveness. Class rank, grade-point average, portfolios, or any other assessment tools are subordinate to the determination of educational effectiveness by a standardized test. Failure to perform at the predetermined federal and state levels can result in students' not being allowed to graduate, teachers being dismissed, administrators fired, and the control of schools taken from local school boards. Performance failure has resulted in schools being closed, privatized, and placed under state-appointed officials.

In the NCLB environment, disciplinary experts develop the state-mandated curriculum. To various degrees, this curriculum development process can be exclusively controlled by outside experts (i.e., university-level professionals, think tanks, and disciplinary professional organizations), or a similar process that allows a degree of input from practicing teachers in the various disciplines. However, seldom are teachers allowed a significant role, and generally student and parent participation is minimal at best. Once in place, the mandated curriculum is enshrined as the canon, and deviation from the curriculum can be justified only after the mandated curriculum has been successfully taught. Documented outcomes of the imposition of mandated curriculum include curricular fragmentation, curriculum displacement, curriculum reductionism, and a rigid adherence to curriculum alignment.

Curricular fragmentation occurs when curriculum is reduced to a series of disconnected facts. Because of the focus on the correct answering of specific and unconnected factual information on the standardized tests, curriculum is no longer viewed as interconnected and holistic. As a response to this testing focus, the pragmatic and expedient pedagogical strategy is to develop a factoid focus, or concentration on the teaching and learning of curriculum as discrete and unconnected factual information.

Curriculum displacement occurs when the tested school curriculum takes precedence over nontested curriculum. In this case, certain disciplinary areas become expendable in light of the amount of time that is available to guarantee appropriate student achievement levels on the tested curriculum. Often, the fine arts, physical education, social studies, and other programs that meet the functional purposes of education, such as driver education, vocational education, and family and consumer science, are displaced from the curriculum because of the need to use their time for test preparation. For example, as testing time approaches, some schools require teachers in these areas to devote class time to remediation activities related to the tested curriculum and the development of test-taking strategies.

Curriculum reductionism takes place within the tested disciplines. Disciplinary curriculum that will be tested is stressed at the expense of other information within the discipline that will not be tested. In fact, tested content is often divided into categories of essential knowledge and nonessential knowledge, with an instructional emphasis focused on the essential knowledge. Of course, essential knowledge is defined as the discipline's knowledge that has the highest probability of being on the test.

Somewhat related is curriculum alignment. This refers to the practice of making sure that the written curriculum is what is taught and tested. The purpose of curriculum alignment is to streamline the pedagogical process by making sure that extraneous information (i.e., information that is not part of the written curriculum) does not compete with the time that is used to teach and test the mandated written curriculum. A rigid application of curriculum alignment finds no place for impromptu or creative infusions of curriculum in either the written, taught, or tested phase of the teaching and learning process by either the teachers or students. This pedagogical

restriction works against the enhancement of curricular authenticity and relevance that may occur when the curriculum, instruction, and assessment is situationally changed by teachers or students to enhance instructional relevance.

The focus of instruction is constantly negotiated between student-centered, teacher-centered, and test-centered techniques. In a standards and accountability environment as defined by NCLB, the most efficient pedagogical strategies are teacher-centered and test-centered. The use of student-centered instruction infers that student differences and needs will inform and mediate the nature of curriculum, instruction, and assessment. Since in a standardized test environment the test content is predetermined, it is more efficient for the teacher to transmit knowledge or be directive in focusing student learning on what is most important—learning what will be on the test. Student differences that involve learning styles, cognitive styles, cultural differences, command of the English language, disabilities, or other special needs are irrelevant because none of these differences are factored into the testing process. Because of this disregard for student difference (mainly because all students regardless of these differences must take the test), students are decontextualized and objectified. Just as all of the tests are standardized, students are stripped of their individuality and viewed as an essentialized and homogenized group in that only their individual test scores define them as individuals.

In order to achieve instructional efficiency, instruction tends to emphasize the use of direct instruction models. Memorization, rote learning, test taking skills, and repetitious instructional activities tend to be the norm; simply, because they offer a greater potential for test achievement. Lower-level thinking skills are also emphasized, and higher-order thinking, cooperative learning, and student creativity are closely monitored to ensure time on task, content coverage, and determination of the correct answer. Constructivist techniques and strategies may be used but are also closely monitored, because in the end, there is a correct answer that may not coincide with the students' construction of meaning.

In general, efficiency models of education are more focused on control. The organizational hierarchy is well defined, with sharp boundaries between administrators, teachers, and students. To enhance the efficient delivery of mandated curriculum within the time available to prepare for the test, many schools attempt to control instruction through the use of prescriptive commercially prepared instructional products that are characterized by scripted lesson plans, lesson plan banks, programmed instruction materials, and other teacher-proof materials and lessons. In addition, student motivation is an object of control. Many schools rely on extrinsic motivational strategies to foster appropriate student attitudes toward test preparation and performance. In a return to the scientific management of schools, school time is also highly controlled. Besides curriculum displacement, time is rescheduled for remediation purposes. Students whose progress lags behind, as determined by diagnostic tests, have their school time restructured to accommodate remediation activities. These repetitious drill activities may occur throughout the school day by displacing other curriculum, or be structured activities after the regular school hours, on Saturdays, and during the summer break.

Another aspect of NCLB is the growing requirement for schools to base their instruction on only quantitative research-based strategies. NCLB defines research-based strategies as those supported by randomized longitudinal quantitative studies. Not included in this definition are qualitative research studies, action research by educators, and descriptive statistical quantitative studies of short duration and small samples that cannot be generalized to the larger student population. Building on the research mandate of NCLB, the federal government has restructured its professional research organizations to accommodate and promote this restrictive definition.

In the NCLB environment, the assessment of curriculum is a simple issue because of the total focus on state standardized tests. Teacher-made assessments, authentic assessment, and the use of multiple assessments are all subordinated to the standardized tests. Student performance on these standardized tests is not only evaluated by whether students answer the questions

correctly, but their overall performance rating is determined by arbitrary cutscores or passing scores (i.e., a number on a score scale that determines whether a test has been passed). Because of this arbitrary process of setting the passing scores, some states periodically change their tests when scores tend to be high. Many have criticized the use of cutscores because government officials can change the cutscores at any time for any reason. Also, these arbitrary performance levels can have a great impact on students and schools. For instance if a cutscore is set at 80, some testing experts have argued that there may be no significant difference in a child's learning from a 77 to a score of 80. Because the purpose of these tests is to compare all students in a state, the tests must be able to reliably account for student differences involving variables such as place (i.e., rural, urban, suburban, underfunded schools, well-funded schools), individual difference (i.e., intelligence, disability, culture, language, socioeconomic status), and local instructional differences. This need to generalize test results is problematized by the fact that some tests have yet to be proven statistically reliable and valid in their assessment of students.

In an attempt to accommodate these reliability and validity issues, test content is manipulated to enhance the score spread. Score spread allows students to be statistically ranked and sorted. The more spread out the scores, the easier it is to sort the students. One technique in establishing score spread is to eliminate questions that were to frequently answered correctly. In this case, schools and students are punished for their ability to effectively teach to the test. Other problems with the validity of these tests include test pollution and teaching/testing mismatches. In test pollution, the validity of the test results is adversely affected by the teaching of test-taking skills, the use of practice tests, and the use of other test preparation strategies that are designed to enhance student achievement through the question-answering process rather than through the correct understanding of the tested information. The issue of teaching/testing mismatches involves the difference between what information is on the test and the information that is taught in schools. If students are not taught what is on the test, then they do poorly, not because of their own effort but because of this mismatch. The solution to this problem is twofold. First, teachers can anticipate the test content and teach to the test. Second, test preparation materials can be purchased or developed that closely aligns with test content. In any case, either practice once again has significant consequences for curriculum and instruction, and more important the students and schools.

Finally, the impact of this type of educational system on the roles of the educators and students is significant in our comparison to a reconceptualized environment. In this technical rational system, administrators function solely as managers whose primary responsibility is to ensure appropriate student test scores. The administrator's role as instructional leader is sharply defined by the standardized test requirement. The role of teachers in the teaching and learning process is greatly affected by the standards and accountability environment. One requirement of NCLB is that all teachers must be highly qualified. This noble and commonsense requirement is subverted by the federal requirement that the definition of highly qualified teachers is solely determined by their performance on standardized tests. Most of these tests are related solely to disciplinary content knowledge. Other indicators of teacher expertise such as administrative evaluations geared to the local context, teacher experience, and student and parent feedback are subordinated to the test performance requirement. Many alternative teacher certification programs designed to fill teacher shortages are solely focused on content tests with a minimal emphasis on pedagogical knowledge. In this type of environment, teachers function as deskilled technicians whose sole responsibility is to make sure that the appropriate content is taught in the required amount of time. Teachers are considered deskilled when they must operate within a narrow range of specialized knowledge and skills. In this situation, teachers become content specialists rather than content generalists who can make interdisciplinary connections. Generally, the power of teachers is limited to decisions about how best to carry out the curricular and assessment mandates of the states.

In rigid technical rational standards and accountability systems, students are viewed as the receptors of knowledge that can be transmitted to them through direct instruction or constructivist activities that are contrived so that students will arrive at the correct answer. Generally, students are limited in how much they can participate in the decision-making process concerning teaching and learning. Their role is akin to the role played by workers in the traditional factory system in that they do what they are told to do by the manager/expert/administrator/teacher. This lack of ownership and empowerment within the teaching and learning process has well-documented negative effects such as high dropout rates and high levels of student anxiety. In addition, some students, due to a narrow instructional focus on tested content and repetitious remediation, experience a reduced engagement with curriculum and critical thinking skills.

THE RECONCEPTUALIZED EDUCATIONAL EXPERIENCE

In a discussion of a reconceptualized educational experience because of the significant foundational differences between this view of education and a technical rational view, it quickly becomes apparent that curriculum, instruction, and assessment cannot be viewed as separate components of teaching and learning. Unlike the reductionist alignment process in which curriculum, instruction, and assessment are viewed as separate and discrete aspects of the educational process that need to be aligned in order to enhance the efficiency of the educational process, a reconceptual view sees these three components as inherently and ubiquitously integrated. Therefore, other concepts will be used to organize an explanation of the reconceptualized educational experience. These organizing concepts include a focus on critical thinking, attention to context and social constructivism, an interdisciplinary and holistic orientation, authentic assessment, and teachers and students as scholar-practitioners.

Before discussing the characteristics of reconceptualized education, it is important to clearly establish the fundamental purpose of a reconceptualized education. Of course, as is the idealistic purpose of all education, the purpose of reconceptualized education is to prepare individuals to have full, rich, and productive lives. More fully defining this purpose requires a look at the nature of society in which the individuals will exist, and the knowledge, skills, and dispositions that they will need to acquire in order to fulfill this purpose. Writing in the context of preparing students to function effectively in the economy of the digital age, one scholar proposes the needs that must be fulfilled by education. Students need to acquire a digital-age literacy in science, mathematics, technology, and visual information and culture. In addition, in order to manage complexity, they need to be inventive, curious, creative, and risk-taking. They need to acquire skill in higher-order thinking, teamwork, leadership, and problem solving—all within an ethical sense of personal and social responsibility (Thornburg, 2002, p. 59).

To say the least, this is certainly a significant challenge for any educational system. Most individuals would agree that any student who acquires this skill and knowledge certainly would be well prepared to effectively engage the complexity of the future. Furthermore, let us add to this wish list an overriding concern for social justice, an ethic of care, and the promotion of participatory democracy. From a pragmatic viewpoint, any educational system will have difficulty achieving such a lofty purpose if faced with inequitable educational funding, systemic poverty, racism, and a myriad of other conditions that complicate and confound the education process. However, these conditions are precisely why all of this knowledge, skill, and critical awareness need to be the central focus and purpose of public education.

Proponents of reconceptualized education will argue that their educational perspective offers the greatest potential to maximize the achievement of this purpose. They attempt to realize their purpose through pedagogies that empower and emancipate; standards that require the engagement of complexity; accountability systems that are equitable, just, and caring; and educational systems

that are attentive to individual needs and local and global contexts. The characteristics of such an educational system are as follows.

A Focus on Critical Thinking

The term *critical thinking* has quite different definitions depending upon the purpose of education. If the purpose of education is to control the educational process in order to promote a specific viewpoint or reproduce a specific arrangement of power, then critical thinking may be defined as the higher-order thinking skills of analysis, synthesis, and evaluation that are to be learned and used within narrow contexts with the sole purpose of finding correct answers and validating the predetermined conclusions of experts. If on the other hand the purpose of education is to empower and emancipate, then students are encouraged to use these processes to expand contextual awareness through problem posing and problem solving through research, challenge simplistic solutions, and uncover injustice, a lack of care, and undemocratic policy and practice.

In this reconceptual definition, critical thinking is inherently critical in its concern for social justice, an ethic of care, and democratic participation. It is also technical in relation to the development of higher-order thinking skills within this critical context. It is also contextually holistic in the understanding that the primary function of these skills is to increase the complexity of the situation in which they are employed. In addition, a reconceptualized view of critical thinking requires an awareness and critique of the values that are imbued within all human activity. One consequence of the inclusion of values is the concomitant inclusion of emotion. Unlike the positivist separation of reason and emotion, reconceptualized critical thinking understands that reason and emotion are interrelated and interconnected, and therefore, analysis, synthesis, and evaluation must engage a situation or problem as having both a logical and an affective dimension.

Critical thinking is not used as a normalizing agent so that students will fit into the preconceptions of the dominant group, but instead is a best practice that facilitates the development of critical and creative thinkers who can think out of the box. Through the use of divergent and lateral thinking as well as convergent and linear thinking, students make connections that allow them to see the deep and hidden patterns in which all human activity is nested. To achieve this potential, students learn how to think not what to think. An integral part of problem posing, pattern detection, and making connections is the ability to engage in continuous critical reflection. Critically reflecting upon process, conclusions, actions, and consequences is an integral part of reconceptualized critical thinking. In a reconceptualized context, critical thinking is posed as using analysis, synthesis, and evaluation in the critical reflection process that is a fundamental aspect of the praxis process of action–critical reflection–action.

In reconceptualized curriculum, critical reflection as the recurring theme in all critical thinking activities is inherently metacognitive in nature. Metacognition is the awareness of one's thinking processes—how one constructs questions, solves problems, makes decisions, organizes daily activity, and all of the other cognitive activities that mediate our desires and actions. A deep, broad, and critical understanding of the consequences of our actions is not possible without this metacognitive reflection.

In conclusion, reconceptualized curriculum requires a constant use of critical thinking in relation to the developmental level of the students. The acquisition of facts, data, and information is always in the context of critical thinking. Instead of collecting and learning facts as an isolated activity followed by critical thinking, the collection of information occurs within the critical thinking framework. In their lessons, teachers pose problems or situations that require students to form questions, gather information, employ higher-order thinking in the analysis of the information, pose and test solutions, and throughout this whole research-based process engage in critical reflection. Or, in a less linear sequence, teachers ask students to gather information, formulate

questions, detect problems, analyze, reflect, synthesize, and evaluate—all done continuously and dynamically as deemed relevant by the teacher and student.

Attention to Context and Social Constructivism

A reconceptualized view of education is attentive to context—the context of the individual student, the context of place, and the act of learning in context. This view is fundamentally a social constructivist view. In this context, student thinking and learning (i.e., their construction of meaning) is unique to each student and to the specific circumstances of the context of the situation in which the learning takes place.

First, a reconceptual view is sensitive to student diversity and difference that manifests itself in forms involving gender, race, ethnicity, social class, lifestyle preference, sexual preference, language, special abilities, and disabilities. In addition, all of these forms are mediated by the political, social, cultural, economic, and spiritual contexts in which the students live. Adding even more complexity to the teaching and learning process is the increasingly pluralistic nature of society, which problematizes monocultural educational practice. To educationally accommodate these differences, reconceptual education employs instructional diversity through an attention to other individual differences that may manifest themselves as multiple intelligences, cognitive styles, learning styles, and emotional responses within and to the learning process. Because each student is viewed as unique, the resultant pedagogical strategies must be student-focused, humanistic, and personalized.

A second consideration involves the place in which the learning occurs and the student exists. Reconceptualists are aware that the concept of place mediates and informs all teaching and learning, and that there are many places that affect the educational process. Place can include the culture of the individual classroom, the school, the family, the neighborhood, the city, the region, and the world. The characteristics of place enter the classroom with students, teachers, mass media, business activity within the school context (e.g., business-supported educational programs, marketing aimed at students as consumers) and governmental regulations. A reconceptual view recognizes that teaching and learning cannot be isolated from these characteristics and, in fact, they overtly and covertly influence all aspects of the educational process. Often referred to as hidden curriculum, these characteristics and influences offer the potential for authentic and relevant education to occur.

Reconceptual teachers situate information within the conditions or places in which students find themselves, thus fostering authentic educational activity. Reconceptual teachers understand that by situating learning within the places that influence their students, their students experience learning that is mediated by change. Situated learning is important because, when learning is situated within real-world contexts, knowledge, inquiry, and learning processes are not static and controlled entities but change as the learning context changes. This engagement with change requires the learner to engage change, the dynamic nature of the construction of knowledge and use of skills, and the complexity that is created by change. In this way, learning becomes less an artificial exercise conducted within the minds of students and more an authentic learning exercise within the world in which the students live. This is truly authentic education because there is no separation of knowledge or learning contexts from the social, political, economic, cultural, and historical forces that mediate real-life situations.

Besides the motivational value of engaging curriculum within the authentic context of their local place, students gain more complex understandings about their home, neighborhood, and city. Utilizing their critical thinking skills and critical dispositions, students can take the opportunity to develop the capacity to democratically participate within their local context. Within this authentic learning context, disciplinary knowledge as well as abstract concepts such as social justice, caring,

and democratic participation take on a concrete and visceral meaning. Understandings gained within the authentic context can lead to learning activities involving praxis, in which students formulate action plans, critically reflect, take action, and engage in further critical reflection. Active learning in context positions knowledge, skills, attitudes, and values within an authentic context rather than in the artificially decontextualized context of formal learning. In this social constructivist context, teachers creatively and situationally develop instructional strategies and course content that requires students to individually and cooperatively engage the knowledge that they already have with the knowledge that they are expected to learn.

Based on the social constructivism of Vygotskian theory, the social context of learning is an essential element in reconceptualized education. This social context recognizes both teacher-and-student and student-and-student interactions as the fundamental social contexts of teaching and learning. The importance of this understanding is seen in the continuous use of observational learning, situated learning, cooperative inquiry and problem-based learning, cognitive apprenticeships, and dialogic and generative conversation. Reconceptual education promotes cooperative group work as a fundamental organizing structure for teaching and learning. Within the group context, students learn to work collegially with others; critically critique their own and their colleague's ideas, values, and assumptions; and recognize their fundamental interconnection and interrelationship with others in all human activity. Another important conversation goal of reconceptual education is to foster an awareness of the different types of conversation and their consequences. Different types of conversation are essentially different types of text that mediate our understanding of human activity and the consequences of our subsequent actions that are based upon our interpretation of these texts.

An Interdisciplinary and Holistic Orientation

In keeping with its critical pragmatic and postformal orientation, reconceptualized education views all aspects of teaching, learning, and knowledge as holistic in nature. This orientation not only views curriculum, instruction, and assessment as integrated components of the educational process, but also views the curriculum as interdisciplinary rather than as separate disciplinary fields. Obviously, science, math, social studies, etc. are discrete and separate fields, but in the context of teaching and learning, a reconceptual view finds it necessary and more effective to construct learning activities that require the learner to engage these separate disciplines in a holistic context. In this reconceptual view, disciplines are integrated and synthesized, thus eliminating any hierarchical arrangement of disciplines in which some are privileged over others. This positions the student for more authentic engagements with disciplinary knowledge, and creates the potential for the occurrence of more complex student understandings. Through interdisciplinary study, students have the potential to make more complex epistemological connections, and detect more complex patterns of human activity.

The promotion of interdisciplinary learning requires interdisciplinary teaching. In reconceptual education, teachers learn, plan, and teach in interdisciplinary teams. In order for students to make holistic connections, teachers must also make these connections. While individual teachers may be disciplinary specialists, they reconceptualize their disciplinary understanding to be part of an interdisciplinary understanding that engages human activity in more complex ways. Another benefit of interdisciplinary teaming involves pedagogical diversity and complexity. In the interdisciplinary teaching context, each individual teacher brings pedagogical techniques specific to their discipline, and collectively these teachers construct a reconceptualized pedagogy that is synergetically powerful in its ability to foster a holistic student understanding of content, critical thinking and metacognition, authentic situated learning, and a postformal engagement with the phenomenon under study.

Reconceptualized education also defines *interdisciplinary* to refer to the integration of theory and practice within a critical context. Besides integrating the content of different disciplinary areas, teaching and learning within and between disciplines is reconceptualized to bring together theory and practice within authentic learning contexts. As students engage learning in authentic real-world situations, they use disciplinary theory in an interdisciplinary context to inform and mediate the experiences of their practice. Conversely, the experiences that they encounter within their practice are used in a critical critique of the theory. As students engage theory and practice as dynamically interrelated forms of understanding, they do so within a critical and pragmatic context. In a sense, they simultaneously engage in two levels of thinking: one that requires critical reflection on content and process and another that requires an assessment of the critical consequences of the theory and practice in relation to issues of social justice, caring, and democratic participation.

Authentic Assessment

In order to assess the reconceptual goal of holistic understanding of human activity and natural phenomena, assessment must be authentic and multiple. Authentic assessment requires a formative and summative evaluation of student learning within the context of real-life problems and situations. The goal of authenticity in the assessment of learning is to determine how well students have applied content, skills, and attitudes in these real-life contexts. The idea of authentic assessment is in contrast to the formal idea that students can apply the learning that they experience in the decontextualized and artificial environment of the classroom to the real-life situations that they will encounter at a later time. A reconceptual view questions the effectiveness of formal assessment because of this disconnect between learning and the authentic application of the learning. Situated interdisciplinary learning directly connects the acquisition and understanding of content, skills, and attitudes to real-life situations. Therefore, only assessment that occurs naturally with instruction and is directly related to the situated/real-life context can provide a valid and reliable assessment of student achievement.

To capture the complexity of the learning process over time, which includes student engagement with all of the interdisciplinary content, skills, and attitudes within the real-life context, multiple assessments are required. Being student-centered, reconceptual education is interested in student achievement over time. Student growth in learning is a better indicator of teaching and learning effectiveness than a once-a-year decontextualized assessment such as a standardized test. In order to assess the holistic nature of student learning over time (i.e., a semester, a year, the length of a program), many and diverse assessment strategies are necessary. These can include traditional forms of assessment such as report cards, standardized tests, and teacher-constructed tests. Also included can be portfolios, scoring rubrics, peer and self-assessments, journals, and parent conferences. The use of multiple forms of assessment provides a fuller picture of not only student acquisition of content, but also of student cognition, affect, and ability. No one method of assessment can provide a valid and reliable assessment of such complex concepts such as teacher effectiveness, school effectiveness, and student progress.

An often-cited goal of education is to develop life-long learners. A reconceptual view of this goal recognizes that an integral part of the learning process is the ability of an individual to assess her or his own learning by herself or himself. If students do not learn appropriate assessment strategies in school, how can they accurately assess their learning when they are not part of a formal learning environment? From a pragmatic viewpoint, while in school, students must learn how to assess themselves through the use of multiple and authentic assessment strategies. These strategies need to be multiple because in real-life contexts, assessment at various times needs to be immediate and long-term, both of which require different assessment techniques.

Also, to function independently individuals need to be able to self-assess rather than rely on external assessments by other individuals. Authentic assessment strategies need to be acquired because when the assessment need arises, it will be in a real-life context, not in a decontextualized classroom context. How then are these requirements of multiple and authentic assessment in later real-life situations best met? The answer is found in how professionals engage in assessment. They use journals, rubrics, portfolios, and peer and self-assessments.

Teachers and Students as Scholar-Practitioners

Reconceptualized education requires teachers and students to perform roles that are quite different from their roles in a technical rational system. One term that can be used to capture this very different role is scholar-practitioner. Scholar-practitioners are individuals who have the attitude and ability to utilize scholarly and experiential knowledge and skills, viewed by them as dynamically interrelated entities, in their understanding of phenomena and in their solution of problems. Teachers as scholar-practitioners are not the deskilled technicians of technical rational systems, but individuals who as scholars can use scholarly knowledge and skills to better understand and shape their practice. They are practitioners who can use their practical knowledge to critique the formal theory and the theory that emerges from their practice. Above all, scholar-practitioners are critical in that the theory that they engage and the practice in which they are involved is critically interrogated with a fundamental concern for the promotion of social justice, an ethic of caring, and democratic participation. Through their scholarship and practice, they are not micro-managed individuals but self-empowered professionals who engage in a critical praxis in their classrooms, schools, and communities.

Teachers such as this are skeptics and critics who, through their critical interrogation of social phenomena, strive to facilitate the construction of egalitarian, caring, and democratic communities. In the context of educational communities such as the classroom, the school, and the larger community in which the school is nested, they use their interdisciplinary orientation, critical thinking, and postformal perspective to construct effective and egalitarian pedagogical environments. As researchers, they are bricoleurs who utilize a wide range of inquiry methods and knowledge bases to build egalitarian communities through the use of a critical pedagogy. They understand the situatedness of their own teaching and learning, and critically reflect upon their understandings as they are socially constructed in relation to the changing context of their place and their social interactions with others. They are critically pragmatic in that they are consequence focused, and critically interrogate their actions and the consequences of their actions. They value self-assessment and engage in continuous authentic and multiple assessment of themselves and their activity.

Likewise, students in a reconceptualized educational environment are scholar-practitioners in training. Unlike technical rational systems, students are empowered and active constructors of knowledge within authentic contexts. As student researchers, they are personally empowered through a critical pedagogy that requires them to experiment, discover, create, problem-solve, think, and act. By developing cooperative skills and dispositions, they learn the value of fostering community and the necessity of critically focused participation within a community. Through authentic assessment, they experience the validation and empowerment that is the result of personal growth. And in the end, they are transformed into life-long learners.

FURTHER READING

Thornburg, D. (2002). *The New Basics: Education and the Future of Work in the Telematic Age*. Alexandria, VA: Association for Supervision and Curriculum Development.

PART IV

New Visions—Postformalism: Education and Psychology

CHAPTER 95

Race in America: An Analysis of Postformal Curriculum Design

JOELLE TUTELA

What happens when students and teachers become empowered? When teachers become more actively involved in curriculum design and integrate their interests and knowledge into their subject matter, their classes are more likely to engage student participation. As a teacher of social studies, I wanted to demonstrate that history can be interesting, even exciting, and—most important—relevant, when historical events and persons are viewed through multiple lenses. I wanted history to “come alive” for my students, but found that they were not interested in its study because, in their experience, it had been taught as disjointed facts that generally dealt with dead white men. As such, they found it hard to relate to the subject. The memorization of facts requires low levels of thinking; certainly, it does not elicit creativity. By departing from a one-dimensional approach to the past and engaging students, challenging them to use higher levels of thinking and draw from their cultural awareness, the reshaped curriculum could empower students to view themselves as active participants. An interdisciplinary approach that engages multiple points of view is more likely to initiate and sustain engagement, so that a multidimensional picture becomes possible. Imaginative approaches to studying the past excite student curiosity and invite a genuine investment in learning.

Postformalism can break the chains of a sterile, one-dimensional approach to the study of history. Postformalism is rooted in democratic post-Cartesian ways of observation and evaluation and seeks to expand human rationality and knowledge (Kincheloe, 2001, p. 341). By deconstructing the typical pedagogical approach to history, teachers can invigorate students, encourage them to participate in the learning and stimulate new insights about the past as it relates to both the present and the future.

My approach to surmounting the constraints of the Cartesian method was to integrate the study of history with the fine arts. As an educator, and an artist, I know that works of art not only are aesthetic entities but also are purveyors of knowledge about our economic, political, and cultural circumstances. Using art as a springboard to the examination of history enlivens the subject matter. Art humanizes. Art adds emotional challenges, thereby attracting and holding student interest. I determined that the best way to integrate fine art into the history curriculum was to transform my classroom into an artist’s studio, filled with the tools for the creation of

“masterpieces.” My students became my apprentices. In concert, we would create art. In concert, all of us would be enriched.

Just as a master seeks to improve her craft, I decided to engage members of the community to collaborate in the construction of my studio/classroom. I collaborated with the Director of Education at the Montclair Art Museum to create “Crit and Create: Race in America.” As an apprentice learns from the master, students taking Crit and Create: Race in America learned to (a) analyze art and primary sources, (b) examine several perspectives, (c) become familiar with the techniques artists use to create their art, and (d) utilize their new knowledge and skills to create their own monument to race in America. There are several stages in the design and implementation of Crit and Create: Race in America. Each will be described and related to postformal thought.

STAGE I: PREPARING THE CANVAS

The first stage in Crit and Create was the creation of a calendar of the events in concert with the school calendar and the museum calendar. This proved to be more problematic than originally anticipated because I wanted to cover so much. An examination of the school calendar brought home how little time there is in one marking period! I met with the Director of Education from the Montclair Art Museum to devise a schedule that would honor both of our commitments while serving to achieve our teaching objectives. Gary Schneider and I wanted our program to

- validate alternative teaching and assessment methods to stimulate higher thinking;
- demonstrate that making the community an extension of the classroom improves student involvement;
- illustrate that studying art improves visual literacy and problem-solving skills;
- show that studying art and its relation to the humanities spurs student reflection on their values and heightens their social consciousness; and
- create an environment in which those with a minimal understanding of art become both comfortable with, and enthusiastic about, art.

To accomplish these objectives, we scheduled three in-school and out-of-school events for students and the museum staff. The culmination would be an evening opening, at the museum. By considering the museum as “our backyard” and a major educational resource, students began to understand that “emotionally derived knowledge” is as important as “rationally derived knowledge.” This partnership with the museum staff encouraged students to develop satisfying and meaningful connections with the larger society and to forge bonds between the two worlds.

Using the community as a direct extension of the classroom provides a strong foundation for intellectual and emotional development and reflects postformal thinking; it improves both the student’s life and the life of the community (Kincheloe 2001, p. 343). Through community involvement, students enhanced critical thinking as they reflected on classroom activities and developed commitment to social issues. Students witnessed first-hand that what they learned in the classroom really does relate to real life. Crit and Create expected students to immerse themselves in both the artistic and the societal environment. It also provided positive role models and experiences that required them to practice and hone their communications skills.

After my conversations with the Director of Education of Montclair Art Museum, I met with the principal, Elaine Davis, to inform her of the new partnership and the new approach to teaching history through an investigation of the arts. She was pleased at the prospect of expanding the classroom into the immediate community, of students working in cooperation with museum personnel, and of students becoming “masters” in more than one discipline.

To fund Crit and Create, I wrote a grant proposal to the Montclair Fund for Educational Excellence, which is committed to funding educational program that incorporate creative initiatives. Montclair Fund for Educational Excellence typically supports programs that enhance student learning by the application of nontraditional approaches. Fortunately, the grant proposal was accepted, perhaps because Crit and Create mirrored the foundation's educational mission. The *interconnectedness* of student learning—in addition to learning from the teacher and classroom activities, learning from one another and from members of the community at large—is a major component of postformal thinking.

After the logistics had been finalized came the artistic challenges. I would equip my fledgling artists with a “palette” so they could begin to create their “masterpieces.” This comprised two phases. *One*: the students learned “primary colors”: studying the history and vocabulary of racism in America. *Two*: the students learned “complementary colors”: studying the language and techniques of artists and as well as an overview of art history.

During the first two weeks of the marking period, students studied “primary colors.” To ensure that they had a clear understanding of race in America, I developed lesson plans that integrated materials and activities to promote cognitive development and comprehension of a spectrum of historical events, described from a variety of perspectives.

Students in *Crit and Create* began their studies by examining group interaction and the dynamics of oppression. Each student was asked to determine his/her “social identity” and “membership” and compare these to those listed in the chart below (Adams 1997, p. 70).

Social Identity	Membership	Status: Agent	Status: Target
Race	Black, White, Latino, Asian, Native American, Biracial	White	All Others
Gender	Female, Male, Transgender	Male	All Others
Economic Class	Poor, Working Class, Middle Class, Upper Middle Class, Owner Class	Upper Middle Class, Owner Class	All Others
Age	Young, Young Adults, Middle-Aged Adults, Elderly	Young Adults, Middle-Aged Adults	All Others
Sexual Orientation	Heterosexual, Homosexual, Bisexual	Heterosexual	All Others
Religion	Christian, Jew, Muslim, Hindu, Buddhist	Christian	All Others
Physical Ability/ Disability	Nondisabled, Disabled	Nondisabled	All Others

This activity required students to examine their backgrounds with regard to race, gender, economic class, age, sexual orientation, religion, and their physical condition and to view themselves as members of several groups. They also confronted the concepts of “agents” and “targets,” in order to better understand the dynamics of power in America. In discussing these issues, students recognized the complexity of relationships within our power structure. This activity provided students with the opportunity to overcome the limitations of monological formalism and afford them with new ways of thinking about themselves and others.

Building on acquired knowledge and working in small groups, students developed working definitions of: *discrimination, prejudice, race, ethnicity, racism, individual racism, active racism, passive racism, target, agent, and ally*. Regular group interactions provided opportunities for developing a clearer understanding of these terms and how they are applied to individuals,

groups, and society as a whole. These interactions also enabled students to take ownership of their learning and provided opportunities for them to express their point of view—two key aspects of postformal thinking.

To develop a critical lens for students to grasp the complexities of the relationships between individual consciousness and culture, students examined a timeline of key events (1819 to 1990) in the struggle for racial equality in the United States (Adams, 1997, pp. 105–107). The timeline helped students gain an overview of the racial categories that had been constructed and legislated by North Americans of European descent to justify privilege and colonialism, even theft and murder. In asking students to examine the history of racial segregation in the United States, it became apparent that they also needed to understand the importance of the individual responsibility and to reflect on the more sinister aspects of American history.

As a corollary of this examination, students were encouraged to reflect on, and talk about, strategies that might be effective in preventing the abuse of power. In addition, students were encouraged to reevaluate simplistic responses to complex questions. The focus, at this juncture, was an analysis of the role of race, gender, religion, and class in the greater context of historical events. To heighten student awareness of historical events from numerous vantage points—race, gender, religion, and economic class—students gave presentations about the inequities they had found in their lives. This exercise underscored the importance of bringing one's own cultural and ethnic awareness to the study of history.

To initiate a dialogue of racial issues in contemporary America, students viewed and then analyzed the film *Do the Right Thing*, written and directed by Spike Lee. Although the scenario is fictitious, the film alludes to racism and bigotry in contemporary America and their tragic, often-violent, consequences. Students leveraged what they had learned from the film to articulate their understanding of the complexities of contemporary urban life, especially for people of color. One of their assignments was to write a movie review. To prepare for this assignment, students were asked to evaluate previously held opinions in light of new-found information and to investigate the duality and ambivalence inherent in the film's characters and in their actions. In many cases, students who had thought they possessed clear-cut solutions to the conundrum of racism discovered their own turmoil and prejudices. This consciousness of their ambivalence.

To enhance understanding of various perspectives of race, gender, and class, and to create an environment in which my students *wanted* to do their homework, I compiled a reader that included African-American voices from the eighteenth century through the present. I included articles that would appeal to my students, so that they were motivated to do their homework and pleased to discuss what they had learned. I also gave my students choices in their additional readings; the only requirement was that they select three relevant articles each week, read them thoughtfully, and write a response. Providing choice empowered my students, giving them opportunities for independent investigation of areas of interest, and encouraging them to reconsider their perspectives and prejudices. These readings engendered awareness of the power of the word, especially when it emanates from subjugated voices, to paint accurate—if somewhat darker—pictures of one aspect of America's past.

Students now were somewhat prepared to understand America's complicated racial history. Now it was time to add the "complementary colors." Most students taking *Crit and Create* had had no formal artistic training. With this in mind, I started with the basics. Students were asked to look at selected works of art and answer straightforward questions: *What do you see? Do you like what you see? If you like it, why? If you do not like it, why not?* Through simulation, students were introduced to the seven key categories that guide most art critics when they review a piece of art: *Physical Presence, Personality, Historical Circumstances, Tradition, Language, Viewpoint, and Conclusions*.

To introduce the specialized argot that comes into play when describing and analyzing artwork, students were asked to describe a painting as if they were reporting a car accident. This aided them in achieving objectivity. I converted my classroom into a gallery, *Faux 215*. On the walls, I hung replicas of: mosaics, frescoes by Giotto and Fra Angelico, and paintings by Van Gogh, Duchamp, Monet, Picasso, Magritte, and Pollack. As they examined these pieces, I provided an overview of the principles governing realism and abstraction. Before entering the new gallery, students crowded in the hall in front of the gallery to review museum directives designed to guide their behavior. In *Faux 215*, students had fun applying their new vocabulary and their newly acquired insights as they attempted to review a painting in the manner of an art critic from *The New York Times*. Students were required to review two paintings, applying the seven key categories of art criticism, and to present their reviews to the class. The simulation required students to consider how we arrive at opinions, and it made them active, often enthusiastic, participants in a new arena—guided analysis to reach an informed evaluation. Further, students were obliged to leave the comfort zone of a more traditional social studies class and to envision themselves in a new role, that of art critic.

Gradually, the students began to feel comfortable with their new “palette.” The next investigation was an examination of the monuments that have helped shape the United States landscape. Students read and analyzed the article, “Lies We Tell Ourselves,” by James Loewen. Among other things, Loewen describes how historical markers “distort our understanding of the past and warp our view of the world. . . [because] Americans like to remember only the positive things, and [because] communities like to publicize the great things that happened in them” (Loewen 2000, p. 20). By asking students to think about an essential controversy—“Who gets memorialized and who gets ignored?” (Loewen 2000, p. 20)—I was, in effect, asking them to become aware of a pervasive mode of thought—the Eurocentric, patriarchal, and elitist viewpoint—and to consider what might be done to empower and give voice to another perspective, that of the non-Eurocentric, non-patriarchal, non-elitist—in other words—the subjugated and the disaffected. Joe Kincheloe maintains in his introduction to this encyclopedia, that students with their new lens would be able to remove their ideological blinders and demand multiple perspectives in their studies.

Students then were asked to consider the function of selected monuments by asking themselves the following questions:

- What is the difference between a monument and a memorial?
- Why do we build monuments? What are the motivating factors?
- Why do we create monuments that commemorate tragic or horrific events?
- What function(s) does (do) such monuments serve for survivors? For the fallen?
- For society as a whole? For posterity?
- Why do we build monuments to commemorate heroes or heroic events?
- Who should have say in the design and building of monuments?
- Who and what are memorialized by a specific community. Who and what are ignored? Who decides these important questions?
- How do monuments simplify the past? How do they “sanitize” the past?
- What important messages do monuments convey about the society that created them?

This critical examination enabled students to uncover the human motivations for building monuments and the ability of monuments to communicate not only to the societies that created them but also to future generations. These individual examinations, and the ensuing group discussions,

helped students ponder the complexities of the modern world and the uses and abuses of power. In the course of this unit, students viewed slides of monuments found throughout the United States. The Statue of Liberty, Washington Monument, The Minute Man, Thomas Jefferson Monument, The Lincoln Memorial, The Korean Memorial, The Vietnam Veterans Memorial, and The Civil Rights Memorial were examined and discussed in order to better understand the role each plays in shaping our landscape and our attitudes. Students commented on each monument and recorded the salient points of their discussions.

These slides helped the students think more critically about the meanings and the influences of our national monuments, broadened their knowledge of this genre, and increased student appreciation of their importance—both as aesthetic entities and as expressions of national consciousness. The discussions also helped students understand that artists—through their works—represent the attitudes of the time and place in which they live. To stimulate greater involvement, students designed a book cover that represented a person and/or an event they wished to commemorate. This created the opportunity to consider what was important to them and, in their presentations, to attempt to convince others of the logic of their choice and the importance of the person/event being remembered. Students took a walking tour of our school, Montclair High School and its grounds to examine its monuments. This heightened their awareness of the local landscape. After reviewing their findings, students realized that much of the school's landscape had been totally foreign to them, since they neither recognized the persons commemorated by the bas-reliefs sculptures nor the connection of these figures with of Montclair High School. For the most part, all that they had seen were figures of white men and a few white women. Students then were asked what monuments *they* would create to add to the school's landscape. This exercise enabled them to voice their concerns, to "lobby for their cause." In keeping with the tenets of postformalism, students reflected on the fact that these particular monuments commemorated only one dimension of the community at large. This was problematic for most students of color. They wondered why the school's landscape was not populated with figures of: Martin Luther King Jr., Mahatma Gandhi, Maya Angelou, W.E.B. Dubois, Frederick Douglass, Ida B. Wells, Harriet Tubman, Jacob Lawrence, and Langston Hughes, to name a few.

As apprentices hone their skills by learning from the master, it was important that my apprentices learn to research all of the skills and history of art from the perspective of an artist. To initiate this unit, students viewed a PowerPoint presentation that provided an overview of the traditional canon of Western European art, beginning with cave paintings and ending with contemporary conceptual art. The presentation gave the students an inkling of how Western art and its functions have changed over the past seven centuries. They also gained an appreciation of the fact that artworks tell a visual story of culture—that they reflect the major beliefs and pervasive behaviors of a specific society at a specific period. I was mindful that the artists represented were white males; nevertheless, the intent was to introduce the traditional canon and then bridge to a more pluralistic, inclusive approach. For many of my students, this was the first time they had been introduced to art history, the first time they had viewed these works of art. This activity provided a grounding—however basic—of the subject, and was undertaken so that my students could understand the continuum that has led from primitive expression to contemporary expression. Further, the overview emphasized the usefulness of an interdisciplinary approach to the subject.

The overview began with color slides of the Lascaux cave paintings (France) and of the Great Pyramids (Egypt) to underscore the story-telling functions of art. Students then viewed the works of Giotto, Da Vinci, and Michelangelo whose paintings—commissioned by the Roman Catholic Church—served a didactic function: to educate an illiterate populace by conveying religious and ethical messages of the Old and New Testaments. Portraits of the nobility of Spain, immortalized by Velázquez and Goya, brought home that, at one time, only the personal histories of the

wealthy and politically powerful could live on by virtue of magnificent paintings that had been commissioned by these noble families. By the nineteenth century, most artists no longer were the protégés of their wealthy patrons, the Church and the aristocracy. With their obligation to their powerful patrons annulled, many were drawn to depicting a more “democratic” middle-class milieu. Works by Ingres and Manet were shown to illustrate this movement. With the invention of the camera, numerous artists began to move away from realistic depictions of their subject matter and looked inward for new inspiration. Artists became interested in iconoclastic interpretations. With this in mind, students viewed the art of Picasso and Duchamp. By the middle of the twentieth century, increasing numbers of artists had rejected the constraints of representational art and were deconstructing their art into the basic elements of paint, canvas, and gesture. Students were exposed to the works of Pollock, deKooning, and Rothko, leading exponents of the startling new ethos, and then to those of American artists, Rauschenberg, Johns, and Warhol, who focused on portraying the more mundane aspects of contemporary life in radically new ways. Moving closer to the present, “ideation” took on new importance. That pure idea, not expressed in tangible form, can be art found its expression in works by artists like Kosuth and Baldessari.

Learning about this evolution in art helped students comprehend that art literacy should not be one-dimensional, and that a multidimensional approach can improve critical consciousness. Students also came to understand that one purpose of art and the humanities is “to open our minds to more alternatives and to ambiguities in the way we see the world” (Feinberg 2000, p. 13). Just as philosophers seek to understand and express human existence through words, artists make sense of their world through pictures.

STAGE II: CREATING THE WORK OF ART

With some understanding of art history, my students were better prepared to study additional examples of contemporary art. For our first in-school event, the Director of Education from the Montclair Art Museum, visited our class to discuss selected works of several minority artists whose subject matter is race. This expansion of the artist’s cultural base was an “eye-opener” that helped students understand “the insight to be gained from the recognition that divergent cultures use art to highlight both our social constructs as individuals and the limitations of monocultural ways of making meaning” (Rose and Kincheloe 2004, p. 97). To help students grasp these multidimensional implications of art and the complexity of human existence, students viewed a PowerPoint presentation of the work of the contemporary artists: Whitefield Lovell, Willie Cole, Shirin Neshat, Kara Walker, Tseng Kwong Chi, and Jimmy Durham. Students were able to identify the symbols used by these artists and to articulate the intellectual and emotional impact of their symbolism. These artworks, by subjugated voices, once again inspired students to confront the multiple perspectives of the American experience. Willie Cole uses discarded objects—for example, irons and ironing boards—to comment on his personal history and that of his culture. His sculptures, reminiscent of the slave trade, convey a strong African-American message of his heritage. The works of Shirin Neshat depict the lives of Muslim women in the Middle East. Binary opposites positions invite questions about the viability of her country’s mores and cultural institutions. Tseng Kwong’s self-portraits provide trenchant commentary on Western ignorance about Asians; in his black and white photographs, Kwong, in a gray Mao suit, wearing sun-glasses and sporting an ID badge stands in front of trite tourist attractions such as the Statue of Liberty, Niagara Falls, and The Hollywood Sign. His work compels the viewer ponder the dangers of stereotypical thinking as it relates to East-West relationships, both personal and global. Many of these artists, in confronting the complex and inflammatory issues of race and gender, want their

art to open minds. They want their audiences to consider alternative ways of viewing the world and how they relate to that world. (Feinberg 2000, p. 13).

This discussion following the presentation focused on the fact that artists incorporate their perspectives on race and gender in their art to coerce the viewer to come to terms with these issues. According to art historian, Jonathan Feinberg: “using works of art as illustrations of cultural constructs and sociopolitical forces. Critical theory derives from philosophy and theoretical orients sociology. Cultural studies resembles traditional history with an emphasis on broad social forces, such as race and gender, and with an infusion of language from critical theory” (2000, p. 18). The presentation, and ensuing discussion, led students to the realization that they wanted to create a monument—to be exhibited at the Montclair Art Museum. They already knew their subject matter: Race in America.

Students now were fairly familiar with some of the techniques contemporary artists use to communicate personal, cultural, and political messages. They were ready to transfer this understanding to the selection of their materials. They considered the use of the ordinary artifacts of daily life. They now understood that such objects could be manipulated in order to shed new light on familiar situations, to question what had been taken for granted, to open the minds of *their* audience. Students were better able to observe their surroundings and their attitudes and behaviors from multiple perspectives. Given this broader understanding of their world, it was time to “roll up their sleeves” and create! Students participated in an artist-in-residence program, in which a local architect, Barry Yanku visited our class to show the students how to transform an abstraction—their concept—into a concrete entity—their monument. Based on the readings and discussions in class, the students had chosen an event—the death of Emmett Till in 1955—that they wished to commemorate. Their choice had been guided by their conviction that this tragic event had sparked the civil rights movement. The architect helped the students construct a model, using Federal Express boxes. The students wanted to understand how architectural space can be used convey the emotional impact of a brutal act. After thoughtful discussion, they decided to juxtapose a square with a circle to express oppression (despair) and freedom (hope). The square represented the oppressiveness of racism that confronted Emmett when he visited his relatives in Mississippi. The circle represented the ideals of freedom as embodied by the courageous civil rights workers in the Deep South. Half of the circle had a window that let in light (hope). In contrast, half of the square was windowless and dark (despair). The completed monument, which stood three stories in height and 30 feet in width, was positioned at the main entrance in front of Montclair High School. An entrance permitted students, faculty, and other members of the community to enter this architectural space. Having integrated artistic expression (the arts) with social consciousness (the humanities), the students had deepened and expanded their ability to think critically. They also had harnessed their creative energies tell an important story—one they felt had been overlooked.

Now it was time for the apprentices to take a two-hour guided tour of the Montclair Art Museum in order to apply their knowledge of art history and art criticism to the world at large. Their new lens was a greater appreciation of art. They were able to ask insightful questions, and to understand the answers to their questions. They were able to interact in a meaningful way with their tour guide. As they toured the permanent collection, they were comfortable discussing some of the works and their responses to these works. This was a successful culmination to all that had preceded it; the museum was the logical setting in which students could relate what they had learned in class to the world outside the classroom.

STAGE III: DISPLAYING THE WORK OF ART

Now it was time for apprentices to become masters. They needed to transition from learning about art to creating a work of art, from learning about monuments to building one. Students

brainstormed about people and events worthy of commemoration and to the reasons for their choices. Students had to consider the intended function(s) of the monument, the message or messages they wished to convey, the nature of their audience, and the most effective way to communicate their message(s) to that audience. In addition, students had to write a statement that propounded their rationale for the creation of the monument and to describe the artists and artistic movements that had influenced their thinking.

I met with each student individually to discuss how to best display their monument. This one-on-one interaction encouraged each student to further investigate prevailing attitudes towards race and to develop his/her own voice. The assignment served to promote constructive effort to improve race relations. The students had learned to cultivate multiple ways of seeing. They had considered American monuments from the perspectives of race, gender, and class. The subjects of their projects included, to name just a few: a) whether Nat Turner was villain or hero; b) whether the lynching of a white middle-class male can be justified; c) what exactly does it mean to be Puerto Rican; d) what is our society's ideal image of female beauty; and e) recognition of the significance of the actions of several African-American competitors during the 1968 Olympics. It was opening night. Everyone was dressed in his/her Sunday best. Instead of taking an ultimately meaningless multiple-choice test, the students were presenting their findings regarding *Race in America in the Twentieth Century* to more than 150 people. Instead of being confined to assigned seats, students were interacting, in animated fashion, with interested adults, fielding questions, excitedly describing their projects I had metamorphized. No longer teacher, I was, for now, their mentor and coach, and I looked to them to learn what *they* had learned about *Race in America in the Twentieth Century*. As they took an active role in this museum event, my students had moved beyond the linear Cartesian approach to observation and evaluation. They had learned immeasurably from their own lives, from the multiple perspectives of history and of art, and from the community. They had gained an understanding of the interrelationship of human consciousness and culture. And, most important, they had become, at least for this evening, proactive citizens. This is what can happen when both students and teachers are empowered.

CONCLUSION

Crit and Create: Race in America examined the use of an interdisciplinary approach to teaching and assessment, as well as guided student interaction with the greater community, to determine whether this method could empower students to achieve a higher order of thinking. A hermeneutic approach to curriculum design made it possible for students to become active participants in the learning process. Students were asked to examine aspects of racism in twentieth century, to study this cultural phenomenon through the eyes of an artist, and create an artwork (in this case, a monument) in response to what they had learned.

The interactions between students, art, history, and the greater community created an enriched learning environment. It provided numerous occasions for students to gain a deeper, broader understanding of the multidimensional world in which we live. It helped them gain a deeper, broader understanding of history and art and how both affect, directly and indirectly, their lives. Students were profoundly enriched by participatory democracy, contributing to the curriculum, applying their newly acquired knowledge and skills to artistic creation, developing their voices and using these voices to communicate with the community.

In response to the age-old question, what is the purpose of education, I would answer thus: a) encourage students to increase their social and cultural awareness; b) require them to apply multiple perspectives to learning; c) design and implement activities that encourage them to think critically; and d) create a nurturing environment that elicits critical questioning and inspires the hunger to always learn more. We must listen closely to our students. We must be genuinely interested in each of them. Their likes and dislikes. Their fears and aspirations. We must learn

what interests them and transform their interests into bridges that lead to further investigation and discussion. If we gather beautiful “patches” from each one of our students, we can create a beautiful “quilt” –one that warms all of them, leaving no one out in the cold!

FURTHER READING

- Adams, Maurianne Bell, Anne Lee and Griffin, Pat. (Ed). (1997). *Teaching for Diversity and Social Justice*. New York: Routledge.
- Berger, John (1977). *Ways of Seeing*. New York: Penguin.
- Feinberg, Jonathan (2000). *Art Since 1940 Strategies of Being*. New Jersey: Prentice Hall.
- Greene, Maxine (1995). *Releasing the Imagination*. San Francisco: Jossey-Bass Publishers.
- Kincheloe, Joe (2001). *Getting Beyond the Facts. Teaching Social Studies/Social Sciences in the Twenty-first Century*. New York: Peter Lang.
- Loewen, James (2000). Lies We Tell Ourselves. *World* (Magazine of the Unitarian Universalist Association).
- Rose, Karel and Kincheloe, Joe. (2004). *Art, Culture and Education*. New York: Peter Lang.

CHAPTER 96

Upside Down and Backwards: The State of the Soul in Educational Psychology

LEE GABAY

You need chaos in your soul to give birth to a dancing star.
—Nietzsche

While we all seem to have an idea about what “soul” is, there are many ways of conceiving of and describing it. As Madison suggests in *The Hermeneutics of Postmodernity*, knowledge is not a passive copying of reality but rather an active construction or constitution of it: each individual creatively interprets reality but there is no absolute truth or reality. Aristotle defined the soul as the active intellect or core essence of a being that was indeed part and not separate from the body. Similar to Aristotle, Buddhism teaches that all things are impermanent and constantly in a state of flux, and thus people are changing entities. Philosopher Anthony Quinton explores the ontological (being in the world) question of who or what a person is by conceiving of the soul as a series of mental states connected by continuity of character and memory that embody the essential constituent of personality. St. Augustine explored an introspective method where perception is intelligence combining with the soul. Alluding to this he wrote, “Noli foras ire, in te redi, in interiore homine habitat veritas” (Deep within man there dwells the truth).

Soul, which is the etymological basis of the word *psychology* (psyche, “soul” or “mind,” *ology*, “study of”), and by extension also of educational psychology, appears to be sadly missing from the rigorous domain of study that is its namesake. Psychology asks questions about the life of the mind and its unique perception of the world. As a discipline, educational psychology explores the mind’s cognitive processes with the aim of developing an individual’s capacities and potential to be successful in a specific society or culture. With its given theoretical positions and important influences on learning and instruction, educational psychology is serving a primary pedagogical function affecting both mental and external behaviors. However, to get a genuine understanding of the functions of teaching and learning that take place within formal school environments, soul is a necessary ingredient, providing a space for intellectual knowledge, reflection, imagination, memory, creation, and mystery. These are the qualities that characterize soul and are completely disregarded by the mechanistic tradition in educational psychology. This essay is a treatise on the importance of reincorporating soul into how we approach education.

Schools are gradually developing clear and rigorous academic standards for what every child should know and be able to do. In an increasingly competitive and industrialized global economy there is a legitimate need for a comprehensive effort in making sure students are given the opportunities to achieve locally, nationally, and worldwide. In developing both reliable and valuable assessments of individual growth, educational psychology needs to encompass and include a soulful critical epistemology that thoughtfully embraces issues of race, class, and gender. It is not an easy task to critique the paradigm of knowledge production within this culture while maintaining legitimacy and allow opportunities for many conceptual frameworks and relevance in curriculum. Educational psychology often defaults into unreflective crass positivism with its theoretical and epistemological assumptions that disregard specific lived experiences with significant cultural pluralism and empirical justice needed to build a world community. Unfortunately, there are central social questions that educational psychology entirely ignores. Do we want our students to be leaders or to be led? Are we building a nation of audience members or are we enculturating actors and activists? It is important as teachers, researchers, and educational psychologists to delve more thoroughly into critiquing our social and political circumstances. The role of educators is to look critically into forms of subjugation and oppression and include an ideological framework that is both multilogical and rigorous to see how these approaches are manifested in the classroom.

In examining educational psychology's curriculum programs and teaching methodologies, I am reminded of Hegel and his ideas against absolutes and his notions that the self is constructed through the interaction with others. As Hegel asserts, given the ever-changing nature of knowledge, it cannot be reproduced. By looking at cultural histories, practices, and meanings, poststructuralist critiques of epistemology focus on the characteristics and understanding the essence of knowledge. A positivistic epistemological stance is deeply connected to simplistic notions of totality with its concept of "universal truth" and assumption that there are fundamental characteristics and values which all humans and societies share. The positivistic approach to knowledge is the story of forms of domination, fear tactics, intellectual limitation, and Western patriarchy. Western society and educational psychology are based around the precepts of rationalism, reliability, and familiarity—all apparently crucial to notions of totality. Lost are the intrinsic elements of motivation, cultural difference, and individualism.

The yearning for concrete, verifiable knowledge in traditional epistemology, at the expense of that which is more instinctive or free flowing, seems an all too common pitfall. What is possible is narrowly defined and what is impossible is broadly stated. As a result, development of the creative spirit and innovative ideas, which should be the lifeblood of educational psychology, is eliminated. The quest for soul is blocked as a result. These beliefs speak volumes about our culture and the limited values we hold. It is indeed a tall order to work against the tendencies of this country. Epistemology seems to intimidate because it disrupts reality and a comfortable sense of the truth. To advance from our current narrow worldview we need to go to places of discomfort. Educational psychology in particular and its entrapped soulful essence cries to take advantage of new mediums, open up older ones, and continually dismantle realities. As teachers and students, we must all be rebels—indeed there is nothing conformist about the journey to know the soul and the self. Unfortunately, many teachers feel helpless, powerless, and are often complicit with directives spawned by traditional mechanist educational psychology because the problems are so great.

Jimi Hendrix is widely considered to be the most important and influential electric guitarist in the history of popular music. Jimi Hendrix played the guitar backwards and upside down. As a self-taught lefty he held the instrument that would soon redefine for a generation what guitar playing could be. In stark contrast to what can be a traditional positivistic approach to how to play the guitar when one is left-handed, his style emerged from his having improvised a manner of playing that best fit his physical needs and musical intuition. His ambition to nurture his gift,

free from constraints of the imposed dominant society, enabled a musical revolution. If Hendrix were a current music student, I doubt the cognitive perspectives that characterize educational psychology that ignore the numerous ways students spontaneously think, feel, act, and learn would enable him get away with literally turning the genre around. His unique way of expressing his genius would somehow been trampled with the needs of standards-driven testing procedures and strict methodology that would have prevented him from expressing his soul.

With Hendrix in mind, and the implications for pedagogy, educational psychology needs a healthy session of self-reflection. It seems frightening that so many of us need to relinquish our cultural and ethnic identities to gain success in academic endeavors. There are more victims than beneficiaries when linear forms of carefully tailored, unthreatening knowledge that fails to approach issues from many angles is provided. Educational psychology has developed a “formula” for learning, and the more this formula is used as the only “valid” means of teaching and learning, the more it becomes a form of intellectual redundancy. Schools, curricula, and pedagogical practices have to encourage the inclusion of new languages by welcoming different grammars and creating new music (so to speak) for souls forgotten or silenced by educational discipline and potentially by society at large. Does this mean that educators should encourage children to turn their musical instruments upside-down? Not necessarily. But should it exclude the possibility that a beautiful sound could emerge from an instrument held in an uncommon position? Absolutely not. Educational psychology appears to have misplaced a diverse and nuanced generation in a complex and often confusing society. There are egregious blind spots in our curricula. To begin to remedy the intellectual redundancy (the “anti-Hendrixness”) of our current educational system, we must rebel: Our goal should be to create imaginative alternative strategies that allow us as teachers and students to embark on the journey to uncover and come to know our soul.

In *Pedagogy and the Politics*, Henry Giroux asserts that we must question the kind of society in which we want to live and what kind of teachers and pedagogy can be informed and legitimated by a view of authority that takes democracy and citizenship seriously. In reframing these questions, we should search ourselves to discover what we want and how we want to get it. Giroux refers to teachers as “transformative intellectuals” and schools as “development spheres.” Thus, thinking, doing, producing, and implementing gives teaching the dialectical meaning that such a vision requires, or in the Jimi Hendrix sense, turning the educational psychology genre upside-down and backwards. To become a transformative intellectual, a phenomenological hermeneutic universal of soul is required. Soul seems to resonate, weaving itself through postformal educational psychological questions suggested by Kincheloe in *The Post-Formal Reader* of how we should deal with the meaninglessness and sociopsychological pathology that affects all of us individually and institutionally with the intention of developing a more holistic psyche expression and production or transmission of knowledge.

Soul is part spirit, desires, and self-esteem. Soul has rage, passion, grace, elegance, sensuality, sexuality, anger, longing, loneliness, confusion, transcendence, and spirituality. G.B. Madison elegantly broaches this subject in *The Hermeneutics of Postmodernity* by stating that there does indeed exist a “soul” and a “body,” but the body is a human body only by being the very foundation of the soul, the visible expression of a “spiritual” life.

Soul allows us to approach problems in a new way by adding an element of creativity. Creativity is transformative knowledge through its quality of seeing things in a new way, or updating an older concept, and perceiving connections between the unconnected. Its vision could be dynamic, stimulating, chaotic, or even wrong, but at least it brings new life energy and takes risks by expanding individuals’ and communities’ worldviews. A unique aspect of creativity is that it is an all-inclusive domain—rich or poor, healthy or sick, creativity is an infinite commodity where all can take as much as one wants to ultimately produce or enact new epistemological paradigms. It is not enough, however, to create a culture that encourages creative thinking. Educational psychology also must develop mechanisms that channel creative energy and give

our students a sense that their ideas are being listened to by both encouraging and rewarding this type of thinking. Pedagogy needs to put in place a system that can evaluate, act on, build upon if necessary, challenge, and handle even the wildest creative ideas.

A natural by-product of spiritually and soul is celebration. Most religious denominations include music and dance and celebration in their own dogmas. They take the mysteries of life and celebrate the journey with much fanfare. Likewise, transformative knowledge is a celebration: it has the potential to create universes through its joyous reconnection to the soul and spirit by facilitating the restoration of unity and an element of respect.

The restoration of soul to pedagogy will require more than just a change in the outlook toward creativity and celebration. Irrelevant curricula make good teachers bad; for teacher as well as student, agency is essential. Both need to engage in determining what is worth learning—not merely to survive or nurture dependence on the existing system—but to become independent of it. Offering a curriculum that is focused upon breaking the built-in structural antagonisms, thus changing the hegemonic dynamic while maintaining legitimacy, is something that Joe Kincheloe and Ladislaus Semali richly explore in *What Is Indigenous Knowledge?* The pursuit of multilogical perspectives that these authors describe is particularly useful for discovering one's soul. I have drawn upon multilogical perspectives not only to inform my own teaching and learning, but also to consider myself from the dimensions of critical complexity, agency, poststructuralism, essentialism, phenomenology, ideology, positivism, and constructivism. Ultimately, in relying upon frameworks designed to rigorously question and reexamine all of my assumptions, I have come into much closer contact with my soul.

For what profit is it to a man if he gains the whole world, and loses his own soul? (Matthew 16:26).

Education and schooling are distinct and all too often not interchangeable. Education begins at birth and continues throughout life. Educational psychology, a subdiscipline of psychology dedicated to the positivistic study of cognitive processes and behavior, provides the foundation for the formal learning environment of schools. The primary purpose of schooling is to assist the individual to better develop his or her full potential as well as the knowledge and skills to interact with the environment in a successful manner. Teaching is not *giving* knowledge or skills to students; teaching is the process of *providing opportunities* to produce their own knowledges. Certainly schools need to discover/allow for new ways to learn. There's nothing more radical, there's nothing more revolutionary than learning what one wants to, and not what one ought to. Cognitive theories can never accurately describe how intelligence is expressed. Each situation is specific and idiosyncratic. The search for the soul has the potential of liberating teachers and students into a new paradigm to seek new literacies and personal ones at that. In *Pedagogy and the Politics of Hope*, Giroux explores the valuable link between what a student learns in the classroom and the environment in which she functions outside of school, stating that teachers need to understand how experiences produced in the various domains and layers of everyday life give rise to the different "voices" students use to give meaning to their own worlds. Whether it is hip-hop, free verse, slam, or any other yet-unlabelled form of verbal self-expression, the new poetics will continue to come and old ones will be reinvigorated. These languages must reflect the social and cultural life in the classroom. In this structure for postmodern learning, students need to be asked how they interpret the world and be encouraged to use their power in both school and society. Similar to batteries and milk, ideas get outdated; likewise, curricula need to have freshness dates inscribed or, like The Constitution, provide a built-in clause for revision or openness for interpretation. New curricula are like a mouthwash for the soul: they may provide minty freshness to the way people feel about the world.

In reconsidering the kinds of curricula we implement in our instruction, we need always to return to the question of whose interest is served, and how we can actively engage all of our students' talents, imagination, and skills into the learning process. What matters to the students should be a starting point for our discussion, and one that needs to take place with the students present. The idea of a national mandate to teach "appreciation" of specific subjugated groups (African Americans, women, Latinos, etc.) in a particular month irrespective of whatever else may be going on in the world or in the lived experience of students holds all the elements for utter lack of student interest and, worse, mockery. Positivist curricula simplify serious issues, producing chewable pills that force-feed subject matter to students. In the end, these efforts are undermined by designating which days to think about these topics. Districts have scheduled ceremonies to promote ideas that teachers and students may or may not find relevant or interesting or in any sense worthwhile. Therefore, again, the question of whose interest the curriculum serves arises. Yet if we teachers fail to teach the proscribed curricula according to mandate we are considered politically incorrect, un-American, lazy, or just plain wrong. As such, fear is what motivates so many into contrition. It is mostly "shoulds" and fright that sustain such arcane notions of pedagogy. Picture someone standing in front of a room, reading about a bunch of people whom they should know about. E.D. Hirsch and his cultural literacy crew would be the only ones applauding. In many cases history should be on walls, monuments, and in pictures, not in mandated instruction. Where is the soul in that?

Bob Dylan stated that the most powerful person in most situations is the one standing in front of an audience with nothing more than a guitar and a microphone because we necessarily get to hear the voice and the speaker. Not what they should be, but rather what they are—not playing a persona but actually living the material. A man standing behind a pulpit can start wars, bring peace, instill love, and make us think. Emotion, challenges, and thought should be welcome in student assemblies otherwise I would suggest calling Assembly Time "Group Regurgitative Teaching and Learning that Amounts to Nothing Save for Walking Book Reports."

In *Researching Lived Experience*, Van Manen acknowledges that people change and his understanding of human science rejects notions of positivism. Lived experiences connect us to the lived world. A transformative intellectual makes it real for them as hermeneutics is a dialectical and phenomenology is always autobiographical by necessity because we are socially infinite. By choosing our lenses and placing our emphasis this leads us to things that matter to us or, in other words, to the things of the soul.

Educational psychology should allow for critical faculties to divide differences into different learning categories and sort through the contradictions or our mandates. All too often I see a teacher annoyed by the distance from his students, matched only by a thirst for political instruction that allow students to see the world their way. Souls need to be emancipated, in students' work and their classes: as a teacher I need to listen to the singing of different but unified songs from my students.

The ability to liberate teachers and students into new paradigms is my working framework of the new and improved educational psychology. The unique lenses that learners bring from experience that informs their epistemology is rich and full and needs to shine in all pedagogical structures. The ability to ask questions, challenge, explore, and discuss ideas is essential to any educational pursuit. Education is not just information, it is critical thinking, and it is soul.

Soul is a person's a gift, and for numerous reasons we don't give it away too often because people might not place upon it the right value or, in many educational settings, value it at all. I know many students whose genius needs to be exposed but are reluctant to give themselves (souls) away, justifiably fearing that if they are too open there's a cost to their personal life and a cost to the class as well.

The methodology of critical complexity is crucial in the study of educational psychology. John Dewey challenged us a century ago to engage the individual in pursuing education for

democracy and democracy in education. Dewey and many others who followed were more interested in the spiritual conflict that preceded them and the mental conflict that followed. Soul invites this journey into a space of fever, where knowledge is exposed and revealed. Soul furthers directions that investigate what it means to feel and move. The learning/creative process is unpredictable, and noisy and unsure of where it is going. This is revolt. A soul can change everything—socioeducationally and politically. Within each individual, you have a universe—voice and body—that yearns to demonstrate what it is capable of experiencing and accomplishing. Schools need to adopt a humble educational psychology that falls to earth a bit and restores divinity back to our students. Each classroom needs to showcase these voices whose ways of knowing don't necessarily translate into the conceptual apparatus. Amplifying them bigger than the buildings themselves, where real tears are cried, individuals' rhythm and music sing out their hearts, turning classroom into opera. If we allow this to happen, pragmatism will no longer be immune, nor could it resist new possibilities.

Pedagogy needs to embrace what is relevant. We've got to make great ideas that challenge, and thrive on the exhilaration of these challenges. As we change shape, so does the world. Once something is experienced it is difficult to return to a prior state. Thus, soul is a very strange. It can make you happy, and it can make you sad. It's a weird wave to ride. Situated in the middle of that wave, with not much light at the end of the tunnel, is frightening uncharted waters, which don't necessarily portend rough seas. What panics me is educational psychology's obsession with positivism, with caricature—the left, the right, the progressives, the reactionary. Taking people on rumor. To further the aims and philosophy of pedagogy, the industry needs to find the light in our students, because that will help our cause of breaking down the differences between having what you want and doing what you want. As educators we need to provide the most precious thing to our students, and that is called hope.

These are complex problems and demand complex solutions. Educational psychology too often amounts to total appeasement: you can't satisfy every uncertainty, so it adds up to being steamrolled by positivism. Every problem cannot be solved at the negotiating table. At any rate I think that bringing back the emancipatory element of soul to educational psychology is an idea that is a simple situation of right or wrong

We seem to be very afraid of what we don't understand. When we can't understand something we turn to our assumptions. This is usually when we begin to reduce and simplify complex ideas, situations, and people. For instance, it is easier to say a student is "bad." It is more daunting when they are complex and individuals, not easily defined. I have a student, Kiana, who is a fourteen-year-old misanthrope. She is moody, nasty, a poor speller, and hated by the entire staff. Her mouth can be just that lethal. She is also very charming and a great dancer. Truth be told, it would be almost easier to have no hope for Kiana than to deal with her heartbreaks and infrequent successes. It takes endurance and maybe some courage to deal with her uncertainties. I can't say that I enjoy working with her nor that I really understand her, but I do know that she is more than just "bad."

There are events that have happened in this amazingly complex world that sometimes are mean and we crave reasons and answers when bad things happen to good people. If something gives us comfort, then it is good. We all deserve it. We want to believe in something that is not so bad. I certainly am not immune to the temptation of positivism. I am sure that there is an element of reductionism in my way of thinking, particularly when I think about the misfortunes that I've seen and experienced. It is clear that some things are difficult to grasp and the desire for answers is powerful. Many of us as individuals turn to religion or spirituality to find solace. However, as a culture we seem to instinctively draw on a monolithic epistemology.

Correlation is not causation; thus as a field of study educational psychology's epistemology must not be positivist in its approach as ideas cannot be reduced or decontextualized to controlled

variables. The standards and testing that are common in today's educational practices wants cognitive development to run quick, cheap, and efficient, but these things have no business in my version of knowledge production, as the ramifications can be dangerous.

We must therefore embrace the whole of society. Many thinkers and writers are disavowing spiritually diverse aspects of learning. The self-justifying dogmatic epistemologies currently in use neglect the others modes of thinking and learning, and we cannot lose sight of the human factor. These positivistic powers seem to be allergic to abstraction. They want to tell instead of being shown, they want to dramatize rather than debate, and their arguments are constructed as absolutes.

Poststructuralism allows us to begin to address complex questions. Using the tools that poststructuralism provides has the potential for granting access to the soul. A poststructuralist acts to both comfort the afflicted and, more important, afflict the comfortable, thereby looking through a framework that is smart, stimulating, and fair in terms of power and justice. Kincheloe supports this assertion in *Critical Pedagogy* when he writes that poststructuralism rejects any form of universal conceptions of the world. In regard to pedagogy, this includes linguistic values and high forms of smartness. A poststructuralist's job is to bring in new tools and work to avoid bourgeois, ethnocentric, and misogynist practices.

The purpose of a poststructuralist discourse is for teachers, researchers, students, and citizens of the globe to generate discussion of critical issues that have been ignored, destroyed, or silenced. This must be done with rigorous methods and accountability and include many interpretations of what knowledge is. Looking at and trying to understand the forces that shape and often limits one's control is the very root of critical theory.

Perhaps the most useful poststructural approach is phenomenology. Phenomenologists realize that a person is always interpreting through his own personal lens. What makes phenomenology unique is that every instance has the potential to be phenomenological; it depends upon your awareness and perspective of this aspect of human lived experience. The contextual experience or "lived situated" is the quintessence of what it means to be human and to conduct research on human beings. One cannot look at phenomenology without context. It is therefore always autobiographical as well as by necessity a reflection of things. As Van Manen has stated in *Researching Lived Experience*, phenomenological research consist of reflectively bringing into nearness that which tend to be obscure, that which tend to evade the intelligibility of our natural attitude of everyday life.

The value of phenomenology lies in getting us to reflect upon our experiences in the richness of experience at the micro, meso, and macro level. Although Van Manen does ignore the issue of power in his take as there is no sociohistorical macro-analysis of forces that contribute to human suffering. The nature of true pedagogy is reflective. The use of phenomenology in pedagogy is certainly reflective in revealing our own locations in the web of reality.

The enactivist approach is also a useful tool in our search for the soul. From an enactivist standpoint, there is no way to prepare for or plan any human interaction. The moment-to-moment interpretation, in which we improvise our response to one another, offers the potential to define our own genius or limitations.

The description of the above approaches is not to suggest that these are the only approaches to reclaiming soul in our teaching, learning, and living. Alternative epistemological approaches do, however, provide a more respectful and inclusive means of thinking about the kinds of curricula we hope to teach that will help our students reengage spiritually with learning.

The future is unwritten (The Clash).

As educators we must ask ourselves what it is that we want to be remembered for. Do we hope to just identify and articulate the problems of the world (alone, a worthy task) or will we aid in

fixing them? Can we take extreme actions and drastic measures to challenge things and become emissaries of pedagogy? How far will we go? In the end, where is the soul? Where did it go? Why should we care? Should we care at all?

These are good questions. Unfortunately I don't have the answers. In *The Hermeneutics of Postmodernity*, Madison states that it is the transintentional element in a work that makes it a classic, a living classic, that is, a work which is capable of having a life of its own. Therefore the concept of imagination is a way of understanding how the world is constructed. It also holds within it a certain promise for the future. To achieve this it would help to have great hope for yourself, family, friends, and the world. Hope and creativity are the embodiment of promise. This is the ingredient for imagination. The quest for educational psychology is to awaken the spiritual in our hearts, desires, and feelings. Ideas sometimes happen by accident, but they don't survive by accident. It takes will, intent, a sense of shared purpose and a tolerance for differences and even fallibility, both others' and our own. This helps to even and perhaps beat the odds by continuing to do transcendent work and remain relevant, energetic, and powerful.

The United States is a cultural canyon of red and blue unwilling or unable to bridge the whiteness that created the divide. We have always been a nation of interdependent and interconnected social challenges. Time and space are always changing and knowledge is more than just space and time; it is boundless, endless, and infinite. People participate in creating the universe and therefore should not be told what to think.

What is true for you is not necessarily correct for me. However it is our responsibility to know ourselves, as we are each living expressions of truth. It is my hope that we are all longing for respect and hunger for beauty. It is also necessary to have the courage to get dirty and embrace this mess, as it is equally vital to live in spaces of danger and risk. Self-doubt makes us fragile and real. This discomfort can help us get where we need to go.

People are as transformative as we are mercurial. Surely there is always an element of reductionism in any research or way of thinking, so as an educator I am mindful to be humble and self-critical in relationship to both my living and working world. I must also tell myself daily that I cannot underestimate the strongest forces of the universe: the voice and soul.

FURTHER READING

- Giroux, H. (1997). *Pedagogy and the Politics of Hope*. Boulder: Westview Press.
- Kincheloe, J. L. (1999). *The Post-Formal Reader: Cognition and Education*, eds. S. Steinberg, J. Kincheloe, and P. Hinchey (pp. 4–54). New York: Falmer Press.
- . (2001). *Getting Beyond the Facts*. New York: Peter Lang.
- . (2004). *Critical Pedagogy Primer*. New York: Peter Lang.
- . (2005). *Critical Constructivism Primer*. New York: Peter Lang.
- Madison, G. B. (1988). *The Hermeneutics of Postmodernity: Figures and Themes*. Bloomington: Indiana University Press.
- Semali, L., and Kincheloe, J. (Eds.). (1999). *What Is Indigenous Knowledge?* New York: Falmer Press.
- Quinton, A. "The Soul," in *Personal Identity*. *Journal of Philosophy*, 59 (15), 393–409.
- Van Manen, M. (1990). *Researching Lived Experience*. Albany: SUNY Press.

CHAPTER 97

Critical Constructivism and Postformalism: New Ways of Thinking and Being

JOE L. KINCHELOE

For many years I have been concerned in my work with the intersection of the social and the cognitive. As I lay out in the introduction to this encyclopedia, at this intersection rests the origins of *postformalism* and a critical cognitive theory. The understanding of constructivism and critical constructivism helps us make sense of the educational/psychological world that surrounds us. In the twenty-first century the idea that teachers need to understand the complexity of the educational world is almost a radical proposition in and of itself—many educational reformers see no need for teachers to be rigorous scholars. Indeed, the No Child Left Behind reforms demand disempowered, low-cognitive-functioning teachers who do what they're told and often read predesigned scripts to their students. Ray Horn and I assert in *Educational Psychology: An Encyclopedia* that such actions are insulting to the teaching profession and are designed ultimately to destroy the concept of public education itself. The study of constructivism and critical constructivism induces us to ask important questions. What is the purpose of schools? How do we organize them for maximum learning and higher orders of cognitive activity? What is the curriculum and how do we conceptualize it? How do we understand the relationship connecting mind, school, and society?

THE IMPORTANCE OF THEORY IN CRITICAL CONSTRUCTIVISM: GROUNDING A TRANSGRESSIVE EDUCATIONAL PSYCHOLOGY

Such psychological and pedagogical questions cannot be answered thoughtfully without the help of diverse theoretical knowledges. Please note that theory is defined here not as that which indicates the proper way to teach or to learn but as a body of understandings that help us make sense of education and cognition, their social and political implications, and how we as educators fit into this complex mix. In the social theoretical domain, for example, we might ask how the existence of socioeconomic inequality along the lines of race, class, gender, sexuality, religion, and language influence our answers to these questions of educational psychology. What happens to our answers when we bring an understanding of power to our analytical table? What is the effect of social theoretical insight on the subjectivity and context dependency of knowledge production? Might, for example, the knowledge emerging here help shape the way we answer

questions about the curriculum? In this context we begin to understand the forces that construct knowledge and mind. This is central to understanding constructivism and critical constructivism and their relationship to a transgressive educational psychology.

Thus, the insights of critical constructivism change the way we approach cognitive and educational activities. In transmission-based conceptions of teaching there is no reason to study the learner. Teachers in such pedagogies are given the curriculum to teach. They simply pass designated knowledge along to students and then test them to see how much of it they remember. In a critical constructivist school the identities and cognitive dimensions of students matter. Children and young people enter the schoolhouse with extant worldviews, constructed by their experiences and the social contexts in which they have lived. These perspectives actively shape school experiences, thinking, and learning. Indeed, they help shape all the interpretations students make about the world around them. If teachers are serious about teaching such students, critical constructivists contend, they must gain a sense of these prior perspectives and how they shape students' relationship to schooling.

Any learning must be integrated with these prior perspectives. It is a naïve view of knowledge and cognition that believes that transmitted knowledge deposited in the mind can be later taken out unchanged and uninterpreted. Such knowledges merge in complicated ways to shape idiosyncratic perspectives. Students, like all human beings, see the world from the perspective of previous experiences and knowledges. Critical constructivists study these knowledges, these interactions, and their effects. One of the reasons that I wrote *Teachers as Researchers: Qualitative Paths to Empowerment* was because of the need of teachers to come up with systematic ways to study and understand the construction of their students' consciousness and its effect on their life in schools. Without such knowledge, teachers can easily retreat into a transmission model of pedagogy and a filing-cabinet view of the mind.

Critical constructivists argue that traditional forms of reason and theory-as-validated-truth often contribute little to answering the most basic questions of pedagogy and cognition. How does scientific explanation help us answer the question, what is the purpose of schools? Social theory viewed in relation to pedagogical and cognitive theories in this context profoundly enhances the ability of educators to evaluate the worth of particular educational purposes, articulations of curriculum, beliefs about sophisticated thinking, and evaluation practices. These theoretical modes help teachers and students escape the well-regulated administered world that unbridled rationalism and scientism work to construct. Critical constructivists use these theoretical tools to sidestep new models of social control that put a chokehold on individual and social freedom, in the process decimating teacher professionalism. Concurrently, they use such tools to evade the stifling effects of mechanistic models of the mind.

Whether we know it or not, all of us are theorists in that we develop and hold on to particular views of how things work. Such views insidiously shape our action as lovers, parents, citizens, students, and teachers. Critical constructivists understand this reality and argue that the social, cognitive, educational theories we hold must be consciously addressed. Such conscious awareness allows us to reflect on our theories, explore their origins in our lives, change them when needed, and consider how they may have unconsciously shaped our teaching, thinking, and our actions in the world in general. Thus, we come to better understand—as great educators always should—the ways the world operates and how that operation shapes education, definitions of intelligence, educational policy, the curriculum, the lives of teachers and students, and who succeeds and who doesn't in schooling. Critical constructivists are painfully aware that many forces in the twenty-first century are at work to remove such insights from the realm of teaching. Such understandings are more important than ever in the bizarre dominant-power-driven educational cosmos of the twenty-first century.

While constructivism and critical constructivism are theories of learning, I see them as this and much more. Constructivism/critical constructivism involves theoretical work in education,

epistemology, cognition, and *ontology*. In my delineation of a critical constructivist postformalism I argue for a unified theory where all of these dimensions fit together and are synergistic in their interrelationship. For example, it is hard to pursue a critical constructivist pedagogy without the grounding of critical constructivist epistemological and postformalist cognitive theories. In this unified context, critical constructivism becomes a *Weltanschauung*, a worldview that creates meaning on the nature of human existence. In this way critical constructivism comes to exert more influence in more domains than it has at this juncture.

CRITICAL CONSTRUCTIVISM AS EPISTEMOLOGY: PHILOSOPHICALLY GROUNDING A TRANSGRESSIVE EDUCATIONAL PSYCHOLOGY

Modernist philosophy has been trapped in an epistemology that locates truth in external reality. Thinking and cognition in this context has often become little more than an effort to accurately reflect this reality. Indeed, Cartesian–Newtonian–Baconian thought is seen as simply an inner process conducted in the minds of autonomous individuals. The thoughts, moods, and sensations of these individuals are separate from their histories and social contexts. If thinking is to be seen as a mirroring of external events, the need for a theory of critical constructivism and an understanding of the shaping of consciousness is irrelevant. In this epistemological framework the ability to conceptualize has little to do with culture, power, or discourse or the tacit understandings unconsciously shaped by them. From the Cartesian perspective, the curriculum becomes merely a body of knowledge to be transferred to the minds of students. More critical observers may contend that this is a naïve view, but the naivete is recognizable only if knowledge formation is understood as a complex and ambiguous social activity. Mind in the critical constructivist/postformalist framework is more than a repository of signifieds, a mirror of nature. A critical constructivist epistemology assumes that the mind creates rather than reflects, and the nature of this creation cannot be separated from the surrounding social world.

Knowledge emerges neither from subjects nor from objects but from a dialectical relationship between the knower (subject) and the known (object). Drawing from Piaget, this dialectical relationship is represented by the assimilation–accommodation dyad. Employing the conceptualizations, critical constructivist teachers conceive knowledge as culturally produced and recognize the need to construct their own criteria for evaluating its quality. This constructivist sense-making process is a means by which teachers can explain and introduce students to the social and physical world and help them build for themselves an epistemological infrastructure for interpreting the phenomena they confront in the world. Critical constructivists realize that because of the social construction of knowledge, their interpretations and infrastructures are a part of the cosmos but they are not in the cosmos. As a result, when the recognition of the need arises we can always modify our viewpoints.

Thus, the Cartesian–Newtonian–Baconian conception of truth and certainty is rejected by the epistemology of critical constructivism. We can never provide a final construction of the world in a true sense, apart from ourselves and our lives. As living parts of the world we are trying to figure out, and we can only approach it from the existing cognitive infrastructures that shape our consciousness. Limited in this way, we can see only what our mind allows. With this restriction we are free to construct the world any way we desire. This is not to say, however, that the outcomes of our construction will not be confused and they could even be destructive. We may, for example, adopt a worldview such as the medieval Europeans'. In this view of the world, sanitation was irrelevant and thousands of individuals died as a result of the Black Plague. Obviously, this was not an adequate construction of the nature of the world. This recognition confronts us with calls to develop a way of determining valid constructions of reality.

All that critical constructivists can do in response to such a need is to lay out some guiding principles for judging which constructions are more adequate and which less adequate. The constructions

- are consistent with a critical ethics of difference—a theoretical orientation that accounts for cultural difference, the complexity of everyday life, and the demands of a rigorous democratic education. Grounded on a detailed awareness of a bricolage of indigenous knowledges, African American epistemologies, subjugated knowledges, the moral insights of liberation theology, our critical ethics of difference seeks more complex approaches to understanding the relationship between self and world. How do students and teachers come to construct their views of reality, critical constructivists ask in this ethical context. Guided by the critical ethics of difference, educators come to understand the social construction of world and self. In this context they focus on the forces that shape individual perspectives. Why are some constructions of reality and moral action embraced and officially legitimated by the dominant culture while others are repressed? Asking such questions and aided by a rigorous understanding of knowledge production, critical educators grasp how schools often identify, sometimes unconsciously, conceptions of what it means to be educated in the terms of upper-middle-class white culture. Expressions of working-class or nonwhite culture may be viewed as uneducated and ethically inferior. Drawing upon a variety of discourses, critical constructivists separate conventionality from just, democratic, egalitarian ethical behavior.
- resonate with emancipatory goals—those who seek emancipation attempt to gain the power to control their own lives in solidarity with a justice-oriented community. Here critical constructivists attempts to expose the forces that prevent individuals and groups from shaping the decisions that crucially affect their lives. In this way greater degrees of autonomy and human agency can be achieved. In the first decade of the twenty-first century we are cautious in our use of the term *emancipation* because, as many critics have pointed out, no one is ever completely emancipated from the sociopolitical context that has produced him or her. Concurrently, many have used the term *emancipation* to signal the freedom an abstract individual gains by gaining access to Western reason—that is, becoming reasonable. The critical constructivist use of emancipation in an evolving criticality rejects any use of the term in this context. In addition, many have rightly questioned the arrogance that may accompany efforts to emancipate “others.” These are important caveats and must be carefully taken into account by critical educational psychologists. Thus, as critical constructivists who search for those forces that insidiously shape who we are, we respect those who reach different conclusions in their personal journeys. Nonetheless, critical theorists consider the effort to understand dominant power and its effects on individuals to be vitally important information needed in the effort to construct a vibrant and democratic society and to reconceptualize the field of educational psychology.
- are intellectually rigorous and internally consistent—does the construction in question provide a richer insight into the phenomenon than did other constructions? Is the construction thorough in answering all the inquiries it raises about the phenomenon? Is it sensitive to the complexity in which all phenomena are embedded? Does it expand our consciousness in relation to the phenomenon? If the individual constructing a body of knowledge can answer these questions in the affirmative, she or he is on the way to a rigorous and consistent construction.
- avoid reductionism—the rationalistic and reductionistic quest for order refuses in its arrogance to listen to the cacophony of lived experience, the coexistence of diverse meanings and interpretations. The concept of understanding in the complex world viewed by critical constructivists is unpredictable. Much to the consternation of mechanistic educational psychologists there exists no final, transhistorical, nonideological meaning that psychologists strive to achieve. As such critical interpretist, postformal educational psychologists create rather than find meaning in enacted reality, they explore alternate meanings offered by others in similar circumstances. If this wasn’t enough, they work to account for historical and social contingencies that always operate to undermine the universal pronouncement of the meaning of a particular phenomenon. When researchers fail to discern the unique ways that historical and social context make for special circumstances, they often provide a reductionistic form of knowledge that impoverishes our understanding of everything connected to it. The monological mechanistic quest for order is grounded on the Cartesian belief that all phenomena should be broken down into their constituent parts to facilitate

inquiry. The analysis of the world in this context becomes fragmented and disconnected. Everything is studied separately for the purposes of rigor. The goal of integrating knowledges from diverse domains and understanding the interconnections shaping, for example, the biological and the cognitive is irrelevant in the paradigm of order and fragmentation. The meaning that comes from interrelationship is lost and questions concerning the purpose of research and its insight into the human condition are put aside in an orgy of correlation and triangulated description. Information is sterilized and insight into what may be worth exploring is abandoned. Ways of making use of particular knowledge are viewed as irrelevant and creative engagement with conceptual insights is characterized as frivolous. Empirical knowledge in the quest for order is an end in itself. Once it has been validated it needs no further investigation or interpretation. While empirical research is obviously necessary, its process of production constitutes only one step of a larger and more rigorous process of inquiry. Critical constructivism subverts the finality of the empirical act of knowledge production in its support of a transgressive educational psychology.

POWER SURGE: SELF, COGNITION, AND TEACHING

The Cartesian–Newtonian–Baconian view of self cannot stand up to the epistemological assault of critical constructivism and postformalism. Taking the concept of the inseparability of the knower and the known one step further, postformal educational psychology examines the socially constructed dimensions of language and discursive practices. French social theorist Michel Foucault observed that discourse referred to a body of relations and structures ground in power dynamics that covertly shape our perspectives and insidiously mold our constructions. Russian theorist Mikhail Bakhtin complemented Foucault’s observations, maintaining that power functions in a way that solidifies discourses, in the process erasing the presence of unorthodox or marginal voices. After Foucault and Bakhtin the notion of the autonomous self free from the “contamination” of the social is dead; as language-using organisms we cannot escape the effect of the influence of discursive practices and the power that accompanies it.

In this context, postformalists engage in the excitement of attaining new levels of consciousness and “ways of being.” In a critical constructivist context, individuals who gain such an awareness understand how and why their political opinions, religious beliefs, gender role, racial positions, or sexual orientation have been shaped by dominant perspectives. What I have called a critical ontological vision helps us in the effort to gain new understandings and insights into who we can become. Such a vision helps us move beyond our present state of being—our ontological selves—as we discern the forces that have made us that way. The line between knowledge production and being is blurred, as the epistemological and the ontological converge around questions of identity. As postformalists employ the ontological vision we ask questions about ethics, morality, politics, emotion, and gut feelings, seeking not precise steps to reshape our subjectivity but a framework of principles with which we can negotiate. Thus, we join the quest for new, expanded, more just, and interconnected ways of being human—a central feature of the quest of postformalism to become more than we presently are.

A key dimension of a critical ontology involves freeing ourselves from the machine metaphors of Cartesianism—from mechanistic psychology. Such an ontological stance recognizes the reductionism of viewing the universe as a well-oiled machine and the human mind as a computer. Such ways of being subvert an appreciation of the amazing life force that inhabits both the universe and human beings. This machine cosmology has positioned human beings as living in a dead world, a lifeless universe. Ontologically, this Cartesianism has separated individuals from their inanimate surroundings, undermining any organic interconnection of the person to the cosmos. The life-giving complexity of the inseparability of humans and the world has been lost and psychological studies of people abstracted—removed from context. Such a removal has

exerted disastrous ontological effects. Human beings, in a sense, lost their belongingness to both the world and to other people around them.

Armed with such ontological understandings and grounded epistemologically on critical constructivism, postformal teachers direct student attention to the study of discursive and other power formations in the classroom. They are empowered to point out specific examples of power-shaping discursive formats and the ways that power subsequently works to shape consciousness. For example, consider a postformal history teacher who exposes students to the patriarchal construction of American history textbooks and school district curriculum guides. The teacher uncovers an approach to teaching American history that revolves around the principles of expansionism, conquest, and progress. The westward movement of America is a central organizing theme that serves to focus the gaze of the student on the “impediments to civilization,” for example, Natives, “unusable” land, other nations such as Mexico and England, etc. In this context student consciousness is constructed to ignore the ethical dimensions of empire building, to identify those different from us as the “other,” as inferior enemies. A nationalistic consciousness is constructed that not only exonerates the sins of the past but also tends to ignore national transgressions of the present.

Another term for the Cartesian mode of analytical reasoning is *reductionism*. This method has formed the basis for Piagetian formalism and the forms of analysis that have dominated education. Cartesian reductionism asserts that all aspects of complex phenomena can best be appreciated by reducing them to their constituent parts and then piecing these elements together according to causal laws. This reductionism coincided with Rene Descartes’ separation of the mind and matter/body. Known as the Cartesian dualism, human experience was split into two different spheres: (1) the “in here”—an internal world of sensation and (2) the “out there”—an objective world composed of natural phenomena, for example, IQ. Drawing on this dualism, scientists asserted that the laws of physical and social systems could be uncovered objectively. The systems operated apart from the “in here” world of human perception, with no connection to the act of perceiving.

Forever separate, the internal world and the natural world could never be shown to be a form of one another. Critical constructivism and postformalism reject this Cartesian dualistic epistemology and posit an alternative to the Western traditions of realism and rationalism. Briefly, realism presumes a singular, stable, external reality that can be perceived by one’s senses. Rationalism argues that thought is superior to sense and is most important in shaping experience. Critical constructivism contends that reality, contrary to the arguments made by proponents of realism, is not external and unchanging. What we know as reality cannot be separated to the nature of the perceiver. Change the perceiver, her background, and location in the web of reality and we get a very different picture of reality. In contrast to rationalism, critical constructivism maintains that human thought cannot be meaningfully separated from human feeling and actions. Knowledge, critical constructivists assert, is constrained by the structure and function of the mind and can thus be known only indirectly. The objectivism, the separation of the knower and the known implicit in the Cartesian tradition, denies the spatial and temporal location of the knower in the world and thus results in the estrangement of human beings from the cosmos.

Postformalists pick up on these epistemological insights, arguing that traditional social sciences promote a form of cognition suitable for an alienated age and an alienated people. The dominant expressions of the social sciences and educational psychology serve to adjust students to sociocultural alienation rather than helping them overcome it. Descartes argued that knowledge should be empirical, mathematical, and certain, and the orientation toward research that emerged worked to exploit the forces of nature in a way that destroyed the landscape of the earth. As a result of this objectivist epistemology, we now inhabit a human-made, artificial environment. Emerging from this tradition was a psychology untroubled by the manipulation of human beings and an

educational system that utilized psychology to mold students in a way that would foster efficiency and economic productivity. Such goals were typically pursued at the expense of creativity, social justice, and democratic impulses.

Thinking and learning, from the perspective of the reductionists, are developed by following specific procedures, specific measurable psychological processes. The acts are operationally defined and then broken into discrete pieces—we first learn the symbols of chemistry, the place of the elements on the periodic chart, the process of balancing chemical equations, the procedure for conducting a chemical experiment. It would be disorderly and “scientifically inappropriate” to think in terms of where chemistry is used in our everyday lives before these basics were learned, the reductionists argue. Reductionists fragment data; teach to standardized tests; develop content standards; standardize the curriculum; and utilize basals, worksheets, and sequential methods. Such reductionist methods facilitate the development of materials and the training of teachers. It is far easier to write a workbook based on a fragmented form of knowledge with a list here and an objective multiple choice test there than it is to create materials that help connect individual student experience to particular forms of disciplinary and transdisciplinary knowledge. Indeed, it is far easier to train a teacher to follow specific, predefined, never-changing steps than it is to encourage a reflective stance concerning the points of interaction connecting student experience, critical concerns with justice and equality, and diverse forms of information.

Critical constructivists believe that in teaching and thinking the whole is greater than the sum of the individual parts. They reject reductionist task analysis procedures derived from scope and sequence charts. Rejecting definitions of intelligence grounded upon a quantitative measurement of how many facts and associations an individual has accumulated, critical constructivists and postformalists maintain that there are as many paths to sophisticated thinking as there are sophisticated thinkers. The best way to achieve higher orders of cognition is to research particular students, observing the social context from which they emerge and the particular ways they undertake the search for meaning. In this process, postformal teachers set up conditions that encourage student awareness of their own self-construction, their unique skills and experiences. With such awareness students can work with diverse individuals including their teachers to facilitate their own further growth via their insight into their own prior growth.

Many reductionist teaching strategies emerge from research studies conducted in strictly controlled laboratory settings that have little to do with everyday classrooms and everyday learning in general. Informed by their own practical knowledge and the practical knowledge of other teachers, postformal teachers question the generalizability of laboratory research findings to the natural setting of their own classrooms. These teachers have suspected the inapplicability of such decontextualized research all along, but positivist research community was not so insightful. The mechanistic mainstream of educational psychology assumed that laboratory research findings were the source of solutions that could be applied in every classroom setting.

Mechanistic psychological researchers failed to understand that every classroom possesses a culture of its own—a culture that defines the rules of discourse in classroom situations. Thus, all classrooms are different, critical constructivists and postformalists contend, and as a result the use of standardized techniques and materials with their obsession with the parts instead of the whole is misguided. In these unique, particularistic classrooms of postformal teachers, form follows purpose as students are protected from premature instruction in precise forms. Interest and passion are cardinal virtues, as student rational development is viewed as simply one aspect of thinking. Learning and thinking problems, moreover, are not viewed simply as the products of aptitude but of complex interactions between personalities, interests, social and cultural contexts, and life experiences. Thus, in its recognition of the complexity of learners and learning situations, critical constructivism and its cognitive cousin, postformalism serve as antidotes to mechanistic reductionism.

THE INSEPARABILITY OF COGNITION AND SOCIOHISTORICAL CONTEXT

Thus, a key theme of postformalism emerges: consciousness and cognition cannot be separated from the sociohistorical context. All cognition and action take place in continuity with the forces of history. Critical constructivism understands that contextualization is inseparable from cognition and action. The role of a postformal educational psychology is to bring this recognition to the front burner of consciousness. With such awareness we begin to realize that consciousness is constructed by individual agency, individual volition and by the ideological influences of social forces—it is both structured and structuring. Psychologists from diverse traditions did not traditionally understand the ambiguity of consciousness construction and social action. They failed to discern the ways that power was inscribed in language and knowledge and the implications of this for the production of selfhood. Individuals are initiated into language communities where women and men share bodies of knowledge, epistemologies, and the cognitive styles that accompany them. Thus, the manner in which our interpretations of the world are made is inseparable from these contexts, these language communities. The sociohistorical dimension of consciousness is often manifested on the terrain of language.

Because of these linguistic and other factors hidden from our conscious understanding, individuals are often unaware of just how their consciousness is constructed. The schemas that guide a culture are rarely part of an individual's conscious mind. Usually, they are comprehended as a portion of a person's worldview that is taken for granted. It was these ideas that Italian social theorist Antonio Gramsci had in mind when he argued that philosophy should be viewed as a form of self-criticism. Gramsci asserted that the starting point for any higher understanding of self involves the consciousness of oneself as a product of sociohistorical forces. A critical philosophy, he wrote, involves the ability of its adherents to criticize the ideological frames that they use to make sense of the world. I watch my colleagues and myself struggle as postformal teachers to engage our students in Gramsci's critical philosophical task of understanding themselves in a sociohistorical context. Many of us are frustrated by our students' lack of preparation for engagement in such a rigorous introspective and theoretical task. No matter how frustrating the job may be, we have to realize how few experiences these students possess that would equip them for such a task. Indeed, life in *hyperreality* produces experiences that undermine their ability to accomplish such undertakings.

A critical constructivist epistemology and a postformal cognitive orientation are very important in the effort to engage in an ideological critique of self-production in hyperreality. Such a critique interrogates the deep structures that help shape our consciousness as well as the historical context that gave birth to the deep structures. It explores the sociohistorical and political dimensions of schooling, the kind of meanings that are constructed in classrooms, and how these meanings are translated into student consciousness. Students of cognition often speak of student and teacher empowerment as if it were a simple process that could be accomplished by a couple of creative learning activities. One thing our ideological critique of self-production tells us is that the self is a complex, ambiguous, and contradictory entity pushed and pulled by a potpourri of forces. The idea that the self can be reconstructed and empowered without historical study, linguistic analysis, and deconstruction of place is to trivialize the goals of a critical interpretivist educational psychology, it is to minimize the power of the cognitive alienation that mechanism produces, it is to ignore history.

In this sociohistorically contextualized postformal effort to uncover the sources of consciousness construction, we attempt to use such insights to change the world and promote human possibility. In the spirit of our critical ontology we work to reconstruct the self in a just, insightful, and egalitarian way. In this context postformal teachers search in as many locations as possible for alternate discourses and ways of thinking and being that expand the envelopes of possibility. In

order to engage in this aspect of the reconstruction of self, students and teachers must transcend the mechanist conception of the static and unified self that moves through life with the 106 IQ—it is 106 today, it was yesterday, and it will be tomorrow. While the process of disidentification is urgent, we cannot neglect the search for alternate discourses in literature, history, popular culture, the community, subjugated and indigenous knowledges, and in our imaginations. My friend Peter McLaren tells me that we need to find a diversity of possibilities of what we might become by recovering and reinterpreting what we once were. While we might use this to change our conception of reality, we must see this change of conception—this change of mind—as only the first step in a sets of actions designed to change what is referred to as reality.

TERMS FOR READERS

Hyperreality—Jean Baudrillard’s concept: the contemporary cultural landscape marked by the omnipresence of electronic information. In such a landscape, individuals begin to lose touch with the traditional notions of time, community, self, and history.

Ontology—The branch of philosophy that studies the nature of being, that asks what it means to be in the world.

Postformalism—A sociocognitive theory that blurs boundaries separating cognition, culture, society, epistemology, history, psychoanalysis, philosophy, economics, and politics. Postformalism transcends much of the cognitive theory typically associated with Piagetian and many other theories of cognitive development. While more positivist and mechanistic cognitive science has associated disinterestedness, objectivity, adult cognition, and problem solving with higher-order thinking, postformalism challenges such concepts. In this context postformalism links itself to the concept of alternate rationalities. These new rationalities employ forms of analysis sensitive to signs and symbols, the power of context in relation to thinking, the role of emotion and feeling in cognitive activity, and the value of the psychoanalytical process as it taps into the recesses of (un)consciousness. In the spirit of critical theory and critical pedagogy, postformalism attempts to democratize intelligence. In this activity, postformalist study issues of purpose, meaning, and value. Do certain forms of cognition and cognitive theory undermine the quest for justice? Do certain forms of psychological research cause observers to view problematic ways of seeing as if they involved no issues of power and privilege?

CHAPTER 98

Intelligence Is Not a Thing: Characterizing the Key Features of Postformal Educational Psychology

ERIK L. MALEWSKI

To pursue postformal alternatives in educational psychology is not a wholly new venture, as it builds upon a foundation of enacting critical consciousness in pursuit of social justice: (1) the use of postmodernism to critique metanarratives, curricular understanding to advance dynamic notions of teaching and learning that take place both within and outside of formal schooling, (2) critical pedagogy to highlight the role of social institutions in shaping youth culture, (3) teacher criticality to create a context for heightened consciousness and “wide-awakeness,” and (4) indigenous knowledge to critique banking models of education that forego contextual relevance in pursuit of universal truths. I agree and weave these properties into a tentative description of a postformal educational psychology that seeks to understand how intelligence functions through critical interrogation of the very tenets that anchor the field, highlighting the ambiguous, contradictory, paradoxical, and complex agendas that compose theories of cognition.

Of key importance, postformalism is deeply concerned with the ways intolerance and authoritarianism are further enabled through the Enlightenment concepts of reason and rationality, the very intellectual frameworks used to support the logic that competency based curriculums will lead to equity in public schooling, further masking the ways cognition is shaped by race, class, gender, and sexual orientation in a symbolically and materially inequitable society. Postformalism asserts that just theories of educational psychology place at their core appreciation of differences in cultural style and intellect, the ways of knowing around which meaning is made, reclaiming that significations of intellect are cultural and specific to context and identity. In addition to representation, postformal educational psychology seeks to understand the core state production of inequitable attachment of value to the ways meaning is made and through the examination of such productions seeks to redress unequal assignment in ways that maximize participatory democratic practices. In other words, postformalism seeks not only critical interrogation of formal, developmental theories but also moves to create tentative constructions of cognition that provide increased possibilities for just, sustainable, and caring cultures that forgo dominant, universal narratives and principles of operation that incite pathology, self-hatred, and other forms of sociocultural denigration among those living on the borders.

Postformal thinkers, recognizing that formalism offers a skeleton around which discursive constructions can be tentatively thread, retain the principles of participatory democracy and libratory

ethics as a method of theory building that calls into question reductive mandates regarding learning assessment, forms of evaluation that squelch criticality and work to maintain conventional power relations, instead weaving around the tenets of democratic practice border knowledge emanating from the voices of the oppressed. It seeks a celebration of difference and multiplicity, leading to revolutionary realities that unite critical consciousness with liberatory teaching practices. Hybrid theories of educational psychology take from formalism and postformalism as if theoretical toolboxes and utilize each of the modalities to revolutionize how we think about human thought in education. While the description of postformalism as a disposition that values multilogicality can confuse readers searching for definitive answers and easy solutions, there remains no concise definition of postformalism; intelligence is not a thing. Instead, postformalism offers an amazing opportunity to engage in transformative theories of human aptitude as a post-structural tool that becomes emancipatory when wedded to participatory democratic paradigms capable of identifying injustice, challenging hegemonic articulations, and elevating subjugated ways of knowing.

MULTILOGICALITY AND INTELLECTUAL ENACTMENTS

As the reader might note, postformalism is itself an enacted terrain that remains alive through its fluidity and malleability. Owing to a foundation in feminism, cultural studies, poststructuralism, and queer and critical race theory, with scholars that include Hall, Derrida, Adorno, Marcuse, Foucault, Jameson, Kristeva, and Lacan, among others, a language was created that positioned cognition within economic, political, and social practices and concern over their ability to induce self-hatred, loathing, subjugation, and deprivation among those bearing selected cultural styles and manners of being. Educational psychology has been transformed through extensions of Freudian theory; historical recounts of trauma, gender, race, and social practice; threading postmodernism upon personal psychology; and Kincheloe and transcendence of developmental theories that recognize the important intersection of cognition and social group identifications in a symbolically and materially unequal world. In particular, the work of Kincheloe marked the start of a hybrid understanding of postformalism that retained a language of critique while also grafting on generative elements such as deconstruction, etymology, and problem detection that interfaced well with the need to expand critical consciousness, a shift in realities that allows teachers to promote antiracist, antisexist, anticlassist, and antihomophobic social and educational curriculum and pedagogical practices. Working from a postformal disposition, educational psychology pulls from each of these domains as if theoretical toolboxes from which various ideas can be threaded together to offer new and unforeseen descriptions of intellect proposing radically divergent ways of witnessing human reality, from art, music, and literature to applications involving the integration of science, technology, and liberation ethics. Those who embrace postformalism recognize that educational psychology, like human thought, involves imagination and play and the insight that comes from using emotion to envision cognition as contingent, idiosyncratic, exceptional, and laden with power relations.

Postformalism might best be characterized as a disposition or attitude because it is more a reaction to the near ubiquitous character of formalism and its principles and rules than itself representing any formative, authoritative body of scholarship or set of doctrines. As a result, postformalism is constituted by debate and deliberation and dominated by local narratives that often work in solidarity against hegemonic articulations while falling short as theoretical propositions that involve a quest for universal status and therefore silence the voices of the oppressed. It can be said that postformalism challenges reductive essentialism, instrumental reason, and canon building. While recognizing that presuppositions allow for hybrid theoretical forms that avoid the pitfalls of overt relativism, propositions are not beyond question but rather invite dissenting

voices, exposing postformal foundations to ongoing deliberation over the assertions made in its name, questions that bring cause for humility. Clearly some could relate formal presuppositions to the beginning dialogue in Plato's *The Symposium* and postformal precepts to the interventions that occur with the entrance of Dionysius. Others find in postformalism a melding of the pre-formal with the formal to form a hybrid synthesis, possibly an emphasis on uncovering the tacit relationships and hidden assumptions that reveal larger life forces within the universe. Such universalizing discourses, as Eve Sedgwick described them in the 1990 book, *Epistemology of the Closet*, when thought of tentatively, open up the possibility for seeing relationships between ostensibly different entities as opposed to minoritizing discourses that tend to reduce narratives into their most simple parts. The emphasis of the latter on reductionism as a precursor to examination limits the opportunity to see relationships in the relentless search for establishing control and reason. As Kincheloe, Steinberg, and Hinchey explained in *The Post-Formal Reader: Cognition and Education*:

We might be better served to think of the mind not in terms of parts, but in terms of connecting patterns, the dance of interacting parts. This initial consciousness of the 'poetic' recognition of this dance involves a nonverbal mental vibration, an increased energy state. From this creative tension emerges a perception of the meaning of the metaphor and the heightened consciousness that accompanies it. Post-formal teachers can model such metaphoric perception for their students (1999, p. 69).

It is with explanation that we can find a clear relationship between the description of postformal educational psychology that Kincheloe offers and phenomenologist Alfred Schutz when he highlights a "fundamental anxiety" associated with an expressed concern that our lives might be essentially meaningless, that through our interaction on this earth we might impress so little as to leave without having mattered at all. Such anxiety does not have to lead to paralysis but can be a psychologically motivating factor, spurring ideas for projects and plans of action. Through the generative process of making such plans, arranging ahead for their enactment, and bringing them to fruition we can recognize how cognition involves the creation of identifications within particular social contexts in which our lives take place. Postformal educational psychology embraces such understanding.

While the postformal movement in educational psychology is certainly in alignment with other paradigms of thought, engaged in critique of theories of intelligence that attempt to bracket our culture, a process of neutralization that can be evidenced in the work of Jensen, Murray, and Herrnstein, it joins forces with Baudrillard and his opposition to one-dimensional depictions of reality; Dewey and his critique of positivism; and Foucault and his insistence on power as recurrent at the point of human interaction—it also seeks to move beyond these points, recouping these oppositions and extending these insights toward the generative process of tentatively describing intellectual possibilities. The work of Kincheloe, Steinberg, and Hinchey in *The Post-Formal Reader: Cognition and Education* (1999) and Eisner in *Curriculum and Cognition Reconsidered* (1994) provide valuable insight into the transformations that occur in educational psychology when postformal dispositions not only offer a language of critique but spaces of opportunity for reenvisioning cognition as a sociocultural construct and, therefore, the key to an effort to end symbolic and material inequities. In response to the success of modern, formal movements and the terror invoked through the certainties of metanarratives, we need more than "reactionary countermoves," responses based on the underlying assumptions regarding developmental psychology that fail to extend beyond the binaries established in the reasoning of the preceding position. As such, the totalizing structures stand in the way of the imagination that arises from the unrestricted play of ideas, the "wide-awake-ness" that comes from opening up opportunity,

providing self-direction, and setting a person free. As Greene engages a postformal imaginary in her book, *Releasing the Imagination: Essays on Education, the Arts, and Social Change*:

We who are teachers have to strive against limits, *consciously* strive. The alternatives are not to be found in a rediscovery of untrammelled subjectivity or in acceptance of total determinism. A dialectical relation marks every human condition: it may be the relationship between the individual and the environment, self and society, or living consciousness and object-world. Each such relation presupposes a mediation and a tension between the reflective and material dimensions of lived situations. Because both dimensions are equally significant, the tension cannot be overcome by a triumph of subjectivity or objectivity: the dialectic cannot be finally resolved (1995, p. 185).

The postformal, following Greene's disposition, works toward theories of educational psychology that move youth into a symbolically and materially rich life where they actively seek self-direction and work to understand the conditions of their own existence. In the search for self-direction horizons are breeched and lived rationalities are formed, intellect is enacted and developed. In the search to understand the context where we live experiences are clarified, the social, political, and economic practices that shape subjectivities are recognized and one begins the journey toward understanding the ways their location in the web of reality shapes individual thought and the range of opportunity believed possible. Postformal education offers a critique of reductive theories of intellect that equate learning with information transmission, canon building, and establishing metanarratives, the concepts that undergird conventional cognitive theories and continue to bolster false binarisms in educational psychology, the recycling of the biology/culture debates that foreground the perpetuation of race, gender, class, and sexual orientation discrimination through neoliberal, neoconservative, and neocolonial politics, the repetitions that mark the boundaries of intelligibility around the capacities of dominate cultures. Postformal education refuses to be restricted by rules, conventions, and bifurcations that work in dialectics without synthesis, linear forms of logic that result in either/or rationalities.

A TENTATIVE DESCRIPTION OF POSTFORMAL FEATURES

The following section further delineates six key features of postformalism that are representative but by no means conclusive on the shift occurring in educational psychology:

Exploring Multilogicality

Researchers and practitioners of postformal educational psychology recognize that the highest forms of cognition involve self-examination, asking questions regarding what is known, how it was assessed, how it came to be known, and whether or not it was embraced or rejected. Postformalism shares this element of multilogicality with other cognitive theorists that emphasize multiple intelligences but adds additional dimensions to the disposition. In order to transcend formality, it becomes important to examine our own position in the web of reality through the study of our traditions, customs, and rituals and draw these particularities into relation with the historical traces of intellect and production and circulation of knowledge. Recognizing the relationship between the particularities of experience and larger social and educational practices, it is possible to become critically aware of the cultural forms embedded within each of us. Postformal thinkers who are concerned with epistemology and etymology will identify with the notion of genealogy, dimensions for examining the origins of knowledge that include the processes involved in describing the social forces that shape what constitutes knowledge as well as subjectivities and identifications.

Engaging Problem Detection

The reduction of intelligence to problem solving has long been a problem of formalism the effects of which can be evidenced in the everyday curricular practice of presenting preformed riddles with the aim of drawing closure at existing solutions. When the focus is on problem solving, students become trapped in reductive politics of instrumental rationality and cause and effect linear logic where students learn to seek out given solutions to given problems, an appeal to explicit orders of reality by curriculum developers that suggests the best solutions to social, political, and economic ills already exist. When the work of children and youth is reduced to the search for extant answers, the opportunity to engage in meaningful and potent acts of improvisation associated with creatively defining problems are thwarted. The focus on problem solving in curriculum as well as learning assessment fails to attend to the process of questioning that leads to the establishment of the problem in the first place. Postformalism embraces problem detection as a process that involves imaginatively coming to critical consciousness through determining the character of a dilemma in explorations of the relationships between ostensibly different elements, charting associations that are more holistic and capable of moving us toward symbolic and material equality.

Recognizing Implicit Orders

The idea of “looking beyond convention” helps us understand an aspect of postformalism that illuminates hidden forces and tacit assumptions with notions of explicit and implicit curriculums. Explicit or formal curricular orders involve easily recognized patterns, events that seem to occur with little variation and consistently within similar physical spaces. Through patterns that arise out of simple comparison and contrast, the explicit curricular order is often the product of the sorting and categorization function of formal cognition. Of a different order, implicit curriculums address a much deeper sense of reality. It is the tacit level of operation in which the interspaces of relationships become evident, where two ostensibly different entities are shown to be part of a larger web-like structure of reality. Recognizing the value of interspaces as worth analysis in their own right, Perrow in his 1999 book *Normal Accidents: Living with High-risk Technologies*, a study of nuclear power plant disasters, highlighted their important role in understanding tightly coupled organizations. Drawing from postformal forms of analysis, he examined the difficulty in knowing, knowledge that shifts in the interspaces between intention and reception, difficulties in intelligibility the effects of which he termed “normal accidents,” and the errors that occur among discursive realities that exceed attempts at relational understanding.

Unearthing Tacit Knowledge

Postformal thinkers look beyond substantive reality to access our hidden assumptions and work to make subjugated knowledge visible. In Perrow’s study of nuclear power plants mentioned above, explicit curricular orders were in place for sharing information across the organization. What Perrow found, however, were deeper implicit orders of reality that involved recognizing the significance of the interspaces between thoughts, the discursive moments where the nonrational occurs: tighter controls by leadership result in increased errors and what was believed to have been communicated effectively utilizing a formal, transmission model of reality, was caught up in implicit curricular orders, the cacophony of multiple competing, contingent realities, heard differently or simply not heard at all. Similarly, in the classroom, postformal educational psychology recognizes the importance of implicit curricular orders where tacit realities are searched out in hermeneutical pedagogies that encourage students to seek out meaning, draw relationships

between ostensibly different things, and engage in problem detection that leads to composing inchoate the dynamics of a dilemma prior to the positing of its solution. Aware of the importance of poststructural analysis, teachers not only teach content but also explore the implicit orders of curriculum textbooks. For example, in a history text, a teacher might highlight the implicit dominance of white supremacist capitalist patriarchal realities enfolded in the order of the information. Most often, required history textbooks further reinforce metanarratives involving the themes of exploration, conquest, and oversight. On the periphery, if addressed at all, remain secondary orders that involve historical issues such as the civil rights movement, women's issues, and the history of the labor movement. Teachers who recognize the influences postformal educational psychology has on classroom curriculum place an emphasis on uncovering implicit relationships and themes.

Releasing Imagination

The postformal abilities of the mind can often be understood through artists, artistry, and the ability to envision what has been erased from the social imagination. Visionary leaders recognize curriculum and instruction as the crafting of different realities and share in their creation with students. The formal curriculum becomes only one reality among many and imagination the only limit to the pursuit of the highest orders of cognition. Kincheloe, Steinberg, and Hinchey delineating the ability of postformalism to access tacit understandings assert in *The Post-Formal Reader: Cognition and Education*, "Formal thinking has not been attuned to such a reality possibly because the expansionist, conquest oriented goals of the Cartesian-Newtonian paradigm emphasized the explicit order of things" (1999, p. 68). Dominant paradigms in educational psychology in the process of attending to recognized patterns and locations have worked to subjugate alternative realities—under explicit orders politics, democratic practices, material distribution, class bias, symbolic elitism, and environmental racism, among others, when discussed are fragmented out into their simplest parts and decontextualized rather than illustrated as relational within a larger web of sociocultural practices.

Challenging Praxis

Postformalism and its counterparts in critical pedagogy have illustrated that little is as it seems when analyzed beneath its outer layer. Teachers who recognize the impact of formal curricular orders on educational realities understand that, for example, heterosexism cannot be taught solely as an issue of whether or not gay and lesbian identified people should be allowed to marry but must address the ways that heterosexuality functions as a economic, political, and social form that is enfolded in the deepest elements of our organizational lives and the realities constructed for those whose daily lives involve dismissal, neglect, and the rendering of their needs and experiences irrelevant. When postformal thought is applied to educational psychology wholly different realms of reality are made visible. Imagine postformal forms of assessment that begin with problem detection and the process of piecing together the relationships between ostensibly different social realities, learning assessments that transcend ongoing attempts to mark winners and losers whether individual students or labeling a failing school. Teachers who embrace an etymological search to understand how intelligence functions historically and in the current milieu as a social, economic, and political force set new terms for teaching and assessment that place culture and difference at the core of curriculum, understanding that cognition is not a universal category but an enacted and contingent phenomenon shaped by identity, social context, and the particularities of place.

This tentative description of postformal educational psychology transpires from a particular vantage point within educational psychology and is also shaped by the position and identifications of the author. Understanding that any description of higher order thinking does not constitute closure on the subject, this chapter acts as another guidepost on the journey toward understanding cognition as a personal-sociocultural production, a postformal attempt to draw individual ways of knowing into relationship with symbolic and material practices and the search for their equalization. If postformalism offers anything to educational psychology it is a device for peeling back the layers of reality, revealing uncommon truths and tacit assumptions and the relationships between ostensibly different realities.

TERMS FOR READERS

Critical Consciousness—The phrase refers to the ability to perceive social, economic, and political oppression and to take action against such subjugation in organizations, culture, and social consciousness. Critical consciousness involves exposing the systemic elements that lead to banking models of education where students are passive recipients of knowledge; educators enforce pedagogies involving drilling, memorizing, and repeating information; knowledge is thought of as a gift from the educated to the ignorant; teachers, administrators, and officials choose the curriculum and students adapt to it; and students are rewarded for storing information in ways that the most successful students are those who lack the heightened awareness necessary to intervene in society for the pursuit of social equality.

Intellectual Enactment—This term refers to theoretically informed actions that are guided by certain values and principles. Intellectual aims under postformalism are not simply about self-improvement or establishing a career trajectory. Instead intellectual enactment emphasizes actions guided by a moral disposition that furthers human well-being and improve the quality of life. Postformalism is not a complete denial of cognitive truth but recognition that intelligence, perception, and thought involve competing truths that most appropriately might be guided moral and ethical considerations grounded in critical notions of participatory democracy.

Liberatory Teaching Practices—This term refers to the development of critical consciousness in students and teachers through dialogic interactions that involve the reciprocal process of expressing experiences and understandings of social justice theme. From this angle, instructors often pose problems to the class that bring learners to heightened understandings of social, economic, and political issues and enfolded power relations. Liberatory teaching practices involve dialectical pedagogies that thread personal knowledge and understanding with critical perspectives and disciplinary scholarship within a search for self-direction and understanding the conditions of one's own existence.

Multilogicality—This term describes the interplay of many competing, overlapping, and incommensurable ways of knowing that illustrate the complexity of perception and analysis. Multilogicality aims for the exploration of numerous axes of reason that hold differing values in society to illustrate the myriad ways human beings reason. Through attending to more than one form of knowing, multilogicality illuminates the ways in which particular forms of reason, such as bodily and emotional intelligence, have been historically subjugated.

Postformalism—The term belies easy categorization but can be safely stated that postformalism attends to alternate ways of conceptualizing cognition and human understanding. Postformalism acts as a response to formalism's search for definitive sets of rules and principles of cognitive

operation. As a reaction, postformalism unearths the idiosyncrasies and abnormalities subjugated by the domination of developmental, formalist logic.

FURTHER READING

- Brookfield, S. (1995). *Becoming a Critically Reflective Teacher*. San Francisco: Jossey Bass.
- Freire, P. (1972). *Pedagogy of the Oppressed*. Harmondsworth: Penguin.
- Gilligan, C. (1982). *In a Different Voice: Psychological Theory and Women's Development*. Cambridge: Harvard University Press.
- Greene, M. (1995). *Releasing the Imagination: Essays on Education, the Arts, and Social Change*. New York: Jossey Bass.
- Sinnott, J. D. (1984). Post-Formal Reasoning: The Relativistic Stage. In M. L. Commons, F. A. Richards and C. Armon (Eds.), *Beyond Formal Operations: Late Adolescent and Adult Cognitive Development*, pp. 298–325. New York: Praeger.

CHAPTER 99

Unpackaging the Skinner Box: Revisiting B. F. Skinner through a Postformal Lens

DANA SALTER

I did not direct my life. I didn't design it. I never made decisions. Things always came up and made them for me. That's what life is.

—B. F. Skinner

While researching for this article, I was struck by the almost apologetic tone that recent biographies of Burrhus Frederic Skinner have taken. Challenging their readers to look past the two prevailing stereotyped images of the mad scientist in the white lab coat obsessively experimenting with either rats and pigeons in his “Skinner Box” or his own child in his infamous “Baby Tender,” the argument is made that the true genius of Skinner can and must be observed in the questions he sought to answer through his experimentation. This is where many biographies begin a myopic tribute to Skinner’s work and vision that not only decontextualizes his work in terms of its historical location and relevance, but concurrently adds to the mythology surrounding Skinner’s theories of behavior. Thus, the question begs to be asked: What is it about Skinner’s theories that continue to spur a rich spectrum of critique sixty years after the initial publication of his work? One thing to keep in mind while reading his work is that Skinner built upon the works of Ivan Pavlov and John B. Watson in creating his theory of operant conditioning. He directly translated his observations to the field of education and thus cemented education’s love affair with uncritical, positivistic, sequential, quasi-scientific, stimulus-reward based, technologically aided instructional design. This gross over simplification of Skinner’s work is not meant as a trite critique but as an entry point into a discussion of the far reaching impact of his work on education, psychology, and educational psychology specifically. The decontextualization of Skinner as a researcher has led to the biographical apologists seeking to mollify and the over zealous critics seeking to vilify Skinner’s work. I’d like to begin by unpackaging the mythology of B. F. Skinner by examining his work through various lenses that may help to contextualize his work in order to better examine its current far reaching consequences in the field of educational psychology.

UNPACKAGING THE SKINNER BOX

Any study of B. F. Skinner must note that he, himself was conflicted about his own theories. Later in his career he would question some of his early experimentations and an example of this critique can be observed through the dialogue of his characters in his book *Walden Two* (1948). However, it is this experimentation that launched the study of educational psychology as we know it today. The unpackaging of Skinner begins with placing him in a historical context. Skinner grew up on a pre-World War I and II world. Industry was king/ queen and anything that needed to be fixed, including social ills, could be broken down into pieces in order to fix the whole. Fredrick Taylor's *The Principles of Scientific Management* provided a "science" for breaking work down into parts that could be efficiently delegated and regulated. In the realm of society and education, Edward Thorndike's work in psychology and intelligence was widely regarded as a breakthrough in testing and curricular design for education. Social efficiency was the science of the day. In the world that followed the two world wars, the United States was faced with among others, two very important philosophical questions. First, how do we control the behaviors of a people so collectively damaged by the violent physical and emotional devastation of war? Second, how do we educate this postwar population for an industry that needs docile skilled workers while simultaneously educate to quell the social unrest? This was fertile ground for a way of viewing behavior in which control was not only attainable but externally modifiable. Enter B. F. Skinner. Skinner felt that because it was difficult, if not impossible to measure and control the inner thoughts that contribute to the control of behavior, focus should be placed on the more observable and thus controllable outer behaviors that can be modified with conditioning.

Without having previously studied psychology, Skinner began his career in the Department of Psychology at Harvard University. Anxious to try new ideas that focused on research that related behavior to experimental conditions, Skinner found a mentor in an equally ambitious William Cozier in the Department of Physiology at Harvard. Cozier postulated a study of animals that focused on observable, measurable behaviors and not the less measurable mental processes of the animal. Skinner was a tenacious experimenter and created many apparati in which to perform his experiments. His immensely popular "Skinner Box" was a result of this experimentation. The box was a specially devised cage for a rat that had a bar or pedal on one wall that, when pressed, caused a little mechanism to release a pellet of food into the cage. As he noted in his book *The Behavior of Organisms* (1938), this box was to represent all environments. The crucial aspect of this box was his discovery that a rat's behavior in the box seemed to be a reaction based upon the effects of the action and not on a stimulus that preceded the action, as postulated by Pavlov and Watson. This led Skinner to coin the term *operant behavior* to describe the act that is dependent on the consequence and *operant conditioning* to describe the process of organizing the reinforcement variables responsible for creating the new action or behavior. His extrapolation from these experiments informed his work in the fields of human behavior and education as outlined in his book *The Technology of Teaching* (1968). The field of programmed instruction is a direct descendent of Skinner's work.

EXAMINING THE PACKAGING FOR WHAT'S MISSING

Examining the packaging that surrounds Skinner's translation of his theory of operant conditioning into the field of education reveals what's missing and ultimately dangerous about Skinner's modernist theories. Programmed instruction has at its core the over-simplified, non-complex, reductionist mentality of operant conditioning that deliberately attempts to factor out the notion of the complexity of human thought and interactions' influence upon learning. Skinner's translation of animal behaviors observed in his "fabricated" lab environment to the classroom setting is

based upon two key assumptions. These assumptions are that all behavior can be controlled and all learning can be broken down in to components that when linearly sequenced, equal learning and social sorting (related to Darwin's theory of natural selection). This formal modernistic view of learning speaks to the empirical nature of Skinner's theories.

These assumptions are the linchpin holding Skinner's theories together. Skinner referred to himself as a Baconian scientist in attitude and in his philosophy of research. This worldview is seductive for its superficially magnanimous appeal to experience as observed through the coupling of experimentation and observation. However, this appeal is uncritical in that only certain aspects of an experience are deemed "valuable" and thus "measurable" and therefore ultimately "applicable" and "translatable." As noted in the introduction to this book, the idea that consciousness could be measured was deemed to be absurd when viewed through a positivistic/mechanistic lens. Therefore, in the prevailing reductionist thought popular at the time Skinner postulated his theory, consciousness was a variable that could be discarded. Skinner's theories emphasize an exclusive cause and effect binary relationship definition for human behavioral interactions. Kincheloe argues in *The Post-Formal Reader* that this Cartesian-Newtonian worldview attempts to break consciousness, knowledge and by extension, behavior down in order to try to understand its parts. The rigidity of this reduction is what made Skinner's work so appealing to the field of education and psychology. Any outcome that didn't fit the experimental norm was discarded or viewed as abnormal. Behavior thus became predictable and modifiable. Programmed instruction allowed for the sequencing of the steps needed to complete any problem. There was no room for other ways of learning. There was no space for difference. And yet, "one size fits all" education still had problems.

Skinner's work has fed the fire of many "reforms" in education. In researching this chapter, what struck me was the lack of space in the discussion of learning for alternative views on the psychology of learning. So many movements, including the current "No Child Left Behind" movement, are built upon the foundation of operant conditioning. The rational is that there is a right behavior and a wrong behavior and through a correct sequence of standards we can condition students to get the correct answer. And if they don't . . .

POSSIBILITIES IN THE PACKAGING

The results of Skinner's theories are everywhere: from the school bell to summon children to school, the bells to signal the change in classes, stickers for attendance, candy for doing well on a test, in-prison good behavior reward incentives, Pizza Hut Bookit! reading programs, advertising gimmicks: "Buy 1, Get 1 Free!", dog training programs, and the educational standards movement are all infused with adaptations of Skinner's theories. These instances are not all bad or all good. Moving beyond a binary/dualistic language for exploring the realm of human behavior is the goal of a postformal approach to the study of behavioral psychology. A postformal approach to the psychological exploration and study of behavior rejects a hyperrational, false-objective, laboratory-equals-reality notion of behavior. As Kincheloe and Steinberg note, a postformal approach to the study of behavior and its relation to learning acknowledges past and present historical situatedness in relation to meaning and understanding—it is elastic. This postformal approach invites, as explained by Freire, a dialogical conversation that calls into question the various assumptions under girding Skinnerian behaviorist theory. This historically situated and critical dialogical questioning of the psychology of behavior opens up the space for more possibilities for understanding human actions. Fighting reductionism à la Skinner's theory is a key component of postformalism. Looking at Skinner's theory through a postformal lens, his reductionist fortified theory of behavior cultivates a fractured, fragmented, and disconnected understanding of how and why behaviors occur, let alone responses to any other questions that arise about behavior. Thus,

as Kincheloe and Berry explain in *Rigour and Complexity in Educational Research*, a rethinking of the methodologies for experimentation in the understanding of the psychology of behavior is in order. A multilogical multifaceted research agenda will combat the limitations of the monological reductionist world in which the psychology of behavior has resided. This postformal approach will transition the research surrounding the study of the psychology of behavior from a modernist Cartesian-Newtonian part-to-whole mentality to a postformal multilogical and methodological approach.

B. F. Skinner was a complex person with a complex idea: the consequences of behavior determine the probability that the behavior will occur again. This incredibly layered statement was swept up in the swell of a moment in the history of the United States where people were looking for “logical” and “rational” responses to their cracked rose-colored glasses. Conversely, psychology was seeking to be viewed as a legitimate “hard” science in a world where science equaled “objective” observable facts. Skinner’s theory grew out of and was a vanguard for this view of science. His translation of his observations and theory to the field of education was based upon an assumptive and uncritical view that education in the 1950s was not succeeding because it was not stimulating, delayed the gratification for the student and it was too subjective. Opening up the dialogue for a postformal rethinking of behaviorist theory will open the space for alternative ways of understanding behavior.

No longer will it be a myopic socially efficient means to an end. It can be a springboard for other ways of thinking about how the psychology of behavior informs multiple aspects of being and how the complexity of being informs behavior. Take a moment and read Skinner’s quote at the beginning of this piece. This quote is from a point later in his life and yet is rarely mentioned in association with Skinnerian theories. The inherent contradictions in this quote, when compared with his earlier works concerning behavior and consequence, are quite fascinating; and yet, without a postformal critique that champions and welcomes a fluidity and complexity in research and not only invites by required concurrent reflection, this quote would be reduced and relegated to a realm of variables inconsistent with the observable truth.

CHAPTER 100

Postformalism and Critical Multiculturalism: Educational Psychology and the Power of Multilogicality

JOE L. KINCHELOE

In 1997 in *Changing Multiculturalism* Shirley Steinberg and I offered an evolving notion of critical multiculturalism that attempted to address and avoid the problems of more mainstream articulations of multiculturalism. Drawing upon critical theory and the tradition of an evolving criticality along with a variety of scholarship from ethnic studies, cultural studies, sociology and education, critical multiculturalism is concerned with the ways that individuals are discursively, ideologically, and culturally constructed as human beings. Indeed, critical multiculturalism wants to promote an awareness of how domination takes place, how dominant cultures reproduces themselves, and power operates to shape self and knowledge. This position makes no pretense of neutrality as it openly proclaims its affiliation with efforts to produce a more just, egalitarian, and democratic world that refuses to stand for the perpetuation of human suffering.

Critical multiculturalism is uncomfortable with the name, multiculturalism, but works to redefine it in the contemporary era. Indeed, the first decade of the twenty-first century cannot be understood outside the framework of fast capitalism, transnational corporations, corporatized electronic and ideologically inscribed information, mutating and more insidious forms of racism and ethnic bias, and a renewed form of U.S. colonialism and military intervention designed to extend the political, economic, and cultural influence of the twenty-first century American Empire. It is my argument in this chapter that the postformal reconceptualization of educational psychology is well served by a familiarity with critical multiculturalism.

In particular, a critical multiculturalism is profoundly concerned with what gives rise to race, class, gender, sexual, religious, cultural, and ability-based inequalities. Critical multiculturalists focus their attention on the ways power has operated historically and contemporaneously to legitimate social categories and divisions. In this context we analyze and encourage further research on how in everyday, mundane, lived culture these dynamics of power play themselves out. It is at this ostensibly “innocent” level that the power of patriarchy, white supremacy, colonial assumptions of superiority, heterosexism, and class elitism operate. Critical multiculturalism appreciates both the hidden nature of these operations, and the fact that most of the time they go unnoticed even by those participating in them and researching them. The invisibility of this

process is disconcerting, as the cryptic nature of many forms of oppression makes it difficult to convince individuals from dominant power blocs of their reality. Such subtlety is matched by cognizance of the notion that there are as many differences within groups as there are between them.

In the twenty-first century the increased influence of right-wing power blocs have elevated the need for a critical multiculturalist approach to knowledge production in various academic disciplines including, of course, educational psychology. The geopolitical and military operations to extend the American Empire have been accompanied by disturbing trends in knowledge production that hold alarming implications for the future—the future of research in particular. Critical multiculturalists are aware that such knowledge work possesses a historical archaeology in Western culture and U.S. society. David G. Smith (2003) in “On Enfrauding the Public Sphere” in *Policy Futures in Education* argues that the twenty-first-century American Empire is constructed not only around territorial and natural resource claims, but in hyperreality, epistemological claims as well. Tracing the epistemological claims of the empire, Smith studies Western knowledge from the cogito of Descartes to Adam Smith’s economics of self-interest. With the merging of Descartes rationalism with Adam Smith’s economics the West’s pursuit of economic expansionism is justified by the concept of liberty. Educational psychology cannot ignore these dynamics in the middle of the first decade of the twenty-first century.

Postformalists who employ the bricolage described in this chapter have carefully examined this Enlightenment reason and its relation to oppression and social regulation. Proponents have maintained for centuries it is this form of reason that frees us from the chaos of ignorance and human depravity. It is this reason, they proclaimed, that separated us from the uncivilized, the inferior. Smith (2003) argues that it is this notion that supports a philosophy of human development or developmentalism used in psychology and a variety of other discourses to oppress and marginalize the cultural others who haven’t employed such Western ways of thinking and being. Often in their “immaturity” these others, this rationalistic developmentalism informs us, must be disciplined even ruled in order to teach them to be rational and democratic.

This psychological developmentalist story about the contemporary world situation conveniently omits the last 500 years of European colonialism, the anticolonial movements around the world beginning in the post-World War II era and their impact on the U.S. civil rights movement, the women’s movement, the antiwar movement in Vietnam, Native American liberation struggles, the gay rights movement, and other emancipatory movements which inform our critical multiculturalism and postformalism. In other work I have argued that the reaction to these anticolonial movements have set the tone and content of much of American political, social, cultural, and educational experience over the last three decades. In the middle of the first decade of the twenty-first century these forces of reaction seemed to have gained a permanent foothold in American social, political, cultural, and educational institutions.

The future of knowledge is at stake in this new cultural landscape. Few times in human history has there existed greater need for forms of knowledge work that expose the dominant ideologies and discourses that shape the information accessed by many individuals. The charge of critical multiculturalists and postformalists at this historical juncture is to develop forms of knowledge work and approaches to research that take these sobering dynamics into account. This is the idea behind my articulation of the bricolage (J. Kincheloe and K. Berry, (2004) *Rigour and Complexity in Educational Research: Conceptualizing the Bricolage*) that will be discussed later in this chapter. Attempting to make use of a variety of philosophical, methodological, cultural, political, epistemological, and psychological discourses, the bricolage can be employed by critical multiculturalists and students of educational psychology to produce compelling knowledges that seek to challenge the neocolonial representations about others at home and abroad.

CRITICAL MULTICULTURALISM IN A POSTFORMAL EDUCATIONAL PSYCHOLOGY

Critical multiculturalism is grounded on the theoretical tradition of critical theory emerging from the Frankfurt School of Social Research in Germany in the 1920s. Seeing the world from the vantage point of post-First World War Germany, with its economic depression, inflation, and unemployment, the critical theorists (Max Horkheimer, Theodor Adorno, Walter Benjamin, Leo Lowenthal, and Herbert Marcuse) focused on power and domination within an industrialized, modern age. Critical theory is especially concerned with how domination takes place, the way human relations are shaped in the workplace, the schools and everyday life. Critical theorists are valuable to the postformal reconceptualization of educational psychology as they promote an individual's consciousness of himself or herself as a social being.

Advocates of a critical multiculturalism make no pretence of neutrality. Unlike many theoretical approaches, critical multiculturalism exposes its values and openly works to achieve them. In this context an educational psychology informed by critical multiculturalism is up front about its desire to construct a psychology of justice, which promotes school practices that encourage intelligence and egalitarianism. Thus, critical multiculturalism is dedicated to the notion of equality and the elimination of human suffering. Operating on this foundation, postformalists ask what is the relationship between social inequality and the suffering that accompanies it and the learning process. The search for an answer to this question is a central concern of a postformalism informed by critical multiculturalism.

Working in tandem with subordinate and marginalized groups, postformalists attempt to expose the subtle and often tacit psychological and pedagogical assumptions that privilege the already affluent, and subvert the efforts of the poor and socially and culturally marginalized. When schooling is viewed from this perspective, the naive belief that education provides consistent socioeconomic mobility for working-class and nonwhite students disintegrates. Indeed, the mechanistic educational psychological notion education simply provides a politically neutral set of skills and an objective body of knowledge also collapses. This appreciation that both cultural pedagogy (media-generated education in an electronic society) and schooling don't operate as neutral, ideologically innocent activities is central to a postformal educational psychology grounded on a critical multiculturalism.

Connecting a postformal educational psychology to the multiple perspectives of critical multiculturalism, means moving beyond the conservative and liberal assumptions that racial, ethnic, and gender groups live in relatively equal status to one another and that the social system is open to anyone who desire and is willing to work for mobility. This debilitating assumption is rarely, if ever, challenged in a positivistic, mechanistic educational psychology. Such an assumption affects almost everything that goes on in such a regressive educational psychology. Even though contemporary economic production in the West—and increasingly in Western style economic systems in a globalized world—is grounded on unequal social divisions of race, class, and gender, educational psychologists have been reticent about using the term oppression.

Postformalists grounded in a critical multiculturalism assert, as they argue vehemently in the spirit of W. E. B. DuBois, the necessity of the struggle for equality and democracy in the economic sphere of society. As diverse world cultures have begun to slide toward the hyperreality of globalized markets, with their fast capitalism, U.S. neo-imperial policies, and assault of electronic information, their ability/willingness to distribute their resources more equitably has substantially diminished. Class and other forms of inequality and the maldistributed cultural capital that accompanies them are key concerns of a multiculturalized postformalism. This puts us directly in contact with the study of power and the ways it has operated historically and contemporaneously to legitimate social categories and divisions. In this context, postformalists

analyze and encourage further analysis of how in everyday, mundane, lived culture and cognition these dynamics of power play themselves out.

In this seemingly banal level of human thinking and interaction the power of race, class, and gender asserts itself—often under the radar of consciousness. Indeed, it is at these unsuspected microsocial levels that the power of patriarchy, white supremacy, class elitism, heterosexism, and other power blocs accomplish their hurtful work. A critical multiculturalism appreciates both the hidden nature of these operations and the fact that most of the time they go unnoticed even by those who participate in them. The subtlety of this process is at times disconcerting, as the cryptic nature of many forms of racism, sexism, class bias, heterosexism, makes it difficult to convince individuals from the dominant culture of their reality. Such subtlety is matched by the nuanced but vital cognizance of the fact that there are as many differences within cultural groups as there are between them. Nevertheless, it is unacceptable that psychologists and educational psychologists have limited insight into the way these power dynamics work. These scholars must be leaders in understanding the ways that power shapes those domains traditionally associated with psychology and educational psychology.

In this context postformalists drawing upon their critical multicultural insights maintain that educational psychologists must be attuned to the ways that power shapes consciousness. Such a process involves the means by which ideological inscriptions are imprinted on subjectivity, the ways desire is mobilized by power forces for hegemonic outcomes, the means by which discursive powers shape thinking and behavior through both the presences and absences of different words and concepts, and the methods by which individuals assert their agency and self-direction in relation to such power plays. Central to the domain of educational psychology, critical multiculturalism vis-à-vis postformalism works to illustrate how individuals produce, revamp, and reproduce meanings in contexts constantly shaped and reshaped by power.

How can educational psychologists possibly study cognitive processes—not to mention teaching and learning—without any appreciation of these dynamics? This culturally informed meaning making activity always involves the ways power in the multitude of forms it takes helps to construct collective and individual experiences in ways that operate in the interests of white supremacy, patriarchy, class elitism, heterosexism, and other dominant forces. Here mechanistic educational psychologists and the pedagogies they help shape often work in complicity with dominant power blocs, as they serve as gatekeepers who transmit dominant values and protect the “common culture” from the “barbarians” at the gates of the empire.

Without an understanding of power and how it undermines the quest for justice, educational psychology becomes a form of disciplinary power—an apology for the status quo. As a politically transformative project, critical multiculturalism helps postformalists work with diverse constituencies who have not traditionally supported movements for social justice. This is why whiteness studies are so important in critical multiculturalism and postformalism. This is why class issues are so important in a transgressive educational psychology, where postformalists see themselves not merely as academic students of culture but as initiators of social movements. An educational psychology that is unable to lead a social, political, and educational transformation undermines the traditional critical notion that there is a moral emptiness to academic work that attempts to understand the world without concurrently attempting to change it.

THE MULTILOGICALITY OF CRITICAL MULTICULTURALISM: MOVING THE BRICOLAGE INTO EDUCATIONAL PSYCHOLOGY

As discussed in my introduction, postformalism calls on educational psychology to bring multiple perspectives to its work. This concept of multilogicality rests at the heart of critical multiculturalism and postformalism. I have expanded these notions in my description of the

research bricolage. A complex science is grounded on this multilogicality. One of the reasons we use the term complex is that the more we understand about the world, the more complex it appears to be. In this recognition of complexity we begin to see multiple causations and the possibility of differing vantage points from which to view a phenomenon. It is extremely important to note at this juncture that the context from which one observes an entity shapes what he or she sees. The set of assumptions or the system of meaning making the observer consciously or unconsciously employs shapes the observation.

This assertion is not some esoteric, academic point—it shapes social analysis, political perspectives, curriculum development, teaching and learning, and the field of educational psychology. Acting upon this understanding, postformalists understand that scholarly observations hold more within them to be analyzed than first impressions sometime reveal. In this sense different frames of reference produce multiple interpretations and multiple realities. The mundane, the everyday, and the psychological dimension are multiplex and continuously unfolding—while this is taking place, human interpretation is simultaneously constructing and reconstructing the meaning of what we observe. A multilogical educational psychology promotes a spatial distancing from reality that allows an observer diverse frames of reference.

The distancing may range from the extremely distant like astronauts looking at the earth from the moon, to the extremely close like Georgia O’Keeffe viewing a flower. At the same time, a multilogical scholar values the intimacy of an emotional connectedness that allows empathetic passion to draw knower and known together. In the multiplex, complex postformal view of reality, Western linearity often gives way to simultaneity, as texts become a kaleidoscope of images filled with signs, symbols, and signifiers to be decoded and interpreted. William Carlos Williams illustrated an understanding of such complexity in the early twentieth century as he depicted multiple, simultaneous images and frames of reference in his poetry. Williams attempted to poetically interpret Marcel Duchamp’s “Nude Descending a Staircase,” with its simultaneous, overlapping representations serving as a model for what postformalists call a cubist cognition.

Teachers and scholars informed by critical multiculturalism’s multilogicality understand these concepts. Such educators work to extend their students’ cognitive abilities, as they create situations where students come to view the world and disciplinary knowledge from as many frames of reference as possible. In a sense the single photograph of Cartesian thinking is replaced by the multiple angles of the holographic photograph. Energized by this cubist cognition, teachers informed by postformalism and a critical multiculturalism come to understand that the models of teaching they have been taught, the definitions of inquiry with which they have been supplied, the angle from which they have been instructed to view intelligence, and the modes of learning that shape what they perceive to be sophisticated thinking all reflect a particular vantage point in the web of reality. They seek more than one perspective—they seek multilogical insights.

Like reality itself, schools and classrooms are complex matrices of interactions, codes, and signifiers in which both students and teachers are interlaced. Just as a complex and critical multiculturalism asserts that there is no single, privileged way to see the world, there is no one way of representing the world artistically, no one way of teaching science, no one way of writing history. Once teachers escape the entrapment of the positivist guardians of Western tradition and their monocultural, one-truth way of seeing, they come to value and thus pursue new frames of reference in regard to their students, classrooms, and workplaces. In this cognitivist cubist spirit, critical multiculturalist teachers begin to look at lessons from the perspectives of individuals from different race, class, gender, and sexual orientations. They study the perspectives their African American, Latino, white, poor, and wealthy students bring to their classrooms. They are dedicated to the search for new perspectives.

Drawing upon this postformal multilogicality in this cognitive and pedagogical pursuit, these educators, like liberation theologians in Latin America, make no apology for seeking the

viewpoints, insights, and sensitivities of the marginalized. The way to see from a perspective differing from that of the positivist guardians involves exploring an institution such as Western education from the vantage point of those who have been marginalized by it. In such a process, subjugated knowledges once again emerge allowing teachers to gain the cognitive power of empathy—a power that enables them to take pictures of reality from different vantage points. The intersection of these diverse vantage points allows for a form of analysis that moves beyond the isolated, decontextualized, and fragmented analysis of positivist reductionism.

Cognitively empowered by these multiplex perspectives, complexity-sensitive, multilogical educators seek a multicultural dialogue between Eastern cultures and Western cultures, a conversation between the relatively wealthy Northern cultures and the impoverished Southern cultures and an intracultural interchange among a variety of subcultures. In this way forms of knowing, representing, and making meaning that have been excluded by the positivist West move us to new vantage points and unexplored planetary perspectives. Understandings derived from the perspective of the excluded or the “culturally different” allow for an appreciation of the nature of justice, the invisibility of the process of oppression, the power of difference and the insight to be gained from a recognition of divergent cultural uses of long hidden knowledges that highlight both our social construction as individuals and the limitations of monocultural ways of meaning making.

Taking advantage of these complex ways of seeing, a whole new world is opened to the field of educational psychology. As cognitive cubists, teachers, students, psychologists, and cultural analysts all come to understand that there are always multiple perspectives. No conversation is over, no discipline totally complete. The domain of art and aesthetics helps us appreciate this concept, as it exposes new dimensions of meaning, new forms of logic unrecognized by the sleepwalking dominant culture. As a cognitive wake-up call, art can challenge what Herbert Marcuse (1955) in *Eros and Civilization* called “the prevailing principle of reason” (p. 185). In this context we come to realize that art and other aesthetic production provide an alternate epistemology, a way of knowing that moves beyond declarative forms of knowledge. Here we see clearly the power of multilogicality and the bricolage: educational psychologists gain new insights into the traditional concerns of their academic domain by looking outside the frameworks of one discipline. It could be quantum physics, it could be history, or as in this case it could be art and aesthetics.

Indeed, literary texts, drama, music, dance, sculpture, and painting empower individuals to see, hear, and feel beyond the surface level of sight and sound. These aesthetic forms can alert educational psychologists to the one-dimensional profiles of the world promoted by reductionistic positivistic researchers. Herbert Marcuse (a central figure in the Frankfurt School of Critical Theory was acutely aware of this cognitive dimension of art and linked it to what he called a critical politics. Art assumes its critical emancipatory value, he wrote, when it is viewed in light of specific historical conditions. Thus, for Marcuse, aesthetic transcendence of repressive social and cultural reality is a deliberate political and cognitive act that identifies the object of art with the repressive social situation to be transcended. This transcendence, this going beyond, of course, is a central goal of postformalism in its politicization of educational psychology.

Following Marcuse’s arguments and the sociopolitical concerns of complex aesthetics, does not mean the promotion of educational psychology—or any academic discourse—as propaganda for a particular point of view. This would be a misguided and disastrous interpretation of the ideas promoted here. Engaging in a multilogical critical multiculturalism and postformalism, does not mean following a blueprint for sociopolitical action—instead it implies the opposite. A critical educational psychology passionately seeks justice but is always attuned to new perspectives on what this might mean and how the well-intentioned pursuit of justice may unintentionally oppress particular groups and individuals—critical multiculturalists have watched this occur far too often. To reduce this possibility postformalism promotes a rigorous self-reflection and self-criticism.

Postformalism as it is conceptualized here simply cannot work without this commitment to self-reflection and self-criticism. Indeed, it is obsessively concerned with the ways our consciousness is constructed and our worldviews are formed and how these dynamics shape our interactions. If postformalism is unable to view its own flaws and mistakes, then it is a miserable failure and should be swept into the dustbin of historical folly.

Thus, these critical psychological discourses illuminate the problematic, as they construct new concepts, new modes of cognition, new angles from which to view the world. In this way they give birth to new meanings, as they break through the surface to explore the submerged social, political, and psychological relationships that shape events. When postformalism is at the top of its game and operating effectively, the pedagogy it supports is characterized by acts of defamiliarization. Moreover, an education grounded on a critical educational psychology seeks not only to defamiliarize the commonsense worlds of students but also to create situations where student experience can be used to demilitarize the world of schooling.

In this critical multicultural, postformal form of education, educators employ aesthetic concerns with the “now” to defamiliarize the postivist school’s unfortunate tendency to functionalize the role of instruction. In this context postformalist educators join with students to seek pleasurable ways of remaking the institution in line with a respect for intelligence. Overcoming the educational tyranny of an exclusive bourgeoisie reliance on delayed gratification and the mistrust of pleasure that accompanies it, teachers operating in the multilogical zone of complexity promote cognitive abilities unbowed by the mystifying power of the given. Emerging from this playful haughtiness is the realization that postformalism can promote a form of teaching that requires interpretation and a form of thinking that seeks new experiences that facilitate interpretation. Such interpretation exposes the forces that suppress creativity, innovation, and new forms of intelligence. These are the very dynamics that lead us to new frontiers of human being, to what I have labeled a “critical ontology.”

The power of the multilogicality of the bricolage is manifested. Cognitive cubism produces a multidimensional form of knowledge that is always open to new interpretations in its hermeneutical connection to larger social, cultural, political, and cognitive processes. Such a multilogical knowledge can never be final because it cannot control the differing contexts within which it will be encountered. In this absence of interpretive closure a critical educational psychology moves understanding away from reductionism into a more complex realm. This cognitive vis-à-vis hermeneutic dynamic reflects the power multiple ways of knowing and their ability to help teachers and students appreciate their own imaginations, creativities, and intelligences. When we rely on particular ways of knowing usually associated with modernist linearity and positivism, teachers operate in a manner that teaches students—particularly those who see the previously unseen—that they are not capable. The Einsteins of our world, the many geniuses who walk among us are quashed before they ever get started. This is a human tragedy.

The guardians of tradition in mechanistic educational psychology are uncomfortable with admitting outsiders into the community of the “cultured” or the fraternity of the “intelligent.” This postformal, critical multiculturalist multiple-ways-of-knowing idea is dangerous, they argue, because such openness is the first step down the dangerous road to a loss of standards. The only cognitive and educational alternative to this subversion of standards, the guardians maintain, is an unyielding protection of official ways of seeing and the certified canon of science, history, and literature. In this context, those of us who point to the boundaries and limitations of Western logical thought and its tendency for domination, ethnocentric arrogance and brutality are often faced with the anger and revenge of the guardians. Our call in critical multiculturalism and the bricolage is to not only include previously marginalized knowledges and their ways of seeing in the canon but to bring these scientific, cultural, aesthetic, cognitive, political, and educational perspectives to the effort to rethink intelligence and even who we are as human beings has not been warmly received.

Despite the mainstream resistance to these concerns, critical multiculturalism and postformal educational psychology continue to promote modes of cognition that are: (1) capable of identifying ideological inscriptions in educational and cultural texts of all varieties; and (2) able and willing to challenge them. As a critical educational psychology breaks through parameters of expectation and reveals new ways of seeing and thinking, it performs a unique and valuable role in a democratic society. Once this process is closed off and limited to only what is “acceptable” to particular forms of dominant power, another thread is removed from the democratic tapestry; another perspective is erased from our multiple ways of seeing. The human state of being is reduced.

CHAPTER 101

Postformalism and Critical Ontology—Part 1: Difference, Indigenous Knowledge, and Cognition

JOE L. KINCHELOE

A key dimension of postformal thinking involves valuing and making use of the power of difference. In this context postformalists engage in a form of metaphoric cognition that involves looking at one entity in relation to other entities, in new contexts, in light of new knowledges. Such previously unencountered relationships open new insights to the individual, causing her to think in new ways. In many ways this is what Vygotsky's Zone of Proximal Development (ZPD) is about—it moves the learner to new forms of encounters via the different experiences and vantage points of a learning community. Those operating in the ZPD have experiences that are different from the individual moving into it, thus, providing the newcomer with unanticipated ways of seeing. These new relationships between different entities and different people are profoundly important in understanding cognition, the world around us, and even who we are as human beings.

As I have written elsewhere, Albert Einstein is extremely helpful in getting across the importance of difference and relationship. In his Special Theory of Relativity, for example, Einstein explained that gravity could be used as a case study of how the universe itself could be better understood as a relationship rather than as a collection of separate objects. This concept was missed by Sir Isaac Newton who argued that gravity was a thing, not an Einsteinian relationship. Gravity is not a substance—a wave or a particle—as physicists argued for 250 years after Newton's work on the subject. The genius of Einstein involved his ability to discern that gravity reflected the relationships between space, time, and mass. Indeed, this insight gave Einstein the power to modify the way we understand the universe and lead to a new world of physics that continues to expand. Postformalism employs this Einsteinian concept to think about cognition and educational psychology. Connecting Einsteinian physics with Umberto Maturana and Francisco Varela's Enactivist understanding of the way the mind emerges in response to a diversity of relationships between humans and the world, postformalism begins to make sense of the inseparability of cognition and identity.

This emergence in *relationship* changes the way we conceptualize *being* for both humans and for things-in-the-world. Thus, educational psychologists informed by postformalism begin to appreciate the fact that patterns of connection become more important than sets of fragmented parts. Acting like a metaphor, postformal cognition "sees" these relationships in ostensibly unrelated things, thus connecting patterns of relationship between diverse entities. In this cognitive

domain humans construct relationships, in the process building bridges between themselves and their circumstances. On the basis of such relationships we migrate to new cognitive and ontological levels—that is, new ways of thinking and being. This chapter explores the ways teachers and learners can build their own ZPDs in relation to the concept of difference. In this context postformalists draw upon the power of subjugated knowledges—the knowledges of indigenous peoples in particular.

Mainstream teacher education and the mechanistic educational psychological tradition are not very interested in the power of difference and the relationships such power can construct. Concurrently, mainstream teacher education and mechanistic educational psychology have been uninterested in questions of ontology. Mainstream teacher education, for example, provides little insight into the forces that shape teacher identity and consciousness. Becoming educated, becoming a teacher-scholar-researcher necessitates personal transformation based on an understanding and critique of these forces. Here is where postformalists bring in their conception of critical ontology to the reconceptualization of educational psychology. Ontology is the branch of philosophy that studies what it means to be in the world, to be human. In an educational psychological context postformalists study what it means to *be* a teacher in relation to indigenous knowledges and ways of being.

As teachers from the dominant culture explore issues of indigeneity, they highlight both their differences with cultural others, and the social construction of their own subjectivities. In this context they come to understand themselves, the ways they develop curriculum, and their pedagogy in a global world. Such issues become even more important at a time where new forms of economic, political, and military colonialism are reshaping both colonizing and colonized societies. This chapter makes three basic points:

- Critical ontology is grounded on the epistemological and ontological power of difference.
- The study of indigeneity and indigenous ways of being highlights tacit Western assumptions about the nature and construction of selfhood and cognition.
- A notion of critical ontology emerges in these conceptual contexts that helps postformalists push the boundaries of Western selfhood in the twenty-first century as we concurrently gain new respect for the genius of indigenous epistemologies, ontologies, and modes of cognition.

WHAT IS CRITICAL ONTOLOGY?

In this context postformalists engage in the excitement of attaining new levels of consciousness, cognition and “ways of being.” Individuals who gain such a critical ontological awareness understand how and why their political opinions, religious beliefs, gender role, racial positions, and sexual orientation have been shaped by dominant cultural perspectives. A critical ontological vision helps postformalists in the effort to gain new understandings and insights as to who we can become. Such a vision helps us move beyond our present state of being—our ontological selves—as we discern the forces that have made us that way. The line between knowledge production, learning, and being is blurred, as the epistemological, the cognitive, and the ontological converge around questions of identity. As we employ the ontological vision we ask questions about ethics, morality, politics, emotion, and gut feelings, seeking not precise steps to reshape our subjectivity but a framework of principles with which we can negotiate. Thus, we join the quest for new, expanded, more just and interconnected ways of thinking and being human.

An important dimension of a critical ontology involves freeing ourselves from the machine metaphors of Cartesianism and its mechanistic educational psychology. Such an ontological stance recognizes the reductionism of viewing the universe as a well-oiled machine and the

human mind as a computer. Such colonized ways of being subvert an appreciation of the amazing life force that inhabits both the universe and human beings. This machine cosmology has positioned human beings as living in a dead world, a lifeless universe. Ontologically, this Western Cartesianism has separated individuals from their inanimate surroundings, undermining any organic interconnection of the person to the cosmos. The life-giving complexity of the inseparability of human and world has been lost and social/cultural/pedagogical/psychological studies of people abstracted—removed from context. Such a removal has exerted disastrous ontological effects. Human beings, in a sense, lost their belongingness to both the world and to other people around them.

The importance of indigenous (Ladislav Semali and Joe Kincheloe's (1999) *What Is Indigenous Knowledge?*) and other subjugated knowledges emerges in this ontological context. With the birth of modernity, the scientific revolution and the colonial policies they spawned, many pre-modern, indigenous ontologies were lost. Ridiculed by Europeans as primitive, the indigenous ways of being were often destroyed by the colonial conquerors of not only the military but the political, religious, and educational variety as well. While there is great diversity among premodern worldviews and ways of being, there do seem to be some discernible patterns that distinguish them from modernist perspectives. In addition to developing systems of meaning, cognition, and being that were connected to cosmological perspectives on the nature of creation, most premodern viewpoints saw nature and the world at large as living systems. Western, often Christian, observers condescendingly labeled such perspectives as pantheism or nature worship and positioned them as an enemy of monotheism. Not understanding the subtlety and nuance of such indigenous views of the world, Europeans subverted the sense of belonging that accompanied these enchanted understandings of nature. European Christomodernism transformed the individual from a connected participant in the drama of nature to a detached, objective, depersonalized observer.

The Western modernist individual emerged from the process alienated and disenchanted—the micro-individual was removed from the macrocosmos. Such a fragmentation resulted in the loss of cosmological significance and the beginning of a snowballing pattern of ontological imbalance. A critical ontology involves the process of reconnecting human beings on a variety of levels and in numerous ways to a living social and physical web of reality, to a living cosmos. Of course, in this process Westerners have much to learn from indigenous thinkers and educators. Teachers with a critical ontological vision help students connect to the civic web of the political domain, the biotic web of the natural world, the social web of human life, the cognitive web of diverse learning communities, and the epistemological web of knowledge production. In this manner, we all move to the realm of critical ontology where new ways of thinking and being and new ways of being *connected* reshape all people.

THE POSTFORMAL EMPLOYMENT OF THE POWER OF DIFFERENCE

The concept of difference is central to a critical ontology. Gregory Bateson uses the example of binoculars to illustrate this point. The image of the binocular—a singular and undivided picture—is a complex synthesis between images in both the left and right side of the brain. In this context a synergy is created where the sum of the images is greater than the separate parts. As a result of bringing the two different views together, resolution and contrast are enhanced. Even more important, new insight into depth is created. Thus, the relationship between the different parts constructs new dimensions of seeing. Employing such examples of synergies, critical ontologists maintain that juxtapositions of difference create a bonus of insight, of cognitive innovation. This concept becomes extremely important in any psychological, epistemological, social, pedagogical, or self-production activity.

Cartesian rationalism has consistently excluded subjugated/indigenous knowledges from validated databases in diverse disciplines. These local, unauthorized knowledges are central to the work of difference-grounded research. I have referred to this type of multiperspectival (multi-methodological and multitheoretical) research as the *bricolage*. Too often in Western colonial and neocolonial history Europeans have viewed the knowledges and ways of seeing of the poor, the marginalized, and the conquered in a condescending and dismissive manner. Many of these perspectives, of course, were brimming with cosmological, epistemological, cognitive and ontological insight missing from Western perspectives.

Western scholars were often simply too ethnocentric and arrogant to recognize the genius of such subjugated/indigenous information. Critical ontologists unabashedly take a hard look at these perspectives—not in some naïve romantic manner but in a rigorous and critical orientation. They are aware that Western scientific thinking often promotes contempt for indigenous individuals who have learned about a topic such as farming from the wisdom of their ancestors and a lifetime of cultivating the land. Many of the subjugated knowledges critical ontologists employ come from postcolonial backgrounds. Such ways of seeing force such scholars and teachers to account for the ways colonial power has shaped their approaches to knowledge production while inscribing the process of self-production.

Starting research, cognitive studies, and pedagogy with a valuing of non-Western knowledges, critical ontologists can spiral through a variety of such discourses to weave a multilogical theoretical and empirical tapestry. They can even juxtapose them with Western ways of seeing. For example, using a Hindu-influenced ontology that delineates the existence of a non-objective, purposely constructed reality, a critical theory that traces the role of power in producing this construction, a Santiago cognitive theory that maintains we bring forth this constructed world via our action within and upon it, and a poststructuralist feminist theory that alerts us to the ways patriarchal and other structures shape our knowledge about this reality, postformalists gain a more profound understanding of what is happening when human beings encounter the world. The insights we gain and the knowledges we produce with these concepts in mind move us to new levels of both epistemological, cognitive, and ontological awareness. Such an awareness may be similar to what the Vajrayana tradition of Buddhism calls “crazy wisdom.” Critical ontologists seek the multilogical orientation of crazy wisdom in their efforts to push the envelope of knowledge production, higher order thinking, and selfhood.

With these insights in mind postformal scholar-teachers can operate in a wide diversity of disciplines and use an infinite number of subjugated and indigenous forms of knowledge. Ethnomathematical knowledges can be used to extend understanding of and knowledge production about math and math pedagogy. Organic African American knowledges of grandmothers, beauticians, and preachers can provide profound insight into the nature of higher order cognition. Hip-hop musicians can help educators working to develop thicker and more insightful understandings of youth cultures and their implications for pedagogy. Ancient African epistemologies and ontologies can help shape the theoretical lenses one uses to study and teach about contemporary racism and class bias.

Feminist understandings are important as they open doors to previously excluded knowledges. Such knowledges often point out the problems with the universal pronouncements of Cartesianism. The presence of gender diversity in this context reveals the patriarchal inscriptions on what was presented as universal, always true, validated knowledge about some aspect of the world. Indeed, this psychological pronouncement about the highest form of moral reasoning may apply more to men than it does to women—and even then it may apply more to upper-middle-class men than to lower socioeconomic class men or more to Anglo men than to Asian and African men. With these feminist insights in mind, critical ontologists find it easier to view the ways the knowledges they produce reflect the cultural, historical, and gendered contexts they occupy. In

this context universality is problematized. Indeed, the more we are aware of those different from us on a variety of levels, the harder it is to produce naive universal knowledges. In our heightened awareness, in our crazy wisdom, we produce more sensitive, more aware modes of information. Once the subjugated/indigenous door is open the possibilities are infinite.

POSTFORMAL KNOWLEDGE: THE BRICOLAGE, DIFFERENCE, AND SELF-AWARENESS IN RESEARCH

When researchers, for example, encounter difference in the nature of the other, they enter into symbiotic relationships where their identity is changed. Such researchers are no longer merely obtaining information, but are entering a space of transformation where previously excluded perspectives operate to change consciousness of both self and the world. Thus, research in a critical ontological context changes not only what one knows but also who one actually is. In this process the epistemological and ontological domains enter into a new relationship that produces dramatic changes. Returning to the beginning of this chapter, Lev Vygotsky was on the right track as he documented the importance of the context in which learning takes place—the zone of proximal development (ZPD). Difference in the sense we are using it here expands the notion of the ZPD into the domain of research, drawing upon the power of our interactions in helping shape the ways we make meaning. In the new synergized position, ontologically sensitive researchers construct new realities where they take on new and expanded roles.

Aware of the power of difference, these researchers develop a new consciousness of the self: (1) the manner in which it has been constructed; (2) its limitations; and (3) a sense of immanence concerning what it can become. Self-awareness is a metacognitive skill that has historically been more valued in Eastern traditions such as Buddhism, Taoism, and Yoga than in the West. Time and again we see the value of pluralism manifest itself in this discussion of difference and the bricolage. A pluralistic epistemology helps us understand the way we are situated in the web of reality and how this situatedness shapes what we see as researchers, as observers of the world. Such awareness reveals the limited nature of our observations of the world. Instead of researchers making final pronouncements on the way things are, postformalists begin to see themselves in a larger interdisciplinary and intercultural conversation. Critical ontologists attuned to this dynamic, focus their attention on better modes of listening and respecting diverse viewpoints. Such higher order listening moves them to new levels of self-consciousness.

Of course, difference does not work as an invisible hand that magically shapes new insights into self and world. Humans must exercise their complex hermeneutic (interpretive) abilities to forge these connections and interpret their meanings. In this context postformalists as critical ontologists confront difference and then decide where they stand in relation to it. They must discern what to make of what it has presented them. With this in mind these critical scholar-educators work hard to develop relationships with those different from themselves that operate to create new meanings in the interactions of identity and difference. In this interaction, knowledge producers grow smarter as they reject modernist Cartesian notions that cultural conflicts can be solved only by developing monological universal principles of epistemology and universal steps to the process of research. Too often, these scholars/cultural workers understand that these “universal” principles simply reflect colonial Western ways of viewing the world hiding in the disguise of universalism. Rigorous examination of the construction of self and society are closed off in such universalism. Indeed, it undermines the development of a critical self-consciousness.

In the face of a wide variety of different knowledges and ways of seeing the world, the cosmos human beings think they know collapses. In a counter-colonial move critical ontologists raise questions about any knowledges and ways of knowing that claim universal status. In this context they make use of this suspicion of universalism in combination with global, subjugated, and

indigenous knowledges to understand how they have been positioned in the world. Almost all of us from Western backgrounds or non-Western colonized backgrounds have been implicated in some way in the web of universalism. The inevitable conflicts that arise from this implication do not have to be resolved immediately. At the base of these conflicts rest the future of global culture as well as the future of research, cognition, and pedagogy. Recognizing that these are generative issues that engage us in a productive process of analyzing self and world is in itself a powerful recognition. The value of both this recognition and the process of working through the complicated conceptual problems are treasured by critical ontologists. Indeed, they avoid any notion of finality in the resolution of such dilemmas.

POSTFORMAL INTERCONNECTIONS: INDIGENEITY AND THE CONSTRUCTION OF SELFHOOD

Always looking for multiple perspectives, insight in diverse places, the power of difference, postformalists as critical ontologists examine human interconnectedness via the lens of indigenous knowledges. Many systems of indigenous knowledge illustrate the *enaction* of interconnectedness and raise profound questions about the ways Western scholars have constructed knowledge, intelligence, scientific methods, and the scholarly disciplines. While there is great diversity in these indigenous knowledges, most assume that humans are part of the world of nature. Extending this holism, many indigenous scholars maintain that the production and acquisition of knowledge involves a process of interactions among the human body, the mind, and the spirit. R. Sambuli Mosha (2000) in *The Heartbeat of Indigenous Africa: A Study of the Chagga Educational System* writes that among the East African Chagga peoples knowledge that is passed along to others must further the development of morality, goodness, harmony, and spirituality. Indeed, he continues, in the Chagga worldview it is impossible to separate these domains. Such fragmentation simply does not make sense to the Chagga. Embedded in every Chagga child is a part of the divine dimension of reality, illustrating the interconnectedness of all dimensions of the cosmos. Thus, knowledge production and the construction of selfhood cannot take place outside this intricate web of relationships.

In Cartesian-Newtonian modes of colonial science the interrelationships cherished by the Chagga are not as *real* as their individual parts. For example, in mechanistic educational psychology consciousness is often reduced to neural and chemical dynamics. Researchers in this context often study nothing outside the narrow confines of brain chemistry from graduate school to retirement. The notion that the understanding of human consciousness might be enhanced by anthropological, theological, or philosophical investigations rarely, if ever, occurs to such researchers over the decades of their research.

Making use of indigenous knowledges and the theological insights of Buddhism in this domain, cognitive theorist Francisco Varela develops a dramatically different concept of consciousness. Understanding the indigenous notion that the individual cannot be understood outside the community of which she is a part, Varela posits that human consciousness *emerges* from the social and biological interactions of its various parts. This understanding, postformalists contend, will revolutionize the fields of cognitive science, educational psychology, and even pedagogy. When scholars grasp the multilogical, interrelated nature of the possibilities for dramatic changes in the ways scholars and educators operate begin to take place. Using the indigenous metaphor, knowledge *lives* in the cultures of indigenous peoples. As opposed to the disciplinary knowledges of Cartesian-Newtonianism, which are often stored in archives or laboratories, indigenous knowledges live in everyday cultural practices.

Critical ontologists ask hard questions of indigenous knowledges. They know that folk knowledges—like Western scientific knowledges—often help construct exploitation and

oppression for diverse groups and individuals. With this caution and resistance to essentialism in mind, ontological scholars study the ways many indigenous peoples in Africa construct the interrelationships of their inner selves to the outer world. This indigenous tendency to avoid dualism that when unacknowledged undermines the balance of various relationships is profoundly important. For example, the dualism between humans and nature can wreck havoc in an indigenous social system. In many indigenous African conceptions humanness is viewed as a part of nature, not separate from it. Unlike scholars in the Cartesian-Newtonian disciplines, the world was too sacred for humans to study and dominate or conquer. Once humanness and the environment were viewed as separate entities, forces were unleashed that could destroy the delicate eco- and social systems that sustained the indigenous culture. Thus, to accept the dualism between humanness and nature in the minds of many African peoples was tantamount to committing mass suicide.

Another example of indigenous culture whose knowledges critical ontologists deem valuable is the Andean peoples of South America. Everyone and everything in traditional Andean culture is sentient, as, for example, the rivers and mountains have ears and eyes. Acting in the world in this cultural context is a dimension of being in relationship to the world. In one's actions within the physical environment, an Andean individual is in conversation with the mountains, rivers, trees, lakes, etc. This language of conversation replaces in Andean culture a Western traditional scientific language of knowing. A profound epistemological shift has taken place in this replacement. In Andean culture the concept of knower and known is irrelevant. Instead humans and physical entities engage in reciprocal relationships, carrying on conversations in the interests of both.

These conversations have been described as mutually nurturing events, acts that enhance the ontological evolution of all parties involved via their tenderness and empathy for the living needs of the other. Thus, the epistemology at work here involves more than simply knowing about something. It involves tuning oneself in to the other's mode of being—its ontological presence—and entering into a life generating relationship with it (Apffel-Marglin, 1995). Critical ontologists take from this an understanding of a new dimension of the inseparable relationship between knowing and being. Those working in the academic disciplines of Western societies must enter into ontological relationships with that which they are studying. Such relationships should be enumerated and analyzed. How am I changed by this relationship? How is the object of my study changed or potentially changed by the relationship?

Great change occurs as a result of the Andean peoples' conversation with nature. Nature's voice is heard through the position and brilliance of planets and stars; the speed, frequency, color, and smell of the wind; and the size and number of particular wild flowers to mention only a few. Such talk tells Andeans about the coming weather and various dimensions of cultivation and they act in response to such messages. Because of the overwhelming diversity of ecosystems and climates in the Andes mountains and valleys, these conversations are complex. Interpretations of meanings—like any hermeneutic acts—are anything but self-evident. Such conversations and the actions they catalyze allow the Andean peoples to produce an enormous variety of cultivated plant species that amaze plant geneticists from around the world.

The Andeans actually have a word for those places where the conversation between humans and the natural world take place. *Chacras* include the land where the Andeans cultivate their crops, the places where utensils are crafted, and the places where herds and flocks live and graze. According to the Andeans these are all places where all entities come together to discuss the regeneration of life. The concept of interrelationship is so important in the Andean culture that the people use the word, *ayllu*, to signify a kinship group that includes not only other human beings but animals, mountains, streams, rocks, and the spirits of a particular geographical place. Critical ontological scholars adapt these indigenous Andean concepts to the rethinking of the ways they study, as

they identify the methodologies, epistemologies, ontologies, cultural systems, social theories, and infinitum that they employ in their multilogical understanding of the research act. Those who research the social, psychological, and educational worlds hold a special responsibility to those concepts and the people they research to select critical and life affirming logics of inquiry. A critical hermeneutics demands that relationships at all levels be respected and engaged in ways that produce justice and new levels of understanding—in ways that regenerate life and, central to our ontological concerns, new ways of being.

Thus, postformalists as critical ontologists are able to make use of the power of difference in the context of subjugated/indigenous knowledges. The power of difference or “ontological mutualism” transcends Cartesianism’s emphasis on the thing-in-itself. The tendency in Cartesian-Newtonian thinking is to erase mutualism’s bonus of insight in the abstraction of the object of inquiry from the processes and contexts of which it is a part. In this activity it subverts difference. The power of these synergies exists not only in the cognitive, social, pedagogical, and epistemological domains but in the physical world as well. Natural phenomena, as Albert Einstein illustrated in physics and Humberto Maturana and Francisco Varela laid out in biology and cognition, operate in states of interdependence. These ways of seeing have produced perspectives on the workings of the planet that profoundly differ from the views produced by Western science.

What has been fascinating to many is that these post-Einsteinian perspectives have in so many ways reflected the epistemologies and ontologies of ancient non-Western peoples in India, China, and Africa and indigenous peoples around the world. Thus, critical ontology’s use of indigenous knowledge is not offered as some new form of postcolonial exploitation—as in pharmaceutical companies’ rush into indigenous locales to harvest plants that indigenous peoples have known for millennia possess medicinal qualities. In this context such products are then marketed as culturally sensitive postcolonial forms of exotica. The hipness of such entrepreneurial diversity provides little benefits for the indigenous people watching the process—they are not the beneficiaries of the big profits. Instead, postformalism vis-à-vis critical ontology employs indigenous peoples as teachers, as providers of wisdom. In their respect for such indigenous knowledges and indigenous peoples, critical ontologists use such indigenous teachings to create a world more respectful and hospitable to indigenous peoples’ needs and ways of being.

REFERENCE

- Apffel-Marglin, F. (1995). Development or decolonization in the Andes? *Interculture: International Journal of Intercultural and Transdisciplinary Research*, 28(1), 3–17.

CHAPTER 102

Postformalism and Critical Ontology—Part 2: The Relational Self and Enacted Cognition

JOE L. KINCHELOE

Making use of our concept of difference and the insights provided by indigenous knowledges, cognitive activities, and ways of being, we are ready to examine the relationship connecting the epistemological, the cognitive, and the ontological. In a critical ontology, the teaching and learning emerge as profoundly exciting enterprises because they are always conceptualized in terms of what we can become—both in an individual and a collective context. In our socio-ontological imagination, we can transcend the Enlightenment category of abstract individualism and move toward a more textured concept of the relational individual. While abstract individualism and a self-sufficient ontology seem almost *natural* in the Western modernist world, of course, such is not the case in many indigenous cultures and has not been the case even in Western societies in previous historical eras. In ancient Greece, for example, it is hard to find language that identified “the self” or “I”—such descriptions were not commonly used because the individual was viewed as a part of a collective who could not function independently of the larger social group. In the “commonsense” of contemporary Western society and its unexamined ontological assumptions this way of seeing self is hard to fathom.

ESCAPING THE WESTERN FRAGMENTED SELF

Enlightenment ontology discerns the natural state of the individual as solitary. The social order in this modernist Eurocentric context is grounded on a set of contractual transactions between isolated individual atoms. In other works I have referred to Clint Eastwood’s “man with no name” cinematic character who didn’t need a “damn thing from nobody” as the ideal Western male way of being—the ontological norm. Operating in this context, we clearly discern, for example, cognitive psychology’s tradition of focusing on the autonomous development of the individual monad. In postformalism’s critical ontology a human being simply can’t exist outside the inscription of community with its processes of relationship, differentiation, interaction, and subjectivity. Indeed, in this critical ontology the relational embeddedness of self is so context dependent that psychologists, sociologists, and educators can never isolate

a finalized completed “true self.” Since the self is always in context and in process, no final delineation of a notion such as ability can be determined. Thus, we are released from the rugged cross of IQ and such hurtful and primitive colonial conceptions of “intelligence.” In this context it is interesting to note that famed psychometricians Richard Herrnstein and Charles Murray (1994), in *The Bell Curve*, noted without any data that the average IQ of Africans is probably around seventy-five—epistemological/ontological neocolonialism in a transparent form.

One can quickly discern the political consequences of a Cartesian ontology. Human beings in Western liberal political thought become abstract bearers of particular civic rights. If individuals are relational, context-embedded beings, however, these abstract rights may be of little consequence. A critical ontology insists that individuals live in specific places with particular types of relationships. They operate or are placed in the web of reality at various points of race, class, gender, sexual, religious, physical ability, geographical place, and other continua. Where individuals find themselves in this complex web holds dramatic power consequences. Their location shapes their relationship to both dominant culture and Western colonialism and the psychological and curricular assumptions that accompanies them. In other words the intelligence mechanistic psychology deems these individuals to possess profoundly depends on this contextual, power-inscribed placement. A prime manifestation of ontological alienation involves a lack of recognition of the dramatic effect of these dynamics on everything that takes place in the psycho-educational cosmos.

In the context of postformalism’s critical ontology the autonomous self with a fixed intellectual ability becomes an anachronism. As an effort to appreciate the power of human beings to affect their own destinies, to exercise human agency, and to change social conditions, critical ontologists study selfhood in light of the sociological, cultural studies, cultural psychological, and critical analytical work of the last few decades. Much of what dominant psychology and education consider free will and expressions of innate intelligence are simply manifestations of the effects of particular social, cultural, political, and economic forces. While we can make decisions on how we operate as human beings, we are never completely independent of these structuring forces. This is true no matter who we are—nobody can operate outside of society or free from cultural, linguistic, ideological influences.

It is important to note here that neo-positivist educational policy makers contend that their work takes place outside of the influence of these dynamics. They claim that their work avoids cultural values and morally inscribed issues and because of such diligence, they have presented us the truth about how students learn and how teachers should teach. In the critical ontological context developed here, such researchers must take a closer look at who they are and the structuring forces that have shaped their views of the world, mind, and self. Their inability to discern the effects of these forces reflects ontological alienation. Such alienation undermines their ability to imagine new and better ways of being human both for themselves and for the teachers and students their knowledges and policies oppress.

A postformal education informed by a complex ontology asks the question: how do we move beyond simply uncovering the sources of consciousness construction in our larger attempt to reconstruct the self in a critical manner? Critical teachers must search in as many locations as possible for alternate discourses, ways of thinking and being that expand the envelopes of possibility. In this context teachers explore literature, history, popular culture, and ways of forging community in subjugated/indigenous knowledges. Here teachers develop their own and their students’ social and aesthetic imaginations. As postformalists we imagine what we might become by recovering and reinterpreting what we once were. The excitement of education as ontological quest is powerful.

CONSTRUCTING A CRITICAL ONTOLOGY: A POSTFORMAL SELF

Employing an understanding of complexity theory, Maturana and Varela's Santiago Enactivism as the process of life, a postcolonial appreciation of indigeneity, critical theoretical foundations, the critique of Cartesianism, and poststructuralist feminist analysis, we can lay the conceptual foundations for a new mode of selfhood. Such a configuration cannot be comprehensively delineated here, but we can begin to build theoretical pathways to get around the Cartesian limitations on the ontological imagination. With Humberto Maturana and Francisco Valera's concept that living things constantly remake themselves in interaction with their environments, our notion of a new self or a critical ontology is grounded on the human ability to use new social contexts and experiences, exposure to new knowledges and ways of being to reformulate subjectivity. This reformulation of subjectivity is a central dimension of learning in a postformal context—the inseparability of ontology and cognition. In this context the concept of personal ability becomes a de-essentialized cognition of possibility. No essentialized bounded self can access the cognitive potential offered by epiphanies of difference or triggered by an “insignificant” insight.

As we begin to identify previously unperceived patterns in which the self is implicated, the possibility of cognitive change and personal growth is enhanced. As the barriers between mind and multiple contexts are erased, the chance that more expanded forms of “cognitive autopoiesis”—self-constructed modes of higher-order thinking—will emerge is increased. A more textured, a thicker sense of self-production and the nature of self and other is constructed in this process. As we examine the self and its relationship to others in cosmological, epistemological, linguistic, social, cultural, and political contexts, we gain a clearer sense of our purpose in the world especially in relation to justice, the indigenous-informed notion of interconnectedness, and even love. In these activities we move closer to the macro-processes of life and their micro-expressions in everyday life. We are developing the postformal self where cognition and identity are never seen as separate dynamics.

A key aspect of the life processes is the understanding of difference that comes from recognition of patterns of interconnectedness. Knowing that an individual from an upper-middle-class European background living in a Virginia suburb will be considered culturally bizarre by a group of tribespeople from the Amazon rainforest is a potentially profound learning experience in the domain of the personal. How is the suburbanite viewed as bizarre? What cultural practices are seen as so unusual? What mannerisms are humorous to the tribespeople? What worldviews are baffling to them? The answers to such questions may shock the suburbanite into reorienting her view of her own “normality.” The interaction may induce her to ask questions of the way she is perceived by and the way she perceives others. Such a bracketing of the personal may be quite liberating. This interaction with the power of difference is another example of Maturana and Valera's structural coupling that creates a new relationship with other and with self. In Maturana and Varela's conceptualization a new inner world is created as a result of such coupling.

Such explorations on the ontological frontier hold profound curricular implications. As students pursue rigorous study of diverse global knowledges, they come to understand that the identities of their peer groups and families constitute only a few of countless historical and cultural ways to be human. As they study their self-production in wider biological, sociological, cultural studies, historical, theological, psychological, and counter-canonical contexts, they gain insights into their ways of being. As they engage the conflicts that induce diverse knowledge producers to operate in conflicting ways, students become more attuned to the ideological, discursive, and regulatory forces of power operating in all knowledges. This is not nihilism, as many defenders of the Eurocanon argue; this is the exciting learning process of exploring the world and the self and their relationship in all of the complexity such study requires.

The processual and relational notions of self structurally couple with the sociocultural context and can only be understood by studying them with these dynamics in mind. These characteristics of self hold profound implications politically, psychologically, and pedagogically. If our notion of the self emerges in its counter-colonial relationship with multiple dimensions of the world, it is by its nature a participatory entity. Such an interactive dynamic is always in process, and thus demands a reconceptualization of the concept of individualism and self-interest—a reconceptualism that leads to the postformal self. The needs of self and others in this context begin to merge, as the concept of self-reliance takes on new meanings. Notions of educational purpose, evaluation, and curriculum development are transformed when these new conceptions of the personal domain come into the picture. In the first decade of the twenty-first century we stand merely on the threshold of the possibilities this notion of selfhood harbors.

POSTFORMALISM AND ENACTIVISM: PSYCHO-ONTOLOGICAL POSSIBILITIES

A critical ontology understands that the effort to explain complex cognitive, biological, social, or pedagogical events by the reductionistic study of their components outside of the larger processes of which they are a part will not work. It will not move us to new levels of understanding or set the stage for new, unexplored modes of being human. The social, biological, cognitive, or the pedagogical domain is not an assortment of discrete objects that can be understood in isolation from one another. The fragmented pieces put forth in such studies do not constitute reality—even if commonsense tells Westerners they do. The deeper structures, the tacit forces, the processes that shape the physical world and the social world will be lost to such observers. As I argue in the introduction to *The Stigma of Genius: Einstein, Consciousness, and Education* (1999), Einstein's General Theory of Relativity could not have been produced without this ontological understanding of connectedness, process, and the limitations of studying only things-in-themselves.

For 250 years physicists had been searching for the basic building block of gravity—some contended it was a particle (a graviton), others argued it was a gravity wave. Einstein pointed out that it was neither, that it was not a *thing* at all. Gravity, he maintained, was a part of the structure of the universe that existed as a relationship connecting mass, space, and time. This insight, of course, changed the very nature of how we conceptualize the universe. It should have changed how we conceptualize epistemology, cognition, pedagogy, and ontology. Of course, it didn't—and that's what we are still working on. The emphasis on studying and teaching about the world as a compilation of fragmented things-in-themselves has returned with a vengeance, of course, in recent educational reforms and mandates for use of only positivistic forms of educational research.

In this context the work of Humberto Maturana is instructive. Maturana and Varela's Santiago Enactivism employ the same ontological concept of interconnectedness that Einstein's used in the General Theory of Relativity to explain life as a process, a system of interconnections. Indeed, they argue, that the process of cognition is the process of life. In Enactivism mind is not a thing-in-itself but a process—an activity where the interactions of a living organism with its environment constitute cognition. In this relationship, life itself and cognition are indelibly connected and reveal this interrelationship at diverse levels of living and what are still considered nonliving domains. Where mind ends and matter begins is difficult to discern, a situation that operates to overturn the long-standing and problematic Cartesian separation of the two entities. In Maturana's and Varela's conception, mind and matter are merely parts of the same process—one cannot exist without the other. A critical ontology seeks to repair this rupture between mind and matter, self and world. In this reconnection we enter into a new phase of human history, new modes of cognition, and dramatic changes in educational psychology and pedagogy.

According to the Enactivists, perception and cognition also operate in contradiction to Cartesianism, as they construct a reality as opposed to reflecting an external one already in existence. The interactive or circular organization of the nervous system described by Maturana is similar to the hermeneutic circle as it employs a conversation between diverse parts of a system to construct meaning. Autopoiesis as the process of self-production is the way living things operate. Self-construction emerges out of a set of relationships between simple parts. In the hermeneutic circle the relationships between parts “self-construct” previously unimagined meanings. Thus, in an ontological context meaning emerges not from the thing-in-itself but from its relationships to an infinite number of other things. In this complexity we understand from another angle that there is no final meaning of anything; meanings are always evolving in light of new relationships, new horizons. Thus, in a critical ontology our power as meaning makers and producers of new selfhoods is enhanced. Cognition is the process in which living systems organize the world around them into meaning. With this in mind critical ontology creates a new era of immanence—“what could be” has never implied so much.

Specifically, Maturana and Varela argue that our identities do not come with us into the world in some neatly packaged unitary self. Since they “rise and subside” in a series of shifting relationships and patterns, the self can be described using the Buddhist notion that the self is empty of self-nature. Understanding this, Francisco Varela maintains, self-understanding and self-change become more possible than ever before. The self, therefore, is not a material entity but takes on more a virtual quality. Human beings have the experience of self, but no self—no central controlling mechanism—is to be found. Much is to be gained by an understanding of the virtual nature of the self. Such knowledge is an important dimension of a critical ontology. According to the Enactivists this knowledge helps us develop intelligent awareness—a profound understanding of the construction and the functioning of selfhood. Intelligent awareness is filled with wisdom but devoid of the egocentrism that undermines various notions of critical knowing. In such a context intelligent awareness cannot be separated from ethical insight. Without this ontological understanding many of pedagogies designed to empower will fan the flames of the egocentrism they attempt to overcome. If nothing else, a critical ontology cultivates humility without which wisdom is not possible.

ENACTIVISM AND THE POSTFORMAL SELF—RELATIONAL SELFHOOD

From Maturana and Varela’s perspective learning takes place when a self-maintaining system develops a more effective relationship with the external features of the system. In this context Enactivism is highlighting the profound importance of *relationship* writ large as well as the centrality of the nature and quality of the relationships an organism makes with its environment. In a cognitive context, this is an extension of Vygotsky’s notion of the zone of proximal development (ZPD) to the ontological realm—it is our assertion here that indigeneity should become a part of Westerners’ ZPD. In the development of a critical ontology, we learn from these ideas that political empowerment vis-à-vis the cultivation of the intellect demand an understanding of the system of relationships that construct our selfhood. In the case of a critical form of pedagogy, these relationships always involve students’ connections to cultural systems, language, economic concerns, religious belief, social status, and the power dynamics that constitute them. With the benefit of understanding the self-in-relationship teachers gain a new insight into what is happening in any learning situation. Living on the borderline between self and external system and self and other, learning never takes place outside of these relationships. Such an appreciation of the postformal self changes our orientation toward pedagogy.

Teachers who view classroom practice in the ontological framework of the postmodern self understand their role as creators of situations where students’ experiences could intersect with

information gleaned from the academic disciplines. They value the pragmatic dimensions of the classroom intersection of selfhood and cognition. In contrast, if knowledge and learning are viewed as simply mastering an external body of information independent of human beings, then the role of the teacher is to take this knowledge and insert it into the minds of students. Thus, in the separation of cognition, epistemology and ontology, evaluation procedures, for example, tend to emphasize the retention of isolated bits and pieces of data. Conceptual thinking is discouraged, as mechanistic schooling trivializes the complexity of learning. Students are evaluated on the lowest level of human cognition—the ability to memorize in a decontextualized context. Thus, if pedagogical practice is removed from the understandings provided by these epistemological, ontological, and cognitive dynamics, schooling will remain merely an unengaging hoop through which to jump on the road to adulthood.

As we now know, a critical ontology is intimately connected to a relational self. Humans are ultimately the constructs of relationships, not fragmented monads or abstract individuals. From Varela's perspective this notion of humans as constructs of relationships corresponds precisely to what he is labeling the virtual self. A larger pattern—in the case of humans, consciousness—arises from the interaction of local elements. This larger pattern seems to be driven by a central controlling mechanism that can never be located. Thus, we discern the origin of traditional psychology's dismissal of consciousness as irrelevant. This not only constituted throwing out the baby with the bath water but discarding the tub, the bathroom fixtures, and the plumbing as well. In this positivistic articulation the process of life and the basis of the cognitive act were deemed unimportant. A critical ontology is always interested in these processes because they open us to a previously occluded insight into the nature of selfhood, of human being. The autopoiesis, the self-making allows humans to perpetually reshape themselves in their new relationships and resulting new patterns of perception and behavior.

There is no way to predict the relationships individuals will make and the nature of the self-(re)construction that will ensue. Such uncertainty adds yet another element of complexity to the study of sociology, psychology, and pedagogy, as it simultaneously catalyzes the possibilities of human agency. It causes those enamored with critical ontology yet another reason to study the inadequacies of Cartesian science to account for the intricacies of the psychological domain. Physical objects *don't necessarily* change their structures via their interaction with other objects. A critical ontology understands that human beings do change their structures as a result of their interactions. Thus, the human mind moves light years beyond the lifeless mechanistic computer model of mind—a psychological way of seeing that reduces mental activity to information processing.

The human self-organization process—while profoundly more complex than the World Wide Web—is analogous to the way the Web arranges itself by random and not-so-random connections. The Web is an autopoietic organism that constructs itself in a hypertextual mode of operation. Unanticipated links create new concepts, ways of perceiving, and even ways of being among those that enter into this domain of epistemological emergence. Such an experience reminds one that a new cultural logic has developed that transcends the mechanical dimensions of the machine epistemologies and ontologies of the modernist industrial era. Consider the stunning implications that when numerous simple entities possessing simple characteristics are thrown together—whether it be Web sites on the Internet or individuals' relationships with aspects of their environments—amazing things occur. From such interactions emerge a larger whole that is not guided by a central controlling mechanism. Self-awareness of this process of creation may lead to unanticipated modes of learning and new concepts of human being.

Postformalist teachers and students have no choice; they must deal with these ontological issues. When they are considered within the context of our understanding of the power of difference and the specific benefits of indigeneity, a postcolonial pedagogy begins to take shape that is truly

global in its scope, its concerns and its influences. Such a curriculum is transformative in ways that other “transformative” curricula have not been in its connection to a plethora of knowledges and ways of being. Employing interconnectedness with difference to push the boundaries of the Western alienated self, this postcolonial pedagogy sets off an autopoietic process energized by the interplay of multiple forms of difference—cultural, political, epistemological, cognitive, and, of course, ontological. It will be fascinating to watch where a critical ontology can take us in the coming years.

REFERENCES

- Herrnstein, R. J., and Murray, C. (1994). *The Bell Curve: Intelligence and Class Structure in American Life*. New York: Free Press.
- Kincheloe, J. L., Steinberg, S. R., and Tippins, D. (1999). *The Stigma of Genius: Einstein, Consciousness, and Education*. New York: Peter Lang.

Paradigmatic Change

CHAPTER 103

Educational Psychology in a New Paradigm: Learning a Democratic Way of Teaching

ROCHELLE BROCK AND
JOE L. KINCHELOE

Rochelle: I recently attended an event at a high school in the Bronx that celebrated the creative expression of its students. The event was called One Mike! and was put on by a group of students who were members of The Society for Independent Thought to showcase the poetic talent of its members. I sat in the audience surrounded by students (and their parents) who were considered by the system “throw-aways.” Instead these students recited poetry and prose about love, death, hope, despair in voices filled with humor and anger, strength and sadness. They were aware of how they are perceived in society and they are aware of the obstacles (at least on a surface level) that confront them daily, yet there was a vibrancy that was infused in the event and in their words. I left the school feeling both hopeful for the future of these children, based on what I had just experienced, and incredibly sad because I knew what they were up against.

When I place my visit to the Bronx in the context of this article I of course can see the immediate connections between the students, their teachers, and the problematics with traditional educational psychology. These same students that displayed an abundance of talent and insight into the human condition would be deemed unintelligent by the school system and the psychometrics of education psychology. All the students were Black or Latino and most were from low-income families. These two factors in the minds of education psychologists presuppose the intellect and ultimate destiny of the students.

Joe: I can understand your sadness. As class inequality, especially along the lines of race and gender, continues to expand in the twenty-first century, students, of course, are the innocent victims caught in the trap of neoliberal economic policies and a pervading social unconsciousness. What is particularly amazing to me is that the very discussion of this growing class inequality and its impact on students seems somehow out of place in mainstream educational discourse. Educational leaders frequently tell me that calls to abolish welfare exact more severe punishment for crime, end social programs, destroy affirmative action, and have little to do with questions of education. “Let’s keep politics out of education,” they politely ask. My point is exactly the opposite of such educators—I want to make explicit what everyone wishes would just go away. My purpose in general is to expose the tacit political dynamics that exacerbate the class divisions between students. I am specifically interested in the ways that mainstream educational psychology often “certifies the damage” that class politics exacts on contemporary American students.

Rochelle: I always find it so ironic when people insist that education and the ways schools operate is not political. In order to understand the most important things about schooling—what is taught, who teaches, how it is taught—you have to address the political dimensions of schooling.

Joe: Something educational psychology is afraid to do. The term psychologization, has been used in recent years to denote the tendency within social, cultural, and educational work to depoliticize. Embedded in the concept is a moral and ethical relativism that subverts the attempt to connect teaching with questions of social justice. In mainstream educational psychology the insights gained over the past few decades concerning the political and cultural inscriptions of research have fallen on deaf ears. Without such an understanding, educational psychologists support an education that views the poor and nonwhite through the lenses of dominant Western European, male, upper-middle-class culture. As cultural actors, such psychologists look only for cognitive traits with which they are familiar. As a result, only a culturally specific set of indicators of aptitude is sought. In this way the abilities of students from cultures different than the psychologist are dismissed. In a political context, those who deviate from the socioeconomic and cultural norms of psychology fail to gain the power of psychological and educational validation so needed in an effort to achieve socioeconomic mobility and status in contemporary societies.

Rochelle: Historically, education has served as a convenient means of maintaining the status quo of those in power. Michael Apple (1999), posits that education in the United States fosters our belief in the concept of a meritocratic society. We become who we are based on our merits and not on the social, political, historical structures of society. And when we don't succeed it's our fault and not the societal structure that is constructed on inequality based on race, class, and gender differences. In this way, education mirrors the undemocratic and class-based character of economic life in the United States. The system of education in a capitalistic economy trains a class of people to be nonthinkers. Although the American Dream persists, the truth behind it proves to be a falsehood many times over. The American Dream is defined primarily by the economic market, property, and, power relationships. We are talking about power. Put simply, "they" will not let anything happen that is not in "their" best interest.

Just as insidious as the concept of The American Dream is the current administrations educational policy No Child Left Behind (NCLB). In a misguided attempt to improve public education this policy is perhaps one of the most detrimental to students and teachers. Based on education psychology, NCLB uses test, test, and more tests to prove a school is doing well or poorly. Those schools who pass are rewarded, and those failing are punished. But we of course know that the pass and fail rate of the various schools is importantly based on factors that NCLB doesn't take into account. So we are left with good teachers who in fear for their jobs teach to the test, schools that are given report cards for poor performance, NCLB requiring items that the funding is not available for and ultimately (as one anti-NCLB Web site calls itself) *No Child Left*, at least a certain type of child. The school that the students of One Mike! attended was one of the NCLB failing schools and is due to be closed in two years.

The American educational system has three functions. The first purpose of education is to provide information for students. This information cannot be neutral by its very nature, and for communities of color the information provided is more often inferior to and at odds with the information provided to the White community. The second goal is to control people and to pigeonhole individuals into their predetermined place in society. The final purpose or goal of Euro-American education is to instill Anglo-Saxon male values or cultural frames of reference.

The purpose of schooling whenever delineated by critical thinkers all have in common the knowledge that schools are not about creating a just society but more about maintaining the status quo—keeping power out of the hands of the poor and blacks and Latinos. Educational psychologists help schools fulfill this based on the paradigm under which they operate. Either a student fits into the accepted, culturally specific norm of White, male, upper-middle-class values or they are placed at the margins of acceptability. Education psychologists base their hierarchy of intelligence on cultural traits with which they are familiar—their own.

Joe: The discipline of educational psychology and the educational leaders it informs have had difficulty understanding that the poor and nonwhite students are not stupid. Often children from working class and lower-socioeconomic-class homes do not ascribe the same importance to the mental functions required by intelligence/achievement tests and academic work that middle- and upper-middle-class students do. In this context the difference between cultural disposition and intellectual ability is lost upon the field of educational psychology. Working class and poor students often see academic work as unreal, as a series of short-term tasks rather than something with a long-term justification. Thus, these students many times display little interest in school. This lack of motivation is often interpreted by teachers, of course, as inability or lack of intelligence. Poor performance on standardized tests scientifically confirms the “inferiority of the poor students.”

Rochelle: Case in point. The stigma of being black according to Claude Steele (1992) is the endemic devaluation many face in American society and schools. The connection of stigma to school achievement among black Americans has been vastly underappreciated, asserts Steele. He further states that, “if blacks are made racially valuable in school, they can overcome even substantial obstacles” (p. 86). At the root of the black achievement problem is the failure of American schooling to meet this simple condition for black students. Doing well in school requires a belief that school achievement can be a promising basis of self-esteem, and that belief needs constant reaffirmation even for advantaged students. Education psychology is not informed by these racial understandings. Because it decontextualizes the lived realities of individual students and the impact of their racial, class, and gender groups, educational psychologist is blinded to the subjective nature of its own discipline. This single mindedness blocks educational psychology from realizing (and deeming that realization worthy) the social constructions of the lived reality of students.

Jacqueline Jordan Irvine, in *Black Students and School Failure: Policies, Practices, and Prescriptions*, posits that black students are subject to school failure because of their race, social class, and culture. According to Irvine, race is a “salient factor that contributes to unequal school treatment, participation, and distribution of rewards for all black students.” She goes on to say, “black students regardless of social class and education, do not share with whites equal opportunities for jobs, housing, and political and economic power” (p. xxii). Her observations force me to ask how would the experiences of students be different if they lived in a society that constantly attempted to place them at the bottom?

Joe: Research on the educational status of low-status groups in other countries provides important insight into the psychological assessment and educational performance of marginalized students in American schools. In Sweden, Finnish people are viewed as inferior—the failure rate for Finnish children in Swedish schools is very high. When Finnish children immigrate to Australia, however, they do well—as well as Swedish immigrants. The same can be said for Korean children in Japanese schools versus Korean children in American schools. The results are numerous and generally follow the same pattern: racial, ethnic, and class groups who are viewed negatively or as inferiors in a nation's dominant culture tend to perform poorly in that nation's schools. Such research helps dispose of the arguments that schools failure results from the cultural inferiority of the poor or the marginalized. It teaches us that power relations between groups (class, race, ethnic, gender, etc.) must be considered when various children's performance is studied. Without the benefits derived from such understandings brilliant and creative young people from marginalized backgrounds will continue to be relegated to the vast army of the inferior and untalented. Such an injustice is intolerable in America. There is something wrong with a discipline that cannot discern the impact of the social on the psychological, that claims neutrality and objectivity but fails to appreciate its own sociocultural embeddedness, and that consistently rewards the privileged for their privilege and punishes the marginalized for their marginalization.

Rochelle: Yes, so what we need is a system that understands the difference and therefore develops curriculum that helps students to appreciate the social, political, historical, and economic forces that shape their lives. Program designs that do not take note of the differences, and develop approaches

that work to maximize the abilities of all ethnic groups, will not be effective. Currently, most education research seeks to minimize, decrease, or ignore differences between groups so that education can proceed more easily and economically. The reverberation is cultural incongruity between poor and minority students and the pedagogy of the school system. The obstacles that students encounter that facilitate academic underachievement are manifested in the classroom as a result of societal problems that have been a part of America since its inception. Reading the newspaper on any given day illuminates the obstacles that face blacks and other ethnic minorities. Unfair housing, unequal political representation, and high unemployment present the myriad obstacles that minority students must overcome. All too often in the public school setting, it is expected that poor and minority students cannot achieve; therefore not much is expected of them. For example, it is perfectly “okay” for a Black child to do “C” work. Can you visualize a school and teachers that expected and encouraged children to perform to their full potential?

Joe: Yes I can and that visualization leads me to ask how do we induce mainstream educational psychologists and teachers to understand the importance of these political aspects of cognition? Within the psychometric web of Cartesian-Newtonian (referring to the work of Rene Descartes and Isaac Newton of the seventeenth and eighteenth century) scientific assumptions, our arguments are dismissed as empirically unsupported. What exactly does such an accusation mean? A democratic psychology is unsupported in the sense that little experimentation has taken place to determine if sociopolitical awareness actually improves cognition. The way this would be empirically measured would involve controlled observation of a classroom operated by a socially aware teacher and the administration of a research instrument designed to determine if students acquired more “certified data” in this context. Such verification of the “validity” of such teaching would have little to do with our concerns and purposes. In the first place, we do not believe that the measure of our success involves how much unproblematic data students might memorize. Secondly, the types of understandings we seek to generate do not lend themselves to quantitative measurements that ask “how much.” Because of such paradigmatic mismatches, it is hard for critical educators to carry on conversations about the effort to democratize education with many mainstream educational psychologists.

Rochelle: These psychometric assumptions devastate the lives of increasing numbers of minority and poor students, leading them to question their own existence, their worth as they try to maneuver a world they have not been taught to understand. I again return to the students and One Mike! In addition to the monthly program the students also publish a creative journal every semester with entries from past and present students, parents, teachers, and members from the community. As I read through the 2004 issue I noticed the level of questioning in virtually all the pieces. Questioning self, society, unjust rules. Reading the various pieces I continuously wondered if my undergraduate students (mostly white, rural, and middle class) would be as critically cognizant and in tune with the world as these students. The answer is probably not yet. But by education psychology standards my undergraduate students would nevertheless be viewed as more intelligent.

Joe: When we rethink intelligence a schooling shaped by a sociopolitically contextualized educational psychology, self-reflection would become a priority with teachers and students, as critical educators attend to the impact of school on the shaping of the self. In such a context, learning would be considered an act of meaning-making that subverts the technicist view that thinking involves the mastering of a set of techniques. Education could no longer separate techniques from purpose, reducing teaching and learning to de-skilled acts of rule following and concern with methodological format. Schools guided by a democratized educational psychology would no longer privilege white male experience as the standard by which all other experiences are measured. Such realizations would point out a guiding concern with social justice and the ways unequal power relations at school destroy the promise of democratic life. Democratic teachers would no longer passively accept the pronouncements of standardized tests and curriculum makers without examining the social contexts in which their students live and the ways those contexts help shape their performance. Lessons would be reconceptualized in light of a critical notion of

student understanding. Postformal educators would ask if their classroom experiences promote the highest level of understanding possible.

Rochelle: In such a world, education psychologists would understand the power of race and racism to affect what goes on in school and society that influences student performance. Education psychologists assume that we live in a just society but a postformal educational psychologist would question the concept of a just world. Moreover they would work to create curriculum that would provide the student with the knowledge to read the world, thereby creating a place of possibilities and belief in self.

Joe: At its worst, mainstream educational psychology reduces its practitioners to the role of test administrators who help devise academic plans that fit students' ability. The individualistic assumptions of this work move practitioners to accept unquestioningly the existence of a just society where young people, according to their scientific measured abilities, find an agreeable place and worthwhile function. Thus, the role of the educational psychologist is to adjust the child, regardless of his or her unmeasured (or unmeasurable by existing standards) abilities, to the society, no matter how unjust the system may be. Thus, the discipline and the practice it supports play an important role in maintaining the power inequities of the status quo. Those children from marginalized racial or class positions are socialized for passivity and acceptance of their scientifically pronounced "lack of ability."

Rochelle: The sad and scary part is that as long ago as 1933, Dr. Carter G. Woodson discussed what the miseducation of a child's mind could do to that child.

When you control a man's thinking you do not have to worry about his actions. You do not have to tell him not to stand here or go yonder. He will find his 'proper place' and will stay in it. You do not need to send him to the back door. He will go without being told. In fact, if there is no back door, he will cut one for his special benefit. His education makes it necessary (p. xi)

The phrase "best practices" that seeps through education literature is a form of teaching that forces students to find the backdoor. I have come to hate that phrase because I know it equates to those practices that have continuously worked to subvert the intellectual growth of students instead of attempting to connect teaching and learning to questions of social justice and student self-reflection.

Joe: The backdoor to life is possible because a form of politically passive thinking is (and has been) cultivated that views good students and teachers as obedient to mainstream educational, psychology-based ways of seeing. In such a context neither students nor teachers are encouraged to construct new cognitive abilities when faced with ambiguity. Piaget labeled this process accommodation, the reshaping of cognitive structures to accommodate unique aspects of what is being perceived in new contexts. In other words, through our knowledge of a variety of comparable contexts we begin to understand their similarities and differences, we learn from our comparison of the different contexts.

Rochelle: That word makes me uneasy. When I think of accommodation I think of an action that removes agency from the individual. You know, "I'll accommodate to your way of being, seeing, or experiencing the world."

Joe: I agree with you but politically conscious teachers push Piaget one more sociocognitive step to produce a critical emancipatory notion of accommodation. Understanding the socially constructed nature of our comprehension of reality, critical accommodation involves the attempt to disembed ourselves from the pictures of the world that have been painted by power. For example, a teacher's construction of intelligence would typically be molded by a powerful scientific discourse that equated intelligence with scores on intelligence tests. The teacher would critically accommodate the concept as she or he began to examine children who had been labeled by the scientific discourse as unintelligent but upon second look exhibited characteristics that in an unconventional way seemed sophisticated. The teacher would then critically accommodate (or integrate) this recognition of exception into a definition of intelligence that challenged the discourse. Thus empowered to move beyond the confines of the socially constructed ways of

seeking intelligence, the teacher could discover unique forms of intelligence among his or her students—students who under the domination of the scientific discourse of intelligence testing would have been overlooked and relegated to the junk heap of the school.

Rochelle: Okay I can hang with you using the critical notion of accommodation. Instead of accommodation taking away agency it affords agency. Being critical is the key and it is that criticality that would allow the teacher to not simply accept the labeling of poor and minority children unquestioningly but to instead reconstruct their knowledge of who that child is and what that child brings to the table. But what I constantly hear from those who accept traditional educational psychology like a religion is that it is an objective science. For example, they believe that standardized tests simply measure intelligence and if the child possesses intelligence then they will do well on the test. They refuse to accept that educational psychology is a situated cultural/political practice—whether it wants to be or not—that addresses the ideology of learning. Whenever learning and knowledge are conceived the nature of the conception affects individuals differently: it validates the cognitive process of some and invalidates others.

Imagine an educational psychology that exists within a different paradigm. One that accepts subjectivity as its calling. And the subjectivity becomes the vehicle that allows an understanding of the political nature of schooling.

Joe: It is difficult to imagine such a paradigm since we both know that dominant educational psychology is uncomfortable with moving to a different way of thinking and understanding and that many practitioners consider critical discourse a defacement of the field, a disruption to its orderly proceedings. Thinking constructed as a political activity in this context is marked by a hint of scandal or at least a lack of middle/upper-middle class “good taste.” Despite such uncomfortable representations critical teachers push their political agenda, confronting the dominant discourse with its erasure of irrationality, emotion, power, paradigms, and morality in the learning process. With this point delineated, such teachers construct the role of a politically conscious educational psychology in terms of its effort to understand the subjective ways learners experience political issues. The focus on this domain delineates a unique and critical role for a reconceptualized educational psychology in macro-transformational efforts.

Rochelle: Not just how learners experience political issues but importantly what they do with the information. Anything short of thought leading to action ultimately means that talk of a move toward social justice is moot. Once the political dynamics of education reaches the level of revolutionary consciousness what happens in the person? What is the relationship between school performance and a student’s or a teacher’s political consciousness and resulting moral sensibility? How do issues of power shape the learning process?

Joe: Such questions would encourage research involving the subjective experience of students deemed unintelligent and relegated to lower ability tracks. The practical meaning of the effort to contextualize children is easily understood in this example. A central feature of this process involves the study and reappraisal of everyday knowledge that is distributed throughout the society. Indeed, as a discipline educational psychology must explore the previously dismissed margins in order to identify the intelligence and creativity that exist in the lives of the people who reside there. To search for intelligence where one has previously found only deficiency is a transformative act that holds radical political consequences. The refusal to recognize such cognitive dynamics is testimony to the dysfunctionality of educational psychology. This dysfunctional impulse also expresses itself in ways that devalue indigenous knowledge or forms of intelligence that are produced outside of school. Learning in this mainstream configuration is narrowly constructed as merely the acquisition of unexamined knowledge that takes place inside the school.

Critical educators argue that intelligence is not something that manifests itself only on standardized tests and in academic classrooms. If progressive educators and educational psychologists can move their colleagues to study intelligence in ordinary lived situations, they will have initiated an important step in the larger effort to democratize our conception of intelligence. As we begin to gain clearer understandings of the cognitive sophistication of everyday life, we will not only

broaden our definition of intelligence but we will be better able as educators to heed Vygotsky's enjoinder to "call out" what our marginalized students already know. In the calling-out process critical teachers would bracket student abilities, bring them to the student's consciousness, induce students to think about how to enhance the processes and engage them in thought experiments and activities designed to facilitate the transfer of the skills into new domains.

What type of thinking might emerge when we democratize intelligence for social justice? Utilizing recent advances in social and educational theory that understand the way our consciousness, our subjectivity, is shaped by the world around us, such a perspective grants us a new conception of what "being smart" might entail. This postformal view of higher-order thinking induces psychologists and educators to recognize the politicization of cognition in a manner that allows them to desocialize themselves and others from mainstream psychology's and school-based pronouncements of who is intelligent and who is not. Postformalism is concerned with questions of justice, democracy, meaning, self-awareness, and the nature and function of social context.

Rochelle: The type of thinking would know no bounds. Students and teachers together could and should create a pedagogy that works to produce a change in their community, their lives, and the life of others. Being able to legitimately place self in a historical and political context allows, no demands, you work to transform self and the world.

Joe: The point is the recognition that the postformal vision is not only about revealing the humanely constructed nature of all talk about cognition (postformal talk included), but also about creating new forms of human being and imagining better ways of life for our young people. Reconceptualizing the abilities of students involves the political struggle to reshape educational psychology in the service of progressive values. As it lurks in the shadows of pseudo-objectivity, mainstream educational psychology denies its political complicity in oppressing the marginalized. In contrast, postformalism embraces its own politics and imagines what the world would become. As Aostre Johnson puts it in her chapter in Kincheloe's, Steinberg's, and Villaverde's *Rethinking Intelligence*, cognitive formalism undermines the expression of human multidimensionality by excluding spiritual dimensions of being.

Rochelle: Spirituality in teaching is essential. A teacher must attend to the spirit of the child. King (1994) speaks of the "clarity of soul" which when missing allows pain to fester in that empty space. Education should be the means toward poor and minority students reestablishing their connection with self and the world. Moreover, education should be the key to a student unlocking the mysteries of their existence and provide the road map to creating their own knowledge.

Education should not only afford students an understanding of the sociopolitical forces that oppress, but also insure that the new knowledge is internalized with enough strength to uproot the old.

A vitalness of humanity is essential to the education of any oppressed students. King (1994) gives a definition of human vitalness as:

aliveness of the human spirit expressed with honest vigor. . .being awake; looking; seeing, tasting, and engaging in nonoppressive uses of the power of one's autonomous soul; participating in self's human rights and responsively demonstrating the Afrohumanity of caring, closeness, creating, and calling for truth (p. 271).

She crafts her language with such love and care for transformative thought and existence and at the same time it is solid language, grounded in a cultural theory which determines the trajectory of our existence and our transformation. The healthy survival of students is dependent on the transformative, human vitality education should provide.

Joe: The new forms of democratic living that postformalism attempts to make possible are indelibly linked to an alternative rationality. Contrary to the claims of some of our critics in mainstream educational psychology, postformalism does not seek to embrace irrationalism or to reject the

entire enterprise of empirical research. We borrow the phrase, alternative rationality, from Stanley Arnowitz, whose critique of mainstream science helps shape our vision of postformalism. In this schemata new rationalities employ forms of analysis sensitive to signs and symbols, the power of context in relation to thinking, the role of emotion and feeling in cognitive activity, and the value of the psychoanalytical process as it taps into the recesses of (un)consciousness.

Rochelle: This alternative rationality is exactly what I experienced as I watched the students at One Mike! That concept relates to the name and purpose of the student organization that sponsored the event—The Society for Independent Thought. Rather than succumbing to society's depiction of them the students were creating a different reality, operating within a new paradigm.

The vehicle for this was their teacher, Winthrop Holder, who started the program in 2001 when he first arrived at the school. Now this man is the embodiment of the democratic, postformal teacher we have been discussing. He sees and acts on the humanness of his students. Although he understands the ideological forces that shape the lives of his students he works to make the students aware of, understand, and change those forces. Holder creates an environment that is safe for the students. He helps them feel comfortable enough to push the boundaries of their learning and thinking. In order to take them from where they are to where they can go he uses democratic teaching to both expose the social construction of their identities and to ensure that they gain control over that construction. Ultimately, he achieved the connection between teaching and social justice, creating a new and better way to think about "best practices."

Joe: Do certain forms of thinking undermine the quest for justice? Do certain forms of research cause observers to view as problematic ways of seeing as if they involved no issues of power and privilege? Educational psychology has simply never encouraged a serious conversation about the reasons students engage in certain behavior, about the purpose of high-order thinking, or about the social role of schooling in a democratic process. For the most part the discipline has never considered the implications that Paulo Friere's notion of conscientization (the consciousness of self) holds for the work of practitioners. What happens in the realm of cognition when individuals began to gain a new consciousness via the process of (a) transforming themselves through changing their realities, (b) grasping an awareness of the mechanisms of oppression, and (c) reclaiming their historical memory in order to gain an awareness of their social construction, their social identity?

The effort to rethink student's abilities extends Arnowitz's powerful alternatives by asking ethical questions of cognition and action. Such inquiries induce educational and cognitive psychologist to study issues of purpose, meaning, and ultimate worth. Until educators and psychologist appreciate a new way of thinking about cognition schools will continue to certify the damage that marginalized children have to endure in the late twenty-first century.

Rochelle: I need to believe that there are more teachers in the world like Winthrop holder who inspires the student of One Mike! I also need to believe that there are a multitude of students who are benefiting from such teachers. When we stop believing in a brighter future and an educational system that provides endless possibilities for students rather than limiting their chances, we give up and allow "them"—the purveyors of psychological "truths" about European/White supremacy—to win.

REFERENCES

- Apple, M. (1990). Rhetorical reforms: Markets, standard, and inequality. *Current Issue in Comparative Education*, 1(2), 4–17.
- King, J. E. (1994). Being the Soul-freeing Substance: A Legacy of Hope and Humanity. In M. J. Shujaa (Ed.), *Too Much Schooling Too Little Education: A Paradox of Black Life in White Societies*, pp. 269–294. Trenton [New] Jersey: Africa Free World Press.
- Steele, C. M. (1992, April) Race and the Schooling of Black America. *The Atlantic Monthly* 68–78.
- Woodson, C.G. (1933). *The Miseducation of the Negro*. Nashville TN: Winston-Derek Publishers.

Alternative Realities in Educational Psychology: Postformalism as a Compelling Force in Opposition to Developmental Theories

ERIK L. MALEWSKI

This chapter explores postformal theory and its impact on the discourses of educational psychology as both a theoretical paradigm and school practice. To begin, postformalism challenges dominant developmental, formal conceptions of cognition and redirects educational psychology away from a focus on rules and generalities toward pathways leading to alternative forms of teaching, research, and assessment. Unlike the search for intellectual truth that undergirds formalism, there is no easily produced or simply defined method for describing postformal educational psychology. In quite the other direction there are, it seems, many dimensions to postformalism. Along the first dimension, the mind and the character of knowledge are reconceptualized. There are investigations into the origins of ideas, recognition of the links between the mind and life forces, and appreciation for imagining what is possible. Along the second dimension, conventional cultural categories are brought into question. This involves reflection on the implicit patterns and structures that draw seemingly disparate elements into relation, appreciation of non-linear holism that eschews cause and effect, and investigation into implicit patterns and structures in ways that draw seemingly disparate elements into relation. Along the third dimension, interstices are reconfigured as potential spaces of understanding. This involves the examination of interspaces as unique beyond the connections they provide, investigation of third spaces that exist between particularities and generalities, elevation of problem detection over the ability to locate existing solutions, and attention to the ways power relations shape representations of intellect. In response to these dimensions and the possibility that some scholars contend that postformalism is less a definitive set of rules or principles than a disposition—a mood or attitude toward intelligence. I agree with this analysis and would add that postformal educational psychology emphasizes the journey toward understanding over a sense of arrival or closure on the topic.

At this point, the reader might come to sense that any attempts to define postformal educational psychology are difficult and, some might even say, inappropriate. I tend to take the middle ground, asserting that it is possible to characterize and explore many of the key features of postformal theories and their implications for educational psychology while also recognizing postformal I tend to take the middle ground, asserting that it is possible to characterize and explore many of the key features of postformal theories and their implications for educational psychology while also recognizing postformalism defers closure in an attempt to avoid asymmetrical structures.

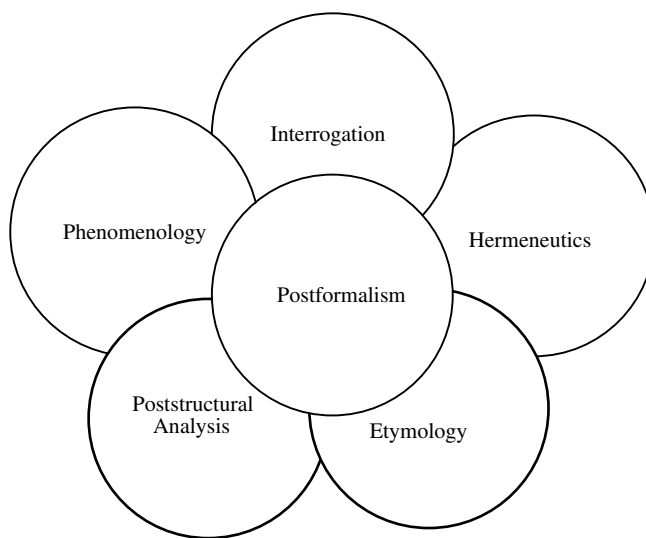
Here insights are crested upon the vanishing point of a receding horizon, always within sight yet never fully known. At this juncture in history, a time when we bear witness to attempts to formalize most aspects of education, my sense is that we can no longer offer graduate education without attending to the major changes in cognitive discourses, including teaching, research, and assessment. More specific, the time has passed when we can make sense of public education without acknowledging and interrogating the rift that has developed between how educational psychology is thought about and how it is practiced in educational settings. The theory practice divide that has brought attention to the politics of intellect and the negative repercussions of an overinvestment in formalism, a move that more recently moved many educators to ask what happened to the connection between happiness and the pursuit of further understanding.

My point is postformal theories must be explored if for no other reason than for the creation of rigorous, nuanced, and critical insights into the ways intellect functions in the present as well as historically. The aim of this chapter is to offer tentative description of what postformalism has to offer educational psychology as well as its implications for educational practice. In the chaos and uncertainty of our current world, the common response involving an increased reliance upon formalism might be ill-conceived. As an alternative, a postformal approach to educational psychology offers fresh perspectives on intelligence, descriptions of a multitude of ways of knowing that, if engaged critically, might offer further understandings of our most pressing social, political, and economic issues.

Postformalism, as a disposition, can be detected in many elements of what might be termed a personal-sociocultural outlook—the exposition of thought that has laid bare the assumptions of Cartesian logic that structures the traditions of educational psychology and how an alternative disposition—one that eschews structure while retaining direction, gives credence to our imaginary worlds and tacit knowledge not easily accessed through empirical means. Some would suggest that the critical perspectives that are key to understanding postformalism began in the 1960s movements that emphasized multilogicality, multiculturalism, and diverse forms of intelligence in addition to paradox, complexity and chaos theory, ultimately opening up spaces for those voices under arrest. The emphasis on criticality broke open customs and traditions as at least, in part, socially constructed phenomena. Just like a fictionalized text, critical approaches to cognition illustrated how theories of intelligence and their counterparts, the ignorance we cannot bear to imagine has anything of value to offer, function according to the arbitrary rules of a language game that had its origins in culture. Lyotard in his 1984 book *The Postmodern Condition: A Report on Knowledge* attributed conventional ways of knowing that commonly exceed examination to metanarratives, theories that attempt to provide a universal, all-encompassing single narrative “plots” regarding the ways people think, schools are structured, people learn, curriculum is assessed, teachers practice, corporations become involved, and government intervenes. Before further exploring the insights postformalism has to offer, a feat we will engage further throughout the rest of this chapter, it is first important to look at the notion of criticality in more detail.

More recent approaches to educational psychology utilize textual analysis, multilogicality, and the study of interrelationships between intelligence and ignorance as theoretical approaches to challenging unjust symbolic and material valuations. As a result, postformal educational psychology does not choose as a starting point the establishment of the definitive properties of a scholarly discipline, but instead advances a movement that defies easy categorization, using strands of thought from cultural studies, narrative inquiry, critical pedagogy, feminist theory, insurgent black intellectual thought, and queer theory, among others, to produce and circulate theories of intelligence that will aid in the pursuit of social, economic, political, and economic equality. Postformal educational psychology teaching practices, research methods, and corresponding assessment are critical of monological approaches to curriculum and cognition, encouraging appreciation for nuanced overlays that more closely resemble the layers of an onion, a process

where peeling back each concealed truth only discloses beneath it a more revealing and less understood way of thinking—critical methods capable of accounting for and bringing appreciation to anomaly, idiosyncrasy, and eclecticism. This attention to difference as a central organizing concept of intellect and cognition is key. Postformal educational psychology aims to unearth the contradictions, oversights, and limitations found within dominant educational discourses and exposes them for the knowledge and realities they subjugate. Once exposed, the particularities of overdetermined ideologies are drawn into broader relations that help better understand hegemonic articulations and totalizing narratives that operate at the level of establishing intellectual truth, the very realities that produce as their social effects officially recognized forms of knowledge as well as ways of knowing deemed not worth knowing about, subjugated knowledge forms relegated to the peripheries and occasionally acknowledged as signifiers of ignorance or, more common, not acknowledged at all. The dimensions of criticality key to postformal educational psychology involve theoretical axes that include but are not limited to



Etymology: The historical study of the origins of knowledge and intellect that involves critical explorations of our own customs and traditions. Through etymology the notion of textual analysis is expanded beyond the written word to allow for the application of critical reading practices to a myriad of social contexts.

Hermeneutics: The interpretive process that entails understanding intellect as a text examined through reconstructing the world in which intellect was conceived and then couching it in that world.

Interrogation: The process of decoding and exploring the unintended meanings of various texts. By moving beyond explicit meaning, interrogation involves reading between the lines of a text using a reconceptualized definition of text that for a teacher might be a classroom or for an administrator a budget.

Poststructural Analysis: A philosophical outlook that attends to the difficulty in knowing any text or expression, a perspective on intelligence originating out of the realization that placing authority in any one text or group of texts is a problem.

Phenomenology: A philosophical movement dedicated to the description of the structures of experience at the moment of awareness. A perspective that aims to capture heightened preconscious understandings without reliance upon reductionism, generalization, or categorization common to empiricism.

Working from these five dimensions, what might be found in postformal theory is an unending attempt to lay bare the contradictions, paradoxes, anomalies, and subjectivities that inform the texts and artifacts that provide intelligence with the opportunity for convention. What becomes fascinating regarding the implications of postformalism is that no theory of cognition, no textual representation of intelligence, holds complete or absolute truth within it. Working against the grain of formalism, postformalism asserts that intelligence cannot be reduced to an IQ test nor can it be appropriately characterized as a thing, a static substance. While many scholars, such as famous educational psychologists Arthur Jensen, Charles Murray, and the late Richard Herrnstein, have attempted to reduce intelligence to empirical assessment—as if intellect is static and knowledge easily captured—postformalism asserts that knowledge is never so much an issue of capturing a single iteration and labeling it intelligence, as human capacities cannot be consistently reduced to instrumental assessment or even known ahead of time. Postformal thinkers use the idea of form rather than the idea of thing in conceptualizing intelligence. Forms are structures whose fundamental function is to change and, as such, have dynamic, fluid properties. Things are structures whose fundamental function is to maintain their stability. They have the properties of simple, linear, causal models seen in formal operations used by educational psychologists such as Jensen, Inouye, Murray, and Herrnstein. Postformalism highlights form as a way to revolutionize educational psychology.

In postformal educational psychology, the value of temporally crystallized structures is reduced, and the perspectives revealed by the revaluation are used as interpretive strategies for revealing the ways in which society, nature, and the self are always undergoing continuous transformation. Postformalism uses criticality as a device for illustrating the ways intelligence exceeds the significations of its boundaries with the passing of each moment. Curriculum committees made up of teachers and administrators work through numerous history textbooks that offer a myriad of different interpretations of historical events. Galileo was sentenced to what amounted to house arrest for breaching the conditions laid down by the Inquisition of 1616, a sentence that was the result of the publication of *Dialogue*, a book that supported the Copernican theory that the earth revolved around the sun. Now this idea is often taught as an unequivocal fact. Einstein failed an entrance examination that would have allowed him to pursue electrical engineering at the Swiss Federal Institute of Technology only to return later in life to become a physics teacher. We now cherish the ideas of a man who revolutionized physics with his theory of relativity. Government officials enter into heated debates over which assessment tools will most accurately measure intelligence, often coming to a standstill and handing over such evaluation to state or local government.

Postformalism recognizes that historically events are not so much witnessed as created, as can be attested to more recently in the different responses to the attack on the World Trade Center. To the present day, evolution and creation narratives are heavily debated topics in relation to school curriculum, culminating more recently in the August 1999 decision by the Kansas Board of Education to remove evolution, as well as the Big Bang theory, and any mention of cumulative changes in the earth or the age of the earth, from state science standards. Even within various communities, there are major schisms as people use various conflicting and divergent lenses to interpret the current state of the world and decisions regarding what knowledge is worthy enough to pass on to the next generation are a reflection of a myriad of tacit forces that bring into being moments of curricular understanding.

Various historical artifacts and individuals have undergone scrutiny, censorship, or celebration according to the zeitgeist. Rap music, for example, was derided in the late 1970s as little more than “street speak” and “beats stolen from music stars” only to become a multimillion-dollar industry by the beginning of the twenty-first century. Simply stated, there will never be a single standard against which to measure intelligence nor a way to bracket out the effects of religion, spirituality, history, aesthetics, music, art, kinesics, and sexual identities on the ways we know, live, interpret, and style the world. Postformalism suggests that attempts to create spaces of cultural neutrality through objectivity (think of, for example, the claims of creators of high stakes tests that they reveal what students’ know, presumably outside of culture) can never be actualized when teaching, research, and assessment as themselves studied as cultural practices. In 1990 a Florida court ruled the rap album “As Nasty as They Wanna Be” by Two Live Crew obscene and, as a result, anyone caught selling or performing songs was subject to arrest and prosecution. By 2004, such lyrics were not deemed unsettling as the measure of decorum had greatly changed and rap, hip hop, and gangsta rap can be found on the music dial in every major city in Florida. As these examples illustrate, intelligence might more closely resemble the idea of a form than something of substance.

Similarly, there is little consistency of knowledge or clarity of importance regarding what might constitute signs of intelligence or discrete facts important enough to test. Woodrow Wilson is often credited with women’s suffrage when it might be more appropriate to highlight that he was unsympathetic to the cause at first. Only after public pressure and hunger strikes by those in the movement did Wilson decide that opposition to women’s suffrage was politically unwise. Few recognize Helen Keller as more than an unruly and difficult hearing-impaired girl who eventually learned to read, write, and speak. Equally important to understanding her life but rarely mentioned was that Helen Keller described herself as a radical socialist. She was a member of the socialist party in 1909 and emphasized that it was her own interests, not her schooling at Radcliffe, that spurred her political interests. After attempting to simplify the alphabet for the blind she began to recognize that she was addressing the symptoms of a problem rather than work toward its prevention. Utilizing postformal notions of problem detection, she distinguished that blindness was distributed across society disproportionately, based largely on class differences. By connecting ostensibly different realities she became aware of the sociocultural realities that made blindness more common in men of lower socioeconomic standing who often worked in factories and lacked adequate health care and in poor women who turned toward prostitution for additional income and, as a result, contracted syphilis. It was this higher-order thinking that allowed her to see the origins of blindness, an insight that is rarely if ever taught in formal, depoliticized classrooms.

To take the field of educational psychology seriously we must be able to move beyond formalism, understanding the subtle interactions of particularities and generalizations and the various connections between mind, social context, and power relations that shape the knowledge that is, in the current era, found worthy. To employ postformalism within educational psychology requires historicizing past figures, the understanding that both knowledge and intellect, as they are conventionally understood, are shaped by the forces of their production. Knowledge often thought of as transhistorical more appropriately bears the marks of its creation, less a reflection of a pure experience, a sole truth, or a scientific discovery than the confluence of economic, political, and social forces that shape knowledge deemed bearable. For postformal educational psychology, metanarratives that concur it is possible to fully assess intelligence through IQ testing or draw conclusions regarding the role historical figures have played in shaping present social, economic, and political practices is not only dangerous but also presumptuous and, through the lack of attention to subjugation, unjust. Postformal educational psychology fosters the role of dissenting voices developing alternative descriptions of intelligence, elevating voices of opposition

to unearth the ways in which intelligence functions as a social convention that works borderlands into existence.

Postformalism recognizes that formalism, with its emphasis on principles and rules, is an outgrowth of Enlightenment rationality and can be evidenced in domains of thought from developmental psychology to Saussurian linguistics and Newtonian physics. As the previous example illustrates, postformal educational psychology does not assert that intelligence is absolutely relative and therefore beyond description. Rather, postformal educational psychology contends that there are many truths that are produced and circulated based on factors as varied as social group identifications, lived histories, and the particularities of place. Unlike misguided attacks on postformalism, the aim of postformal educational psychology is to bring to light the limitations of developmental formalism and the effects an emphasis on universalized, unalterable truths regarding intelligence for all people in all categorical domains has on those who fall outside predetermined boundaries. While there are many more dimensions to postformal educational psychology, this brief introduction works as an overview of its moods and dispositions, what some scholars might agree are its key features at this occasion in time.

CHARACTERIZING THE POSTFORMAL

At this juncture in history it is safe to assert that we have ushered in new realities characterized by compression of time and space, simulation over realism, and the loss of authority associated historically with truths founded upon tradition and custom. There is no easy way to characterize these changes, possibly because we are in the midst of the shifts and redirections associated with the accelerated rate at which change has occurred. While it is clear that formalism has continued to have an impact on educational practices, and some would surmise, and rightly so, that as its influence has increased with the rise of state and national standards, there has been the development of a decidedly new urge in educational psychology to account for alternative ways of knowing. Unlike some who have characterized postformalism as the replacement for formalism, the characterization offered here provides a more nuanced and detailed portrait of how intelligence operates, formal and postformal impulses existing concurrently in occasional moments that are complementary and, at other moments, in conflict and dissonance.

Recognizing that preformal ways of knowing with their attention to mysticism and spiritual life failed to explain away dissonance, chaos, and the mysteries of mental illness, formalism became a way to overlay patterns, tenets, and rules on the bedlam of human thought. Over several iterations taking generations, the mapping of principles provided a set of assumptions or foundations for this urge to regulate, as Cartesian science aimed to understand the complexities of cognition through reductive techniques used to fragment thought into its most simple elements before engaging in analysis. Through this process of scientific categorization, what was pointed out in a 1977 translation of Foucault's work *Discipline and Punish* as the technologies of power and the attempt of dominant cultures to exhibit increasing control over society, ways of knowing became coded in relation to a series of assumptions regarding high-level cognition and the properties of recognizable intellect or intellect that would be recognized. Along with this orientation toward human thought came a socioeconomic feature that tied developmentalism to the formation of social hierarchies and the tenets of marketplace ideologies. Looked at from another angle, the practice of reducing phenomena to their simplest parts and then marking recognizable patterns did little to help in the study of the complexities and idiosyncrasies of human thought and worked instead to bring educational psychology into alignment with the requirements of capitalism and an unquestioned beliefs in 1) science and technology as pathways toward human progress, 2) instrumental reason as a method for overcoming emotion and mysticism, and 3) fragmentation and decontextualization as the best approach to ordering society so that it might be more easily

regulated and controlled. Formalism led to an assembly line mentality regarding ways of knowing, bringing intelligence to operate as a standard against which human ability could be easily quantified and ranked in a never-ending search to mark winners and losers.

Postformalism, as a response to formalism, uses a language of critique to question the principles of developmental paradigms and, through the nurturing of critical consciousness, provides new ways to conceptualize intelligence. Postformalism works to unearth subjugated knowledge, exposing the ways various assumptions regarding human cognition, including the pursuit of objectivity and neutrality, shield educational psychology from more critical interrogations. Through postformalism, ways of knowing previously thought of as based in ignorance cross within the bounds of intelligibility, working to give evidence to historically subjugate forms of knowledge. The way intelligence operates under convention is rendered suspect as previously excluded voices offer until that time unheard questions regarding the agendas served through instrumental understandings of cognition. When the metanarratives of the field are ruptured, intellect no longer exists in an ordinary state but instead comes to be seen as a form of knowing structured by the unintelligible: the ways of knowing we cannot bear to know or the ways of knowing to which claims of ignorance result in the substantiation of a right to recognition, working the borderlands into irrelevance so that the highest forms of cognition can be upheld as recognizable.

Postformal educational psychology seeks new ways of knowing that transcend empirically verifiable facts, monologic, and the use of cause and effect arguments to operationalize intelligence in reductive and over determined ways. When educational psychology moves beyond reductive techniques that equate intelligence with IQ testing and the results of high stakes testing with knowledge acquisition, we can begin to address cognition critically as the generative process of building critical consciousness, weaving together a context for realities founded upon hope, possibility, and radical transformation: participatory democratic systems of meaning are central to conceptualizing intelligence as situational, the effects of social relations and everyday practices in and out of schools that either extend or limit the capacity for self-direction and understanding the conditions of one's own existence. With postformal emphasis not just on description but also on invoking a language of possibility, intelligence evolves from a highly individualized abstract mental aptitude to the practice of attaching meaning to and then altering the social contexts in which the mind has traditionally resided, dismantling hegemonic articulations that thwart the creation of symbolically and materially just communities that place difference at the core of viable, sustainable social relations and relations of intellect. Understanding how worldviews, self-conceptions, and ways of knowing that are valued have come to be constructed, postformalism provides educational psychology with a theoretical toolbox that is quite capable of facilitating the transformation of how we understand knowing in public education.

Postformalism, then, assists in understanding the changing nature of how we think, know, and interact in the world, providing a language of possibility that moves beyond the boundaries of instrumental rationality to value new realities that seem to be cropping up all around us in a new world order where images of war overlap seamlessly with images found in videogames and love affairs begin in virtual worlds where each person ceases to exist in a physical sense, born again into an alternate reality. Postformalism describes a new era in human psychology that helps to reconceptualize education as it takes place in schools and other cultural sites. It invokes the realization that those who continue to invest wholeheartedly in formalism will, in the end, be found naïve. Educators who have yet to acknowledge the impact of postformalism fail to realize they can no longer offer narratives from an omnipotent perspective, as each human being resides in a particular location in the web of reality and, as a result of these competing realities that are sometimes overlapping and just as often incommensurate, must reveal their own subjectivity, the identifications that constitute their particular social and historical vantage point. Intelligence no longer involves a single rationality, with the birth of postformal thinking, but infinite ways of

reasoning based on the intersections of numerous social positions and the willingness to engage in self-examination. Postformalism grounds educational psychology in the particularities of place taking seriously Pinar's description of Currere, the Latin root of the word "curriculum," involving the examination of the nature of the individual experience of the public.

Postformalism offers educational psychology the possibility of providing redress for the myriad of social ills that have plagued formal, developmental theories and the recent recognition that the very forms of intelligence privileged under formalism, thought to be the remedy for individual and social pathologies, have been complicit in many of our recent tragedies including the Holocaust, racial discrimination, genocide, commodification, social elitism, narcissism, indentured servitude, and corporate welfare. Postformalism offers an alternative to the frame of mind that brought us the Phillip Morris Czech Report, the overly formal, procedural document that requested a reduction in excise taxes from the Czech government in response to its findings that "smoking can lead to a reduced life span of smokers" and therefore reduce the money paid out in government pensions and health care subsidies. It is postformalism that might offer educational psychology ways to deconstruct the intellectual sensibilities that have allowed for these tragedies as well as the anti-essentialism required for tentative descriptions of alternative visions. A postformal vision of educational psychology attuned to alternate forms of teaching, research, and assessment can bring about changes in symbolic and material valuations necessary for the actualization of equality.

TERMS FOR READERS

Formalism—The term refers to the empirical developmental operations of human thought that can be evidenced in patterns, rules, principles, and generalizations. Formalism assumes instrumental development where particular task performances are necessary to the development of more complex, higher-order task performances.

Hegemonic Articulations—This phrase refers to tentative linkage of social, political, and economic forces in ways that exacerbate individual and social group inequities by engendering the naturalization of oppression through nonphysical means. Hegemonic articulations involve allegiances of dominant cultures in what result in the subjugation of particular cultural styles and intellects.

Monologic—This term refers to the dominance of a single lens of perception and analysis. Monologic engages in reductive techniques that often mistake a single orientation toward cognition as the only way of knowing and understanding the world. Commonly an instrumental logic that emphasizes rules, procedures, and patterns, this approach to reason in its search for continuity fails to grasp the importance of abnormalities, idiosyncrasies, and eccentricities.

Multilogicality—This term describes the interplay of many competing, overlapping, and incommensurable ways of knowing that illustrate the complexity of perception and analysis. Multilogicality aims for the exploration of numerous axes of reason that hold differing values in society to illustrate the myriad ways human beings reason. Through attending to more than one form of knowing, multilogicality illuminates the ways in which particular forms of reason, such as bodily and emotional intelligence, have been historically subjugated.

Postformalism—The term belies easy categorization but can be safely stated that postformalism attends to alternate ways of conceptualizing cognition and human understanding. Postformalism acts as a response to formalism's search for definitive sets of rules and principles of cognitive operation. As a reaction, postformalism unearths the idiosyncrasies and abnormalities subjugated by the domination of developmental, formalist logic.

Textual Analysis—This phrase refers to inquiry into the ways in which formal texts (books, magazines, journals) and informal texts (conversations, physical spaces, social interactions, human creations) are given significance through reading and interpretation. Textual analysis can involve a myriad of dimensions but often includes entry into the deeper structures of meaning and the illustration of relationships between ostensibly different realities. Inquiry can include, for example, utilization of readership theory to analyze the significance of school space for shaping perceptions of participatory democratic practice.

Totalizing Narratives—This phrase refers to dominance of a particular storyline in a community or culture and the ways in which its sheer press or force gives it over to social convention or everyday practices so common that they are given little thought. As a result of their force, these stories allude to mundane aspects of human life or plot lines that often end with statements such as, “well, that’s just the way life is.” Through their saturation in production and circulation, these story lines regularly drown out alternative narratives that might bring attention to their socially constructed character. The American Dream narrative, for example, has so much power in U.S. American society that it become difficult to envision other ways of organizing social life and family structures.

Transhistorical—This term references the social group affiliations or heuristic devices that as a category are commonly described outside of the constraints of time, circumstance, and context. These axes of affiliation provide the possibility for grounding frameworks of analysis but in the process of setting boundaries the character of the category itself is often assumed to operate throughout history unchanged. The category of women, for example, helps situate gender and feminist studies while it might be difficult to argue that there are unchanging or essential elements to this category that exist unchanged across time and space.

SUGGESTED READING

- Kincheloe, J. L. (1998). Pinar’s currere and identity in hyperreality: Grounding the post-formal notion of intrapersonal intelligence. In W. Pinar (Ed.), *Curriculum: Toward New Identities* (pp. 129–142). New York: Garland Press.
- Kincheloe, J. L., Steinberg, S., and Hinchey, P. (1999). *The Post-Formal Reader: Cognition and Education*. New York: Falmer Press.
- Kincheloe, J. L., Steinberg, S. R., and Villaverde, L. E. (1999). *Rethinking Intelligence: Confronting Psychological Assumptions About Teaching and Learning*. New York: Routledge.

CHAPTER 105

Educational Psychology on the Move: Visual Representations of the Old and New Paradigms

FRANCES HELYAR

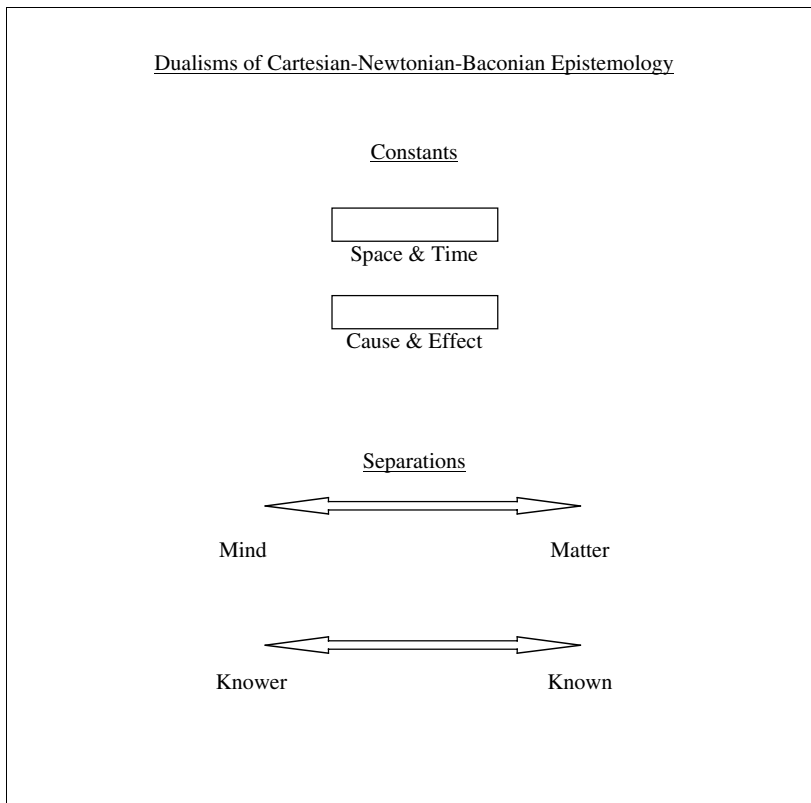
No pleasure is comparable to the standing upon the vantage-ground of truth.
—Sir Francis Bacon

*The truth is not simply what you think it is; it is also the circumstances in which it is said, and
to whom, why, and how it is said.*

—Vaclav Havel

These opening years of the twenty-first century are, perhaps more than ever before in human history, a time of rapid change. In a world of hyperreality and globalization, the Western conception of what is normal and what is deemed true alters with increasing regularity. The authors whose writings are collected in this volume suggest that the time is right for a major conceptual shift in the field of educational psychology. Only with such a shift can we move beyond the old, restrictive paradigms toward more inclusive, expansive models. Assuming this is the case, the question becomes if not this, then what? And once identified, how can a newly defined concept best be explained? The answer to the first question, I believe, is to rearticulate the conceptualization of ed psych epistemology that relies on Cartesian–Newtonian–Baconian (CNB) understandings, and is characterized by a collection of simplistic binarisms, toward a more critical complex epistemology that I choose to describe as post-CNB. By adopting the post-CNB descriptor, I want to avoid the semantic difficulties inherent in any interpretation that limits itself to poststructuralism, postformalism, postmodernism, or any number of other “isms.” Each of these terms means different things to different theorists, and too often disagreements result from conflicting definitions. I choose to describe post-CNB epistemology by focusing on what it is not. While I may use one name, however, it is important to remember that a post-CNB epistemology of ed psych is not monological and should not be construed as such. I will offer my definition of CNB epistemology, and then contrast it with a post-CNB framework. In doing so, I will describe the various ways in which the latter is multilogical, and quite distinct from CNB epistemology. The answer to the second question, how to explain this newly conceptualized educational psychology, is difficult, but I believe a series of diagrams helps to indicate the transformation from simple, static, and fixed knowledges to complex ways of knowing.

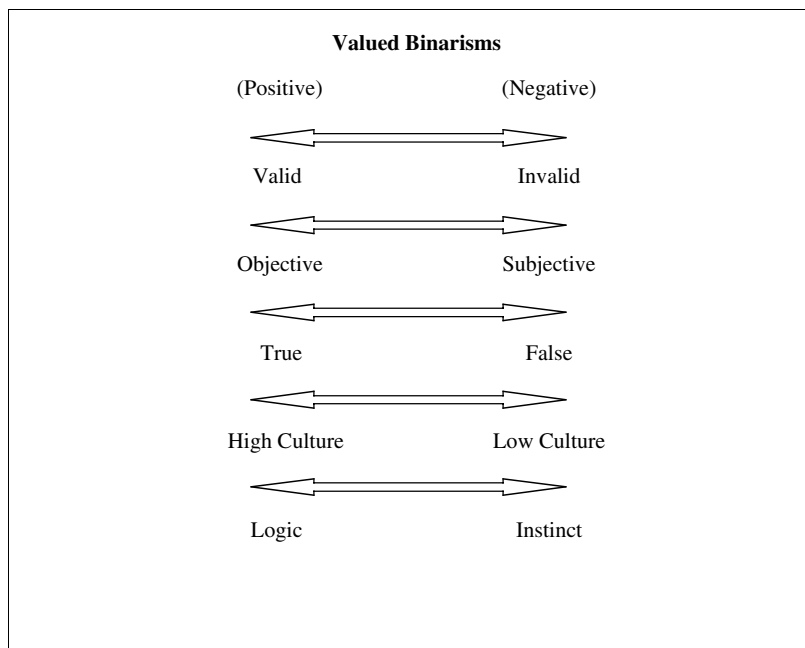
Figure 105.1
Dualisms of Cartesian–Newtonian–Baconian epistemology



PICTURE THIS

The language of metaphor is often useful in describing paradigmatic change, and ordinarily I would use a metaphor to describe the difference between a CNB epistemology and a post-CNB model. None is forthcoming, however. Remembering the pedagogical lessons of my youth, when words won't work, I turn to pictures. I sketch several representations of a CNB epistemology of ed psych, the first (Figure 105.1) showing Sir Isaac Newton's constant dualisms of space and time, and cause and effect, and René Descartes' separate dualisms of mind and matter, knower and known. The constant dualism of space and time represents the assignment of universality to many of the findings of traditional ed psych; if it's true here and now, it's true everywhere and always. Context doesn't matter. The results of Piaget's study of a small group of boys in a Swiss school, for example, were universalized to apply to all children, everywhere. All learning is assumed to fit within the hierarchical confines of Bloom's taxonomy. The Cartesian constant dualism of cause and effect refers to the attribution of causality, that a particular cause will always have the same effect. Again, context is not a consideration in this paradigm, nor is interpretation. This dualism has as its most prominent example the "mind as computer" model. Human minds are conceptualized as computers that always work in a predictable way; the same input always results in the same output, without fail (Bruner, 1996). Predictability is an important requirement of research findings, because predictability makes possible the assignment of universality. Neither intuition nor imagination is acknowledged because each introduces too great a variable into the

Figure 105.2
Valued binarisms



process. Science, reasoned Sir Francis Bacon, can be used to harness nature, and reason should have dominance over imagination. Complex phenomena can be broken down into smaller parts and reassembled to adhere to laws of causation.

In a CNB epistemology, the dualisms of mind and matter, knower and known are completely separate. The traditional research methodologies of educational psychology, among other sciences, are held as sacred, and there is no connection between research method and research technique (Kincheloe, 2001). The identity of the researcher, the life experiences, preoccupations, and biases are assumed to have no impact on what is selected for study and how the study is undertaken. The researcher pursues an inquiry objectively, and the nature of the questions asked is seen to have no impact on the research findings.

CNB epistemology posits a series of valued binarisms, including valid versus invalid, objective versus subjective, true versus false, high culture versus low culture, and logic versus instinct, with the former of each pair positive and the latter negative (Figure 105.2). The result is a group of simple, two-dimensional images.

Of course, complexity may be inferred in the way these various dualisms and binarisms coexist simultaneously, but it is a limited complexity.

Scientific study in ed psych values findings that represent validity according to a prescribed set of norms. Invalid findings are discounted and discarded. For example, classroom studies of students are regarded as problematic because of the number of variables inherent in a real-life situation; the validity of such studies can be called into question, regardless of the fact that the classroom setting more closely reflects the actual life experience of students than does the laboratory. The child learning to divide is expected to complete the task using a particular approach according to a particular algorithm favored by the teacher. When parents or a tutor attempt to help the child but use a different algorithm, confusion arises, because in the context of

the classroom and for the child to achieve success, one method is valid and any other is not. In a science classroom, the scientific method with its set pattern including hypothesis, observations, and conclusion is deemed the only valid method of inquiry. If the method is not followed, it's not science.

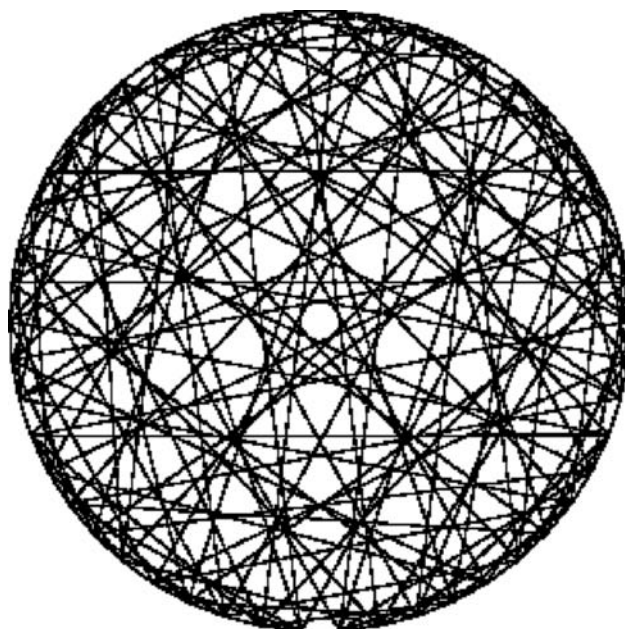
A CNB model of ed psych assumes that a certain narrowly defined objectivity is possible, lays out rules for achieving it, and devalues any findings that fall short, including those in which the identity or experience of the researcher "intrudes" upon the study. Truth and falsity are related to time and space; that which is true is ever thus, and that which is false is always so. The problem with the true/false binarism is immediately and frustratingly evident to adults who attempt to answer public opinion surveys. By reducing the possible answers to yes or no, true or false, the designers of the survey remove all nuance and complexity in a given issue. The child attempting to answer questions on an intelligence test is faced with a similar experience. Questions that reduce truth and value to mere binarisms conflict with the complexity of lived experience. No doubt educational psychologists who are parents value the presence of imagination and joy in their children's lives. But where in the mechanism of ed psych is it possible to measure imagination and joy? At what temperature does an imagination freeze? (Kincheloe, 2003).

In another valued binarism, high culture assumes that only art of a certain specific genealogy executed and displayed or performed in a narrowly defined way has value; if it doesn't fit the definition, it isn't art. This dichotomy can also refer to the culture of research. The work of educational psychologists of certain academic backgrounds or associated with certain schools is assumed to have greater value than the work of those whose institutions are not as widely recognized. Similarly, logic is valued over instinct. The results of empirical studies are accepted and valued for the logic of their findings, and illogical findings are rejected, never mind the huge role that instinct has always played in human exploration and discovery. In spite of the cult of scientific method, much scientific progress is the result of so-called "thinking outside the box." What is deemed logical may simply be an expression of that which is known at any given time or place. Einstein's general theory of relativity, for example, threw the world of physics on its head, but did not follow the conventions of knowledge in the discipline, as they existed in 1905 (Kincheloe, Steinberg, and Tippens, 1999).

NEW, COMPLEX PARADIGMS

With these simple diagrams in place to represent CNB epistemology, the challenge then becomes how to represent the complex epistemology of the post-CNB framework. I recall a doodle I used to draw in the margins of my notebooks as a student (when I should have been thinking deep thoughts, or did these doodles serve to elicit deep thoughts?). I would place as many dots as I desired in a circle, and connect the dots, each to the other, until I saw a geometric design reminiscent of the drawings one could create using the old Spirograph toy of the 1960s. With some investigation, I discover that this is a K - n graph, in which n represents the number of dots forming the boundaries of the circle. Further investigation on the Internet reveals the Hoffman–Singleton graph (Figure 105.3), which most closely resembles a sophisticated version of my notebook doodles. In this conceptualization, each dot, which when connected to all the other dots forms the boundaries of the graph, represents a part of what is deemed the knowledge of educational psychology, and the lines of the graph represent the relatedness of all parts of knowledge with each other. In other words, this graph resembles the web of reality and each of us lays claim to a picture that is uniquely our own. One dot might represent phenomenology, another hermeneutics, another ethnography, yet another history, and so on. The potential size of the graph is infinite, and is determined only by the knower. Connections on the graph do not share

Figure 105.3
Post-Cartesian–Newtonian–Baconian epistemology of complexity (Hoffman-Singleton graph). Retrieved from the Internet at <http://mathworld.wolfram.com/Hoffman-SingletonGraph.html>



the primary focus at all times; at any given point some lines are recessive and some are dominant, depending on the focus of the knower's attention.

This conceptualization is far from perfect. While the K - n graph hints at the complexity of a post-CNB epistemology of ed psych and the relationships between all parts therein, it is overly tidy, symmetrical, and contained. A truer representation would picture changing lines of differing lengths that would be difficult to contain within the page. Rather than a two-dimensional static model, it would have three dimensions—height, width, and depth—and would be in constant motion, changing size and shape from moment to moment. The points on the graph include every element of the CNB paradigm of Figures 105.1 and 105.2, and many, many more *ad infinitum*. The important contrast to the CNB paradigm is that here, every point on the graph is connected to every other, and the representation for one person is never the same as that for another. It is also important to note that post-CNB epistemology does not reject out of hand the teaching of the Enlightenment; rather, it

analyzes social, philosophical, and educational forms previously shielded by the authority of modernist science. It does not attempt to throw out Western science but to understand its limitations and the underside of its application. It is a global perspective, since it admits to the conversation previously forbidden evidence derived from questions asked by previously excluded voices. (*Getting Beyond The Facts* 95)

In other words, post-CNB epistemology does not attempt to ignore the positive or beneficial effects of the Enlightenment. It involves a more complex, inclusive, and socially just conceptualization of pedagogy than is possible within the confines of CNB thought.

Let's return to the example of the child learning to divide. In order to determine how a child accomplishes the task of learning to divide double-digit numbers with single digits, for example, the researcher looks at a variety of different factors. If the *K-n* diagram of Figure 105.3 represents the research, the points on the graph are representative of the different interpretive lenses the researcher places on the phenomenon. The investigation may begin with biography. What is the child's previous experience with division? The child who has experienced success in the past will approach the task differently than the child who has struggled. What instruction outside the classroom does the child receive? A child who receives tutorial help may have additional insights into division that breed success, or may simply be confused because of contradictory instructions. What is the family attitude toward mathematics? The child of parents who view division as a daunting challenge has a different perspective than the child of mathematicians. Does the child speak sufficient English to understand instructions? Language is an integral part of mathematics, and facility with language affects acquisition. Other questions may be ethnographic in nature. Did the child fight with a friend before class? Is this the day before a long weekend? The ability to concentrate has a profound impact on attention to a learning task. A phenomenological approach raises different questions. What experience with division does the child have in everyday life? What is the lived experience of the child during the lesson? What is the lived experience of the teacher?

This leads to an important contextual point: questions about the teacher might be considered irrelevant in the CNB paradigm, but they are key in a post-CNB epistemology. What is the classroom teacher's attitude toward mathematics? The teacher who is a trained mathematician has an approach different than the nonspecialist, and may have the ability to use a variety of approaches. What tools are used in the lessons? A wealthy school may have the resources to provide manipulatives and visual aids to supplement instruction or due to small class size, may afford the teacher greater amounts of time to work with students on an individual basis. What does the teacher believe are the child's capabilities? Pedagogical decisions based on a teacher's expectations can have an enormous impact on classroom learning. The broader context is also important. What is the prevailing societal attitude toward mathematics? A society that values mathematical ability and achievement influences classroom instruction by providing funding, and honoring individuals with demonstrated talent, whether they are students or teachers. These questions and many, many more can affect the student's ability to learn a mathematics task that is apparently simple. Of course, it would be impossible to address all questions in order to come up with the definitive answer to the question about a child's learning. But what is most important is not the answer, it is the questions, and the complexity of the process of attempting to discover the answer leads to a sense of humility for the researcher. By acknowledging that any answers may be dependent upon context, the researcher avoids the sweeping generalizations that have served in the past to harm, not help, those being researched.

CONCLUSION

Clearly, the tendency exists to reduce epistemology to an easily digestible form, whether by adherents to Cartesian–Newtonian–Baconian thought or by those who reject CNB entirely. Even in describing the tendency, I delineate a tension between one side and another! Thus, by my own example, binarisms exert a powerful pressure on the conceptualization of knowledge. It is best, then, to keep in mind the dynamic qualities of the *K-n* graph of Figure 105.3. Is it possible to avoid binarisms? It takes a concerted effort, and perhaps the question “What binarisms are evident in what I just described?” becomes a useful question for the student of epistemology. The question serves as one of the checks and balances enabling the creation of an epistemology that moves more often than not toward dynamism instead of stoicism, expansion instead of contraction,

and inclusion instead of exclusion. The motion is understood to take place on a continuum so that the ideal is never achieved, but always remains in sight. And how does all of this influence educational psychology? Keep in mind the contrast between Figures 105.1 and 105.2 and the greater complexity of Figure 105.3. An epistemology that acknowledges multilogicality can become a tool that aids in a study of teaching and learning for the twenty-first century.

REFERENCES

- Bruner, J. (1996). *The Culture of Education*. Cambridge: Harvard University Press.
- Kincheloe, J. L. (2001). *Getting Beyond the Facts: Teaching Social Studies/Social Sciences in the Twenty-first Century* (2nd ed.). New York: Peter Lang.
- Kincheloe, J. L. (2003). *Teachers as Researchers: Qualitative Inquiry as a Path to Empowerment* (2nd ed.). New York: Routledge Falmer.
- Kincheloe, J. L., Steinberg S. R., and Tippens, D. J. (1999). *The Stigma of Genius: Einstein Consciousness and Education*. New York: Peter Lang.

CHAPTER 106

Toward a Postformal Model of History Education

FRANCES HELYAR

INTRODUCTION

For over a hundred years, historians, educators, and indeed the general public have struggled with definitions of the purpose, form, and content of history education. The questions have been many: Should history education serve to promote nationalism and patriotism? Should the goal be to create responsible citizens? To what extent should the practice of the history student in an elementary or secondary reflect the practice of the professional historian? How much access to primary and secondary historical sources is appropriate? Whose history should be told, and whose should be left out? Should children be learning history, or are social studies the better approach?

These are complicated questions, and different times and places produce different answers. What is generally consistent, however, is the infrequency with which students of history or student teachers are included in the discussion. Their minds are instead imagined as empty vessels into which a fully formed, well-defined (for the moment) history can be poured. Too often, history education as it is practiced even in the twenty-first century follows the positivist model, producing an understanding of the past that reduces the complexity of human experience to a simple cause and effect without complication. The linear nature of textbook narration reinforces this simplicity, and the study of history remains a dry-as-dust examination of undisputable facts and figures. The canon of acceptable knowledge appears monolithic and unchanging. While teaching to the test, history educators are unable to elicit in their students a sense of the relations between historical events, and the patterns that emerge, disappear, and reemerge. The wonder, the surprise, the sheer unexpectedness of human existence is lost in translation.

It doesn't need to be so. History education that has as its foundation a critical historiography can take the same source materials and elicit a deep understanding, on both a cognitive and an affective level, not just of the past but of how the past is constructed and perceived, how that construction and perception can be altered, and to what effect. As students examine their own knowledge and its origins, and then compare their knowledge to that of their peers, the textbook authors and others, they begin to develop the ability to think hermeneutically. This postformal approach serves the students not just in history class, but it becomes a life skill to enable them to approach critically new situations, both in and out of school. In this way, students move beyond

the positivistic process of assimilation whereby they shape an event to fit their cognitive structure, toward a process in which they restructure their cognition to fit an event. This accommodation allows them to anticipate different situations and thereby formulate strategies that will produce emancipatory outcomes as a result of new encounters. Students become explorers of the implicate order, a deeper structure of reality (Kincheloe, 1999).

HISTORY TEXTBOOKS

It has long been acknowledged that the tools of history teaching should include more than one textbook. Over a hundred years ago, teachers were entreated to bring multiple sources, primary and secondary, into the classroom. A century has passed, however, yet the complaint still persists that teachers rely on too few sources, with the history textbook always at the forefront. The textbook may have been revised to include different racial, ethnic, gender and other perspectives, but it remains a cultural artifact, reflective of the era in which it was produced and at the mercy of the particular ideologies of the publishers and the prescribing jurisdictions. Methods textbooks for preservice teachers are equally reflective of particular pedagogical trends but most fail to elicit anything more than a shallow understanding of the notion of historiography and criticality. At the same time, the public discourse refers sentimentally, and sometimes angrily, to a so-called golden age of history education that never existed.

In the late nineteenth to early twentieth century, high school history textbooks were hardcover books no bigger than the size of today's trade paperbacks. They contained some maps and illustrations, but for the most part the text was dense, with the density often relieved within chapters by numbered sections or paragraphs. This textual separation was designed to make the content material easier for the student reader to grasp. Single male authors who were usually university professors of history wrote these tomes with an authoritarian voice. In many nineteenth-century classrooms, textbooks were the antidote to the ill-trained teacher who had no understanding of history (FitzGerald, 1979). The text often included a message from the author about the nature of history, and during this era, it was all about progress. "The study of history was the study of the progress of man [*sic*] in the Baconian sense, with the pinnacle of achievement explicitly identified as white European civilization" (Swinton, 1883). Of course, the particular example of that pinnacle depended on the national origin of the author; in British texts, the British Empire provided the model with which all others were compared, while American authors preferred the American touchstone. Primitive societies were described as inferior, and while mentioned, were dispatched with due haste. In subsequent editions, some authors altered their writing styles slightly to adhere to the characteristics of a story (Myers, 1906/1921). Textbooks were, and still are, big business, and authors and publishers then as today regularly made changes to their books to fit the needs and desires of the committees that approved their use in schools.

As the twentieth century continued, however, history textbooks changed in some significant ways. They became larger in size and the font size of the text was similarly expanded. Illustrations and maps became more numerous, photographs and color were added, and chapters were more likely to be followed by study aids such as questions about content, map-reading activities, and references for further study. The questions were fact-based, and the answers contained within the pages of the texts. These books were written not by lone authors but by teams, which necessitated the removal of authors' signed messages in favor of unsigned forewords or prefaces. The focus on the progress of civilization remained, however, and Western civilization continued to be the gold standard. Science led the way with an unquestioning acceptance of scientific discovery as unambiguously positive. The narrative was chronological and linear, presenting a clean, uncomplicated view of history. Smith, Muzzey, and Lloyd's 1946 *World History: The Struggle for Civilization*, for example, includes a middle section on "The Growth of Nationalism."

The section concentrates on Europe and European colonial power, including a passage titled “How Africa Came to Belong to the Europeans,” with additional passages about Russia, Japan, and China. The section ends with a science-focused chapter titled “Rapid Progress of the Nineteenth Century,” including passages about “The Magic of Modern Chemistry” and “Knowledge Brought Within the Reach of All.”

There were exceptions to this typical textbook along the way. Harold Rugg’s popular series of social studies texts, published under the group title “Man and His Changing Society,” were widely read by American school children until a concerted campaign by business interests and patriotic groups resulted in their effective banishment from prescribed book lists by the early 1940s (Zimmerman, 2002). The main complaint against the texts seems to have been their critique of America in a social, cultural, and economic context. America as an example of the ideal nation was under attack, and that kind of criticism was deemed unseemly and inappropriate for the country’s children. The texts went from being perennial bestsellers for nearly a decade to disappearing entirely, all within the space of about five years.

The appearance of textbooks in use in twenty-first century schools is not much different from those of the mid-twentieth century. The dimensions are more or less the same, and the text is still arranged in columns, with topics separated by headings. Information is organized chronologically and accompanied by illustrations, maps, charts, photographs, and other visuals. Chapter titles range from those echoing the notion of progress from earlier textbooks, using words like *launching*, *triumph*, *upsurge*, *rise*, *shaping* and *creating*, and those which indicate struggle, including *duel*, *friction*, *ferment*, *controversy*, and *ordeal* (see Bailey and Kennedy, 1987).

The biggest changes in textbook content during the last half of the twentieth century concern race and gender. The civil rights movement and feminism of the 1950s, 60s, and 70s had a direct impact on history textbooks so that no longer do they tell an exclusively white, European male story. Photographs, excerpts from primary source documents and other artifacts create a more inclusive portrait of the past. The change is not uncontroversial, however. The nature of history textbook publishing and the economies of textbook size mean that any time one part of history is included, it necessitates the removal of another. By definition, then, there is no such thing as a perfect textbook, and textbook controversies arise with a regularity that would be comical if the consequences to history education were not so severe.

Throughout the history of history textbooks, a distinction can be made between those books prepared for school children and those intended for a general adult audience. For instance, a glance at the *New York Times* nonfiction bestseller list at any time yields a number of histories and historical biographies. No matter the author’s perspective, the book for adults will include the author’s name, probably a biographical paragraph and perhaps even a photograph. In addition, the volume will include bibliographical references. In contrast, only in the late twentieth century have history textbooks written for children begun to contain biographical material about the authors. At the same time, bibliographical material that was included in textbooks in the late nineteenth century has been missing for most of the twentieth. No wonder students accept what they read as the undisputed truth; they are provided few clues to the source of the material. They are simply hearing the voice of authority.

The point, of course, is that students of history do not often compare their textbooks to popular histories. They do not look at old history textbooks (I was once fortunate enough to intercede at a school when a collection of elementary school textbooks was being relegated to the trash. I now own enough copies of that textbook to enable group textbook analysis). They do not think of their textbooks as having been written by a human being, someone’s mother, father, daughter, or son. A positivistic history course does not lay bare the intricacies of textbook approval and production, of the machinations of the publishing industry, or the labored discussion at the school administration level that precede the arrival of an approved textbook in the classroom. Instead of

analyzing why a point of history is included for study, that point of history is simply memorized for the test. Student knowledge is limited to the lowest of cognitive levels.

How would a postformal history lesson make use of textbooks? It would include a critical historiography that not only examines what is there, but what is not there. It goes beyond the assumptions of a single perspective to embrace a multiplicity of vantage points from which to view a particular history. It gets beyond the facts. For instance, students begin with a collection of textbooks from various eras. These books may be examined with a number of questions in mind. Within a broad context, those questions may include the following:

- When was this book published? What was going on in the world at the time?
- What are the chapter headings of this textbook? What do this textbook's authors consider to be important?
- What kinds of words are used in the chapter headings to make them more interesting?
- What names occur in the index? How often do they occur?
- Are there supplemental activities in the text? What form do they take?
- How do the above examined features compare to what is found in other textbooks?

Looking more specifically at the content of the textbooks, the following questions could be asked:

- Choosing a particular historical event, how does this textbook describe that event?
- What descriptive verbs, adjectives, nouns, and adverbs are used?
- Which historical figures are highlighted in this account?
- How do the authors feel about this historical event?
- How do the above details compare with the way the same historical event is depicted in other textbooks?

Students then use the answers to the above questions to frame their understanding of textbooks. This process removes the mystique of the authoritative author and brings to the fore perspective, bias, and knowledge production (see student reflections on this kind of approach to textbooks at the Urban Academy Web site, <http://www.urbanacademy.org/diverse/studentreflect.html>). The process may also be extended with the addition of popular historical nonfiction, film, and television to the mix. By critically comparing presentations of the past, students begin to recognize and make judgments about editorial choices and the multitude of forces that affect textbook production and the production of other historical media.

METHODS TEXTBOOKS

This type of critical historiography should begin with teacher education. Like history textbooks, methods textbooks are reflective of the era in which they were produced. To use one text as an example, William Mace's 1897 *Method in History* describes the organizing principle of history as the growth of institutional life. Mace's perspective is highly Eurocentric and reductionistic. His chapter headings include "Essential Elements of History," "Processes Involved in Organizing History," and "Organization of the Periods of American History." He splits "The Elementary Phases of History Teaching" into two sections, "The Sense Phase of History" and the "The Representative Phase of History," and he introduces the former saying, "No one can intelligently determine what the method of history work should be without first discovering the logical relations in the subject-matter itself. The subject in its scientific form stands as the goal toward which every lesson must point, no matter where the material is found along the line between these two points" (see Mace, p. 255).

While Mace's methods text is overwhelmingly positivistic, it is not without useful information for the student teacher. For instance, he offers a simple method of determining which "facts" should be included in a test. Using, among others, the example of the arrival of the Pilgrims to Plymouth Rock aboard the Mayflower in December 1620, he asks if it would have made any difference had the ship been called the Speedwell. Would the destiny of America have been different had there been one hundred or one hundred and two souls aboard instead of one hundred two? The answer in each case is no, and so Mace concludes that these are pieces of information students of history need not retain. Instead, they should learn about the political, religious, and social ideas animating the Pilgrims, because these ideas had consequence for the development of the nation.

The student teacher who reads an old methods textbook such as Mace's, while perhaps recognizing a few pedagogical gems within, cannot help but remark upon the archaic sentence structure and presentation and, more important, the vastly different approach to the study of history recommended in 1897. By examining such documents historiographically, the student can trace the changes that occur in texts over a long period. This examination influences the way the student approaches the contemporary methods textbooks because it provides a context and reveals the situatedness of any prescribed methodology.

In contrast to Mace's hundred-year-old text, Jack Zevin's *Social Studies for the Twenty-First Century: Methods and Materials for Teaching in Middle and Secondary Schools* (1992) opens with a "Personal Prologue," which addresses the reader directly. Throughout the text, Zevin continues this approach, saying on p. 67 for instance, "You may find yourself in a situation in which the text defines both the curriculum and your teaching plan." Not only is the writing style considerably different from the older text, but also in an echo of the comparison between history textbooks new and old, the dimensions of Zevin's book are greater, and the text is broken up with photographs, charts, and special activities. Most interestingly, where history textbooks tend to omit bibliographical material, Zevin's text contains full references. Where the old and new methods texts resemble each other is in their organization. Zevin's text is divided into five parts, each of which has its counterpart in Mace's text: a definition of the field; a contextual description; strategies for instruction; curriculum information; and a final, wrap-up section. In addition, although Zevin's text tries to represent the range of opinions surrounding the field of social studies, he still reduces the field into three interrelated dimensions—the didactic, the reflective, and the affective.

How would a postformal teacher-educator make use of these texts? An historiographical approach in which many of the same questions asked of history textbooks is appropriately applied to a range of methods texts. Students may examine the context of the historical era in which each text was produced, and delineate the language used in the chapter headings as well as in the body of the text. By comparing methods textbooks from different eras, student teachers begin to acknowledge that pedagogy is not static, but instead is a product of its time and is ever changing. As they recognize changing approaches to teacher education, they begin to question the assumptions implicit in each text. Among the questions they may ask about each text,

- What approach to pedagogy does this author take?
- How does this author's approach compare to others'?
- How does this author's approach compare to my own?
- What about this discipline does this author value the most?
- What does this author not value?
- What claims does this author make?
- Do I believe this author's claims?

In answering these questions, the student teacher develops a personal approach informed by a historical understanding of the discipline. On a cognitive level, the student teacher has a deeper understanding and is better able to articulate what she is teaching and why she is teaching it.

PEDAGOGY

The pedagogy of history education has undergone profound changes over the past hundred years, although in some ways assertions of the past have their counterparts today. In 1912 the American Historical Association's Committee of Five issued *Study of History in Secondary Schools*, in which the most important factor in the classroom was deemed to be not the curriculum or the method or the textbook, but the teacher. The Committee paints a cautionary picture of the kind of mind-numbing history class that has served as the stereotype for nearly one hundred years, in which the pupil works her way page by page through the textbook with a teacher who is in no danger of telling untruths if the students ask no questions. History education as the study of a series of facts was as unacceptable in the early twentieth century as it is in the postformal classroom:

If history teaching results only in the memorizing of a modicum of bare facts in the order in which they are given in a text there is not much to be said in favor of the retention of the subject as an important part of the curriculum. This does not mean that pupils should not be accurate, painstaking, and thorough; it means that in addition to learning, and learning *well*, a reasonable amount of history from the text, the pupil should gain something more: he should learn how to use books and how to read them; he should be led to think about historical facts and to see through the pages of the book the life with which history deals; he may even be brought to see the relation between evidence and historical statement in simple cases where material is close at hand; he should in some measure get the historical state of mind. (pp. 39–40)

The goal of history education is the same, only the methodology has changed. But it is the positivist classroom, with students deep in preparation for the standardized test, that bears a closer resemblance to the negative example of a history classroom in 1912, than does the postformal model. No doubt it will be possible in the future to compare standardized tests of the early twenty-first century with their associated history textbooks and see, just as happened in the early years of the twentieth century, students underlining sections of the text that comprise the answers for the test questions. This marginalia begs the question: what have the students learned, and how has it served them in their lives?

As hierarchical and taxonomical organization became the dominant feature of curriculum design in the twentieth century, the pedagogy of history education became bogged down. Part of the problem was the curriculum designers' inability to harmonize the grand goals of the documents with the instructions for implementation. The stated goal of the curriculum may have been that students achieve equally everything from comprehension to synthesis and analysis of the material covered, but an examination of the language used within the curriculum document itself revealed an unequal balance of expectations. No wonder teachers found themselves frustrated in their attempt to fulfill goals that were unattainable. At the same time, the hierarchical nature of the expectations imposes a value judgment on knowledge that may have little or nothing to do with what the students know, or what they learn.

Whereas the positivist pedagogy of history education envisions the students' minds as vessels to be filled with facts, the postformal model acknowledges that students begin their study with a worldview, with a preexisting notion of history. The teacher's first job is to enable them to articulate that view. Not only do students investigate *what* they know of history, more important,

they look at *how* they know history. The following questions prove useful in undertaking this investigation:

- What history books have you read? (school textbooks or popular histories)
- What public monuments are familiar to you?
- What media representations of history have you seen or heard? (films like *Alexander*, *Troy*, or *Saving Private Ryan*, programs on television networks such as The History Channel or Biography, television mini-series, etc.)
- How have historical events affected you or your family or your friends? (immigration, migration, refugee experience, military service, etc.)

The postformal teacher uses the answers to these questions to shape the study of history. It is not enough to set a course of study before classes begin and plow through a series of lesson plans leading up to the test. The critical teacher, aware of both the cognitive and affective aspects of history education, is sensitive to the fact that different students experience the study of history in unique ways. For example, in a thematic study of immigration and migration, the teacher must be cognizant of the fact that the theme will have a different meaning to the child who is an immigrant himself than for the child whose family has lived in the same location for generations. It is foolhardy and a waste of precious intellectual resource for the teacher not to acknowledge the personal experience of the student, to fail to welcome the sharing of that experience in the classroom. This is not to say that the child should become essentialized, that the immigrant child should become the center of every conversation about immigration, or that the student with a long history in the school district should have no contribution to make other than that relating to her family's longevity. Student knowledge, however, can effectively inform a study of immigration patterns and experience, and bring the study of history into sharp relief with a study of the present and the lived lives of the student population.

The postformal study of history has a particular role in acknowledging the affective as part of the classroom experience. As students examine historical documents and learn about the events and forces that have impacted on the lives of people in the past, it is highly likely that they will experience an emotional reaction. Rather than brushing aside the emotion, the critical teacher acknowledges it, interrogates it and accepts it as an integral part of historiography. In addition, student intuition is similarly recognized, acknowledged, and encouraged. The professional historian, who as one who wonders about history, does not make use of intuition, is a historian who misses much in her study of the past. Students should be no less vigilant in recognizing the affective as an accepted component of the serious historiographer's tools of the trade.

Another important postformal tool is the concept of metaphorical cognition (Kincheloe, 1999). Students should be encouraged to represent their understanding of history in the form of a metaphor. Depending upon their age and cognitive level, the metaphor may be sophisticated or not. The activity is not a discrete one, however. Rather, it serves as an ongoing process in which students revisit previous thoughts and reformulate their metaphors in light of recent learning. As they do so, they interrogate the reasons for the changes in their thinking. This activity can be incorporated into a journaling process in order to trace the development of their historical understanding. Thus they recognize in a very personal way the constructed, fluid, and changing nature of knowledge, and experience the possibilities for deep thinking inherent in the discovery of patterns and connections.

Positivist education places a heavy emphasis on the activity of problem solving, both for students and teachers. It is true that the problem solving process can be useful, and can help

to break away from a worldview that sees history or education as neat, linear processes, for instance in the case where a solution to a problem is not possible. But within the context of many disciplines, and in particular history education, such a focus can seem nonsensical, especially to students. Why should they attempt to solve problems that arose in the distant past, and for which solutions have likely already been found? The resulting crisis in motivation provides only one impediment to deep learning; other impediments may include the sometimes-forced connections imposed between the past and the present, the low-level thinking required to solve the problem, or simply the top-down hierarchy of dealing with problems as defined by others. For teachers, the act of problem solving must begin with an acceptance of the way the world is, not as it could be. This is a limiting view which renders the teacher blind to conditions in the classroom and the school that may serve to impede student success; it is antithetical to the goals of emancipation and social justice that are the cornerstone of postformal education.

The postformal counterpart of problem solving is problem detection (Kincheloe, 2001). This process begins not with a set of predetermined problems, but with observation. For example, teachers examine their curricula, and students examine their textbooks. Both may notice that American history is viewed as a story of progress, and that America is identified, in the words of the national anthem, as “the land of the free.” This observation leads to a definition of freedom, and an examination of the concept in the context of American history. The problem is detected: how is it possible to reconcile that identity with the institution of slavery, with the fight for civil and women’s rights, with the country’s labor history, treatment of ethnic minorities, immigration policies, and so on. The inevitable next step is an examination of freedom as it relates to current events, as students discover where the word is used in political and social discourse, how varying definitions of freedom affect public policy, and what are the consequences in America and throughout the world. This hermeneutic process allows them to interpret this and subsequent situations. When students become experts at problem detection, they develop simultaneously an expertise in historical thinking. The potential for creative investigation and deep understanding is huge, yielding results immeasurable in a standardized test.

CONCLUSION

History education has been surrounded by controversy since its inception. There never was a golden age. The discipline has always been lacking in someone’s estimation: Students don’t know enough, they know too much about this and too little about that, they don’t know who, they don’t know where, when, how, or why. Sometimes the criticism is motivated by a sense of injustice; sometimes it arises in response to a perceived threat to traditionally dominant interests. The only constant is its persistence. Surely the twenty-first century is the time, after so much has been said by so many, to create a new paradigm of history education that is inclusive, equitable, and socially just. Surely now is the time to turn to a rigorous pedagogy that stimulates deep involvement both cognitively and affectively. Acceptance of this new paradigm is not a matter of throwing the baby out with the bathwater; instead it invites a closer look at the baby, the bathwater, the tub, the soap—asking questions, seeing relationships, developing understanding. Educators thus move beyond the model of their own educational backgrounds and become pioneers of the new millennium, forging into the truly undiscovered territory of postformalism. By taking this approach, concentrating heavily on historiography to unearth tacit assumptions of the present and the past, educators and students can abandon memorization of the mere facts inherent in traditional education, to learn the processes and patterns of the dance of human history. Thus they come to understand in a meaningful way their own position in the web of reality. They develop the ability to detect problems, to apply hermeneutics to their experience, and to deconstruct a

variety of texts, both literal and figurative. In doing so, they open to themselves a new world of possible interpretations of yesterday, today and tomorrow, hearts open with humility and wonder.

REFERENCES

- Bailey, T., and Kennedy, D. M. (1987). *The American Pageant: A History of the Republic*. Boston, MA: Houghton Mifflin.
- FitzGerald, F. (1979). *America Revised: History Schoolbooks in the Twentieth Century*. New York: Little, Brown, and Company.
- Kincheloe, J. L. (1999). *The Post-Formal Reader: Cognition and Education*, eds. S. Steinberg, J. Kincheloe, and P. Hinchey. New York: Falmer Press.
- . (2001). *Getting Beyond the Facts*. New York: Peter Lang.
- Myers, P. V. N. (1906/1921). *A General History for Colleges and High Schools*. Kilia MT: Kessinger Publishing.
- Swinton, W. (1883). *Outlines of the World's History: Ancient, Medieval and Modern*. New York: Ivison, Blakeman, Taylor.
- Zimmerman, J. (2002). *Whose America? Culture Wars in the Public Schools*. Cambridge, MA: Harvard University Press.

CHAPTER 107

Postformalism and a Literacy of Power: Elitism and the Ideology of the Gifted

JOE L. KINCHELOE

One of the most important ideological tools designed to maintain existing power relationships involves the use of mainstream educational psychology and psychometrics to validate the “intelligence” of the privileged and the “deficiency” of the socially and politically marginalized. Drawing upon the discursive critique of the fragmentation of the discipline of modern psychology and the need for sociohistorical contextualization of the study of giftedness and intellectual ability, a critical psychology understands that human sociality is a fundamental aspect of the self. Criticality induces us to appreciate that the self is never complete, always in process of shaping and being shaped by the sociocultural, symbolic, and ideological realms. In this context a critical psychoanalysis replaces the term *self* with its implication of autonomy and unity with the term *subject* with its connotation of the self’s production by its interaction with the world around it.

In this context, therefore, the development of mental functions must account for a wide variety of factors, including contextual analysis, the conscious and unconscious production of subjectivity, the subtle dynamics of interpersonal interaction, and an individual or a group’s position in the web of reality. Simply put, contrary to the pronouncements of proponents of gifted and talented education for the elite, the mind extends beyond the skin. Intelligence, memory, and thinking are not the simple possessions of individuals—they are always social and political processes. With these understandings the primitive nature of psychometric IQ testing is exposed with its measurement of cultural familiarity with the discourse of Western schooling and linguistic socialization.

Thus, a critical theoretical encounter with educational psychology involves a critique of the authority of psychological knowledge and the paradigm in which it is produced. The mainstream psychological paradigm, for example, has ignored the stories, experiences, and life world of culturally and politically marginalized groups. A critical reassessment of psychology and its elitist assumptions induces the field to confront the Eurocentrism of the discipline and the ways such a dynamic shapes psychological knowledge. It challenges mainstream psychology’s monocultural value system that reflects the standpoint of a positivist epistemology that reflects the senses over interpretive, more hermeneutical forms of knowledge. Such epistemological orientations impede scholars from critically reading the sociopsychological world in ways that

connect psychological processes to their larger contexts in ways that provide meaning to ostensibly isolated and abstracted phenomena.

Such a dynamic results in a psychology guilty of individuation. Mainstream psychologists have often reused to employ the sociological strategy of studying individuals in relation to their various group identifications, choosing instead to highlight individualism. The critical theoretical critique of Cartesian–Newtonian science rejected this individuation and the theory of the autonomous rational subject that supports it. Residing at the epicenter of the positivist universe, this possessive egocentric individual has corrupted particular scientific ways of seeing to the point that manifestations of difference are excluded. Operating in this epistemological and ontological galaxy, cognitive psychology validates this individualization impulse as it positions the individual as the nonproblematic unit of scientific analysis. In this context learning becomes a simple process of absorbing the given while pedagogy is a matter of transmission and assimilation. Such a perspective establishes strict boundaries between the inside and outside of the mind—students in this epistemology and its attendant learning theory take in information from outside themselves. The mindset builds fences between ourselves and other people, borders between our mutual emotional needs—indeed, fragmented knowledge fragments the community.

THE POSTFORMAL MISSION: EXPOSING POWER IN PSYCHOLOGY'S NATURALIZATION OF INEQUALITY

Mechanistic educational psychology—and, of course the other branches of psychology—has used its positivistic methodology to “naturalize” cognitive superiority and inferiority. As educational psychology presents statistical relationships as natural laws, Spearman's *g* as natural, transhistorical, transcultural, and stable, and IQ scores as the true measure of intelligence, the discipline covers up the human construction of such notions with social, political, and economic assumptions. When psychometricians, for example, contend that IQ is “normally distributed,” they have implicitly assumed that IQ scores really do signify cognitive superiority, this “intelligence” exists inside the mind as a material entity, and the material mental entity has been proportionately passed out to human beings by nature itself.

The cognitively gifted in this context have been granted validation by beneficent nature itself—the ultimate act of naturalization. Curiously absent in this conversation about cognition, however, is the realization that standardized intelligence tests are devised and revised until they produce a normal distribution, a bell curve. Claims of natural cognitive laws ring hollow in such a constructed, if not contrived, positivistic context. Indeed, mechanistic psychology's use of terms such as natural laws and human nature make it look like the mind has no connect to the social, cultural, or political domain. The ability of power to produce knowledge that supports its own interests is irrelevant in this rarefied, naturalistic context.

As we struggle with our postformal reconceptualization of educational psychology, we are profoundly struck by the political dynamics of this interrelationship between mind and culture. The political (power-related) dimensions of the social realm confront us with the role of power in the shaping of consciousness. Our critical constructivist emphasis on the fiction of the preexistent, innate self forces us to face some complex issues. Many critical analysts argue that if we deny the existence of an innate, presocial self then concepts such as ideology lose their meaning. The argument such critical analysts are making in this context is that the ideology of the power wielders distorts the socially pure self.

The concept of ideology can play a profoundly valuable role in understanding both the micro-social production of the individual subject and the macro-social perpetuation of the status quo. If we view ideology as simply one dynamic in a larger sociopolitical constellation of influences, notions of the production of “false consciousness” do not have to be employed with their implication

of a corresponding “authentic consciousness”—that is, a presocial, fixed self. In this conceptual context we can refute the reductionistic nature of modernist psychology’s disposition to naturalization. At this point we can begin to analyze the ways that ideological power complements disciplinary power’s shaping of subjectivity. Subjectivity and power are inseparable concepts.

In this encyclopedic context this reference to ideological and disciplinary power provides a good opportunity to delineate just what these concepts denote. Such knowledge, it seems to me, are key understandings in a critical educational psychology, in postformalism.

Ideological Power: The Basic Characteristics

- Hierarchical power relations are constructed and maintained by diverse ideological expressions that mobilize meaning.
- Ideology is part of a larger process involving the maintenance of asymmetrical power relations—it is not a body of political beliefs.
- Ideology is not a misrepresentation of what is real in society.
- Ideology plays a role in constructing reality—it is found in the interplay of meaning and symbols that make up the lived world of the individual.
- Ideological meaning is always contingent on the process by which a dominant group is able to frame the interests of a competing worldview.
- Ideology as a semiotic phenomenon is located at the level of the social—it uses signs and signifiers to serve the interests of dominant power.
- Ideology is an interpretive framework through which the world is understood in a way that operates to sustain relations of domination.
- Ideology often exists in the realm of the preinterpreted—words, concepts, expressions, symbolic constructions all gain part of their meaning in this domain.
- Ideological refraction refers to the process by which the relationship between a sign and its referent is transformed. Such refraction creates a particular relationship that predisposes individuals to an interpretation of an event that serves the interests of dominant power.
- Ideology does its work in secret—it never says “I am ideology.”
- Ideology struggles to hide social antagonisms and conflicts—an ideological historical account of the U.S. past, for example, hides particular class and race problems.
- So-called reflexive legitimation (very important in educational psychology and pedagogy) induces the oppressed to accept their low place in the social hierarchy, their own “inferiority.”
- Ideology is not a monolithic, unidirectional entity imposed on individuals by a secret cohort of power wielders—it is far more complex and nuanced.
- A hyperreal ideology is found in a variety of social locations, places previously thought to be outside the domain of ideological struggle—for example, ideology in the contemporary electronic world often operates at the level of affects and emotion as well as at the rational level.
- The world can only be viewed through ideologically shaped lenses—no objective, pristine view is available.
- A critical complex understanding of ideology understands its operations at the macro, meso, and micro levels of the social—it also understands both the production and the reception of ideological power.
- The postformal understanding of ideology demands attention to the ways ideology represents the world and the symbolic processes that are used to shape these representations.

Hegemonic Power: The Basic Characteristics

- Views dominant power formations as shifting terrain of consensus, struggle, and compromise rather than a one-dimensional ideology imposed from above.

- Hegemonic power blocs exercise power by winning the consent of the governed—not via force.
- Hegemonic consent is never completely established, as it is always contested by various groups with different agendas.
- Hegemony involves the transmission/reception process that takes place around particular preconceptions, notion, and beliefs (ideologies) that help shape the worldview of particular social groups.
- The process of hegemony involves the social construction of reality through particular ideological institutions, practices, and discourses.
- Hegemony is a much more subtle process of incorporating individuals into patterns of belief, feeling, and behavior than the older notion of propaganda. Propaganda assumes citizens are malleable victims who easily fall prey to indoctrination.
- Consent is garnered by power blocs by turning their own beliefs and ways of seeing into “common sense.”
- In winning consent, the power bloc must be prepared to accept a degree of compromise with those who give their consent. While the power bloc doesn’t give up essential interests, it does cooperate with and respect some of the interests of other groups. A good example of this over the last thirty years has been the traditional Republican Party’s acceptance of fundamentalist Christian politics and ways of seeing the world in order to win their consent to trickle down economics and regressive tax policies.
- Hegemony takes on very different forms in light of differing social conditions.
- Hegemonic consent is always fragile and precarious and is always being contested. Because the material and political disparity between the power bloc and the hegemonized is always known, hegemony is threatened by people’s awareness of and anger about this inequality.
- Hegemony and ideology are inseparable. Ideologies are the tools used to win consent.
- Obviously, hegemony is not the only mode of domination in a society—other forms of domination coexist with hegemony.

Disciplinary Power: The Basic Characteristics

- Disciplinary power “disciplines” or regulates human beings via the use of the human sciences.
- The human sciences have created a society of normalization through specialized discourses deployed at socially specific sites—hospitals, schools, prisons, and asylums.
- Disciplinary power is nonegalitarian and asymmetrical and uses management and surveillance as technologies of control.
- Disciplinary power includes social systems whose rules, practices, and procedures exert an impact on the ways people, institutions, and social life operate.
- Disciplinary power works within human sciences (psychology, education, social work, psychiatry, medicine, etc.) that purport to be caring and humane. In this context—like power in general—disciplinary power is often masked.
- Important theorists of disciplinary power: Michele Foucault theorized a disciplinary power that produces “truth” and “knowledge” about human beings; Mikhail Bakhtin focused on the indiscipline (life force) that dominant power needs to control by disciplinary means; Michel DeCerteau emphasized human beings’ creative agency to resist disciplinary power.
- In the context of disciplinary power theory, power relations are both conditions and effects of the production of truth about humans.
- Disciplinary power extracts data from and about human beings by “qualified experts” and “licensed professionals” who possess and apply the knowledge gained.
- Disciplinary power involves the power of science. The sciences arose in institutional settings structured by hierarchical relations of power. As a form of disciplinary power, science can be used *against* people.

- Disciplinary power, as Michel Foucault maintained, produces “regimes of truth” that involve privileging certain types of discourse, sanctioning certain ways of distinguishing true from false statements (positivism, for example), underwriting certain techniques at arriving at truth, and according a certain status to those who competently employ them.
- Disciplinary power understands that power and knowledge directly imply one another—there is no power relation without the constitution of a body of knowledge.
- The art of management is studied in the context of disciplinary power—management science promotes a regime of knowledge and power. The power to manage life necessitates the knowledge of life’s processes
- When disciplinary power is exerted, there is an attempt to position people as receivers of information not producers—right-wing school curriculum manifests this dynamic.
- Disciplinary power as science disguises its dominating ability with the language of objectivity. Thus, it naturalizes power.

Central to postformalism is a sophisticated literacy of power. Such an understanding is essential in understanding mechanistic psychology’s attempts to naturalize the mind. A postformal educational psychology is focused on the analysis of the way macro-social processes construct identity. In this context postformalists appreciate the Freudian assertion that reality is not pregiven but is fashioned by human beings, that the unconscious is not a biologically bounded black box but just as much a social construction as any other aspect of the psyche. Such understandings are grounded on a social, cultural, political appreciation of the influence of dominant power and power blocs. Drawing upon the work of John Fiske on power blocs, we gain a far more complex view of how power works.

Power Blocs: The Basic Characteristics

- Power blocs are alliances of social interest around specific issues that arise in particular conditions.
- A power bloc is better identified by what it does than what it is—it is not simply a social class, for example.
- A power bloc operates not as a conspiracy but from the recognition of mutual interests—for example, threats to family values, heterosexual dominance.
- Imperializing (dominant macro-) power and localizing (weak, resistant, micro-) power come into conflict at zones of interaction.
- A power bloc is an exercise of power to which certain social formations have privileged access—primarily racial (white supremacy), class (moneyed elite), gender (patriarchy), sexual (heterosexual dominance), religious (Christianity), and several other groups constitute power blocs.
- Social formations that are subordinated along some axes of social difference can align themselves with a power bloc on others. Some have referred to this as the contradictory and ambiguous positioning of individuals in the web of power relations. For example, men subordinated by class or race can and do exert imperializing power along the axes of gender and sexuality. One can observe this phenomenon with economically poor white men in recent U.S. elections.

Of course, what we’re dealing with here is the intersection of educational psychology with critical theory and its concern with power and oppression. Such critical scholarship refuses to accept the reductionism common to mechanistic psychology that reduces complex sociopsychological processes to separate syndromes or stages on the basis of a single criterion. This reductionism views psychological truth as a knowledge of discrete and stabilized stages and categories—for example, she’s operating at a concrete level of cognition or he is dull normal. Typically a reductionistic, mechanistic educational psychology is constructed on an epistemology that is unable to deal with complexity, diverse cultural contexts, transitional states, or entities in process. In a

critical postformal educational psychology, for example, IQ is not a genetically fixed phenomenon but a rather insignificant signpost in an ever-changing, socially contingent process.

Such a reductionistic educational psychology, thus, is blinded to the possibility of growth or breakthroughs that can occur with a modification of sociocultural, historical, or political context. It is blinded to the possibility of a pedagogy that refuses to give in to the determinism of psychological classifications. A postformal educational psychology is a discourse of hope that is optimistic about the ability of humans operating on their own recognizance. Understanding these power dynamics, postformalists believe, is a first step on a longer trek toward human potential. We have to become experts into the way ideology and disciplinary power *construct* human incompetence.

MARGINALIZATION BY PSYCHOLOGIZATION

The failure of educational psychologists to operate with a literacy of power, to understand the social structuring of the self, leads to a variety of problems, especially for those who are in less-powerful, marginalized positions. Without such contextualization individuals from dominant cultural backgrounds are often unable to understand that the behaviors of socioeconomic subordinates may reflect the structural pressures under which they have to operate. In addition, men and women from the mainstream often believe that socioeconomic success is the result of individual merit and that social hierarchies and bell curves represent the natural dispersion of biological cognitive aptitude. Quite conveniently for the more privileged members of society, such individualized belief structures serve to hide the benefits bestowed by dominant-group membership. The same type of elitist concealment by individualization has also taken place in Western cognitive science. Such a tacit process allows gifted education to promote the chimera that giftedness is exclusively an individual not a socially constructed phenomenon.

The mind, mainstream cognitive scientists have contended, is the “software program” that can be studied in sociohistorical isolation by fragmenting it and analyzing the parts—a quick and clean form of analysis that avoids the complication of “messy” sociohistorical contextualization. Such messiness involves touchy issues such as social values or politics and the intersection of the biological (individual) with the collective. Thus, individualized psychology studies the machine (mind) but not the uses to which it is put in the social cosmos of ideological conflict and political activity. Psychologists and teachers like specialists in all fields are often educated as technicians who must pursue a critical and contextualized view of the world through their own efforts outside of their professional education.

These decontextualization processes tend to psychologize the study of cognition or the formation of subjectivity in that analyses of such phenomena are undertaken only as psychological processes, not psychological, sociological, political, economic, and other processes as well. Jean Piaget decontextualized his study of children, often removing questions of cultural context from his observations and analyses. Did children in non-European cultures develop in the same way? In other historical times? In diverse class contexts? Child development in Piaget’s work was not examined in these contexts. In the attempt to understand human political behavior, modernist political scientists often neglected to view political beliefs and actions in the context of desire and other emotions, focusing instead on rational dynamics.

Such abstraction/decontextualization undermined the larger effort to make sense of such activity. Students of education often approach schooling as an institution that exists outside the cultural, linguistic, or political economic context. Indeed, the very organization of schooling in America is grounded around the modernist belief that knowledge can be decontextualized. Only in this decontextualized domain can intelligence testing be viewed as an objective, uncontaminated instrument of measurement. Moreover, only in this domain can giftedness and gifted and talented

education be viewed as simply a phenomenon of individual cognitive ability. To maintain the psychological, educational, social, and political economic status quo, contextual insights must be removed from efforts to understand cognitive and pedagogical processes.

THE HIERARCHIES OF MIND

Employing a variety of sociopsychological modes of inquiry, critical students of the mind gain new angles from which to make sense of cognition and intelligence. Lacanian psychoanalysis's emphasis, for instance, on the ways social institutions shape individual subjectivity is essential knowledge for educational psychologists seeking to trace the subtle ways schooling inscribes student consciousness. Vygotskian cognitivism alerts these same psychologists to the ways social relationships and cultural context are not only influential in cognitive development but are the sources of the mind. When the understandings of psychometricians do not include such cultural appreciations, these specialists in measurement/assessment will perceive no problem with standardized texts being prepared by people from only one culture. What's the problem, they may ask, intelligence is intelligence, giftedness is giftedness, no matter where it's found.

Because psychology is an important aspect of the social and political world, the discipline has responsibilities to such a cosmos. The sociocultural dynamics that shape psychological functions do not alert us simply to methodological features of scholarly conversation—from a critical perspective they focus our attention on the human damage that results from the cultural blindness of professionals in psychological positions. When cultural difference is confused with, for example, mental deficiency or pathological behavior, serious ethical questions arise. Concurrently, when social privilege is confused with giftedness, great injustice can be justified.

If we accept Lacan's view of the positivist notion of an inner "authentic" self as a fiction and that there is no biological schema that presets behavior in advance, then we will find it difficult to accept Piagetian developmentalism. A critical educational psychology interrogates the foundations on which developmental psychology is grounded, positing that there are (1) no predetermined stages to human development existing independently of an individual's personal history or social group(s) affiliation and (2) no genetically programmed stages of intellectual maturation. Cognitive science's and education's taxonomies are merely heuristic, tools for facilitating understanding—not descriptions, as many assume, of an absolute independent reality. Indeed, postformal psychology finds nothing wrong with Piaget's efforts to discern patterns in child maturation. William Perry's attempt to identify levels of commonality in adult modes of thinking, or Freud's isolation of syndromes and disorders. There is no difficulty with such academic work as long as the theorists and their faithful followers don't take the insights as the truth. Piaget, Perry, and Freud's work are mere constructs, conceived in particular times and places about individuals carrying particular cultural and historical baggage.

Lev Vygotsky alerted us to these problems of reification and universalization of cognitive theorizing. Arguing for the need for social contextualization, Vygotsky turned his attention to the ways cognitive development occurred rather than pursuing stage theory. Development is much more complex, constantly changing as it unfolds. Indeed, a postformal cognitive psychology views cognitive growth as a dynamic hermeneutic, a process of culturally inscribed meaning making and knowledge production that continues throughout one's entire life. Such a reconceptualization holds dramatic implications for education and entities such as talented and gifted programs, as it rejects traditional developmentalist notions that education should guide students through their natural phases of development. Instruction, Vygotsky maintained, does not follow children's "cognitive unfoldment" to some genetically programmed developmental plateau.

In this pedagogical context postformal psychology understands the damage that cognitive science's notions of developmental appropriateness inflict on the economically and culturally

marginalized. Riddled with ethnocentric and class-biased conception of where children should be along the developmental spectrum at any particular age, mechanistic educational psychology's discourse of developmental appropriateness makes no allowance for the ravages of poverty, racism, or other forms of disadvantage in children's lives. In the name of ordering the experiences of students who are "developmentally arrested" compensatory programs overstructure marginalized students' school routines to the point that meaningful self-initiated play and other activities are eliminated. In the name of providing special challenging education for the gifted and talented, elitist pedagogy makes sure that privileged students gain the maximum benefits of school resources and high expectations. Thus, cognitive psychology through its labeling and pedagogical prescriptions actually creates and perpetuates an educational caste system—a hierarchy blessed by the imprimatur of science and thus immune from serious questioning.

In schooling shaped by a sociopolitically contextualized educational psychology, self-reflection would become a priority with teachers and students. In such a critical educational psychology, postformalist educators attend to the impact of school on the shaping of the self. In such a context learning would be viewed as an act of meaning making that subverts the mechanistic view that thinking involves the mastering of a set of techniques. Education could no longer separate techniques from purpose, reducing teaching and learning to deskilled acts of rule following and concerned with the methodological format. Schools guided by a democratized educational psychology would no longer privilege white male experience as the standard by which all other experiences are measured.

Such realizations would point out a guiding concern with social justice and the ways unequal power relations at school destroy the promise of democratic life. Democratic teachers would no longer passively accept the pronouncements of standardized tests and curriculum makers without examining the social contexts in which their children live and the ways these contexts help construct their academic performance. Lessons would be reconceptualized in light of a critical notion of student understanding. Postformalists would ask if their classroom experiences promote the highest level of understanding possible. Such insights would undermine the elitism promoted by mechanistic educational psychology. Educational psychologists would understand that elitism is a socially constructed, power-related phenomenon, justified by the social privileges derived around issues of race, class, gender, sexuality, and religion. Again, a literacy of power is central to moving to a more critical interpretivist form of educational psychological practice. Such a psychology would see these issues of elitism and hierarchies in a new light, a new discursive framework—discursive power.

Discursive Power: The Basic Characteristics

- Too rarely do we analyze the deep social assumptions and power relations embedded in everyday language—language inscribed by the power bloc.
- Creations of particular discursive forms mobilize meanings that often sustain domination.
- Traditional linguistics was comfortable with the assumption that language neutrally conveys a description of reality. A more complex linguistics understands the power-inscribed nature of language.
- Critical linguistics sees language as the substance of social action, not simply the reflection of it.
- A discourse is defined as a set of tacit rules that regulates what can and cannot be said, who can speak with the blessings of authority and who must listen, and whose social constructions are scientific and valid and whose are unlearned and unimportant.
- Consider the power relations in the existing mechanisms for producing and distributing scientific knowledge about teaching. In this discourse teachers are deprived of power, as they are effectively eliminated from the active process of uncovering and disseminating knowledge. They are delegated instead to the passive role of knowledge consumers of the predigested products of educational science.

- Discursive practices are present in technical processes, institutions, and modes of behavior and in their forms of transmission and representation. Discourses shape how we operate in the world as human agents, construct our (un)consciousness, and what we consider true.
- Knowledge is interdependent with discourse, in that it acquires its meaning through the context provided by rules of discursive practice.
- In research and knowledge production, discourses validate particular research strategies, narrative formats, and modes of representation.
- In the domain of research methodologies, for example, consider the discourse of traditional ethnography. Such a discourse was quick to exclude nonlinear narratives and surrealistic forms of representation. Like nineteenth-century gatekeepers of the Parisian art world who rejected impressionistic representations of reality, ethnographic guardians dismissed literary forms that fell outside the boundaries of the dominant discourse.
- All language is multiaccental, meaning that it can be both spoken and heard, written and read in ways that reflect different relationships to social groups and power formations. When language is used in an imperializing manner, meaning, as a form of social regulation, this multiaccental dynamic is repressed. Power wielders attempt to establish one *correct* meaning among listeners or readers in an effort to implant a particular ideological message into their consciousness.
- Such a linguistic act is an example of what is labeled discursive closure—a language game that represses alternate ways of seeing, as it establishes a textual orthodoxy. In this context discursive practices define what is normal and deviant, what is a *proper* way of representing reality and what is not.
- Indeed, this process of definition, inclusion, and exclusion connects discourse to modes of social ordering and of regulation of knowledge production. For example, mainstream research discourses avoid representations of the concept of oppression when examining questions of justice or injustice. Often terms such as discrimination or prejudice are used to represent race, class, and gender injustice—the concept of oppression being a much more inclusive and damning concept is inappropriate in a discourse complicit with the dominant power bloc. Thus, discursive closure is effected; the status quo is protected.
- The relationship between discourse and power, Michel Foucault argued, is always contradictory. While discourse applies power, it also makes it visible. Discourse may carry the meanings of the power bloc, but it also exposes them to challenge.
- Discourse analysis disputes psychology's traditional assumption that people possess stable properties such as attitudes and beliefs. Instead, language is viewed as an arena where identity is continuously renegotiated.

A POLITICAL EDUCATIONAL PSYCHOLOGY

Even among many critical of educational psychology these power dynamics, these political dimensions, are missed. As I documented in the introduction to this encyclopedia, this political dynamic is erased in the mechanistic articulation of the discipline. Macro-sociopolitical concerns and the impact they exert on human experience in general and learning in particular are not a part of the discourse of the discipline. Until the relationship between existing social structures and power configurations and the questions of educational psychology are addressed, the work of professional practitioners will mystify and oppress more often than it will clarify and liberate.

In such a depoliticized, power-illiterate context mechanistic educational psychology reduces its practitioners to the role of test administrators who help devise academic plans that fit students' abilities. The individualistic, contextually stripped assumptions of this work move practitioners to accept unquestioningly the existence of a just society where children, according to their scientifically measurable abilities, find an agreeable place and worthwhile function—leadership roles for the elite and the rule following domains for the marginalized. Thus, the role of the educational psychologist is to *adjust* the student, regardless of his or her unmeasured—or unmeasurable by

the instruments typically used in the field—abilities, to the society, no matter how unjust the system may be.

Here again we see how mechanistic educational psychology and the practice it supports play an important role in maintaining the power inequities of the status quo. Those children from marginalized racial or class positions are socialized for passivity and acceptance of their scientifically pronounced “lack of ability.” Thus, a form of politically passive thinking is cultivated that views good students and teachers as obedient to mechanistic educational, psychology-based ways of seeing. In such a context neither students nor teachers are encouraged to construct new cognitive abilities when faced with ambiguity. Mechanistic educational psychology has generally ignored the sociopolitical issues of the day as it pursues its work in “neutral” isolation.

The irony of its claims of hands-off objectivity in relation to the sociopolitical realm is not lost on critical educators who have tracked the discipline’s profound impact in this domain. These postformalists jump into the political fray with its overt call to reform mechanistic educational psychology with a transgressive psychology and pedagogy. Educational psychology is a situated cultural/political practice—whether it wants to be or not—that addresses the ideology of teaching and learning. Whenever teaching, learning, and knowledge are conceived, the nature of the conception affects individuals differently: again, it validates the privileged and invalidates the marginalized. Postformalists are members of a monkey-wrench gang dedicated to subverting this power-driven process.

Many mechanistic educational psychologists are so uncomfortable with such a political psychology that they consider the postformal discourse a defacement of the field, a disruption to its orderly proceedings. When Shirley Steinberg and I were first involved in developing postformalism in the early 1990s, several of our colleagues from the mechanistic domain of the field became very upset when we received positive publicity about our work. During one of my classes, a colleague from this domain of educational psychology came into my class and literally screamed that I was “destroying the field” and to stop what I was doing. I told her that we could talk about our differences later and asked if she would allow me to finish teaching my class. She refused to stop talking and after several minutes of listening to her angry soliloquy, I finally had to dismiss my class. I have to admit the incident provided a powerful lesson for my students on the differences in paradigms within disciplines and the heat such differences could generate.

Cognition viewed as a political activity in this context is marked by a hint of scandal or at least a lack of middle/upper-middle class “good taste.” Despite such uncomfortable representations, critical teachers push their political agenda, confronting the dominant discourse with its erasure of irrationality, emotion, power, paradigms, and morality in the teaching and learning process. Thus, elitist practices are allowed to remain in place, unchallenged by the very professionals who such understand how they came to be supported by shifting power blocs in the larger social order. Postformalists in this context come to play a special role, as they ask hard questions about cognitive and psychological issues.

- How do some of the most important issues of teaching and learning come to be erased?
- How do political issues play out at the level of consciousness?
- How is the learning process shaped by power?
- What is the relationship between school performance and a student’s or a teacher’s political consciousness and resulting moral sensibility?

Such questions would encourage research involving the subjective experiences of children deemed unintelligent and relegated to lower-ability tracks. I frequently visit with students classified as “slow” or “incapable” by mechanistic educational psychology who can make up creative

games that can be played in the confines of an urban neighborhood; who build vehicles out of abandoned car and bicycle parts; who write their own music and choreograph their own dances; who write brilliant “spoken word” poetry; who have collected junk from the neighborhood, fixed it up, and sold it at garage sales; and who have used paint found in the bottom of discarded paint cans to produce sophisticated portraits of themselves and their communities. Critical psychologists and educators recognize the genius of such children early in their school experience. Assuring them of their abilities and engaging them in activities designed to utilize such talents, democratic teachers create situations for these kids that replace their need to employ their talents in illegal, dangerous, and socially damaging activities. The understanding of the politics of cognition that informs such teaching strategies helps rethink educational psychology in ways that profoundly change individual lives.

CHAPTER 108

Research in Educational Psychology: Incorporating the Bricolage in Educational Psychology—Part 1

JOE L. KINCHELOE

It does not seem a conceptual stretch to argue that there is a synergy that emerges in the use of different methodological and interpretive perspectives in the analysis of an artifact. Historians, for example, who are conversant with the insights of hermeneutics, will produce richer interpretations of the historical processes they encounter in their research. In the interdisciplinarity of the bricolage the historian takes concepts from hermeneutics and combines them with historiographical methods. What is produced is something new, a new form of hermeneutical historiography or historical hermeneutics. Whatever its name, the methodology could not have been predicted by examining historiography and hermeneutics separately, outside of the context of the historical processes under examination. The possibilities offered by such interdisciplinary synergies are limitless. This is a central concept in the postformalist reconceptualization of educational psychology—the power of multiple perspectives, of multilogicality, can reshape the discipline of educational psychology.

For example, an ethnographic researcher who is conversant with social theory and its recent history is better equipped to transcend certain forms of formulaic ethnography than are reduced by the so-called observational constraint on the methodology. Using the x-ray vision of contemporary social-theoretically informed strategies of discourse analysis, *poststructural psychoanalysis*, and ideology-critique, the ethnographer gains the ability to see beyond the literalness of the observed. In this maneuver the ethnographer-as-bricoleur moves to a deeper level of data analysis as he or she sees “what’s not there” in physical presence, what is not discernible by the ethnographic eye. Synergized by the interaction of ethnography and the social theoretical discourses the resulting bricolage provides a new angle of analysis, a multidimensional perspective on a social, cultural, educational, or psychological phenomenon.

Carefully exploring the relationships connecting the object of inquiry to the contexts in which it exists, the postformal researcher constructs the most useful bricolage his or her wide knowledge of research strategies can provide. The strict disciplinarian of mechanistic educational psychology operating in a reductionistic framework chained to the prearranged procedures of a monological way of seeing is less likely to produce frame-shattering research than the synergized bricoleur. The process at work in the bricolage involves learning from difference—the value of multilogicality. Researchers employing multiple research methods are often not chained to the same assumptions

as individuals operating within a particular discipline. As they study the methods of diverse disciplines, they are forced to compare not only methods but also differing epistemologies and social theoretical assumptions. Such diversity frames research orientations as particular socially constructed perspectives—not sacrosanct pathways to the truth. All methods are subject to questioning and analysis, especially in light of so many other strategies designed for similar purposes.

GETTING STARTED: THE POWER OF THE BRICOLAGE

This postformal defamiliarization process highlights the power of the confrontation with difference to expand the researcher's interpretive horizons. Bricolage doesn't simply *tolerate* difference but *cultivates* it as a spark to researcher creativity. Here rests a central contribution of the interdisciplinarity of the bricolage: as researchers draw together divergent forms of research, they gain the unique insight of multiple perspectives. Thus, a complex understanding of research and knowledge production prepares bricoleurs to address the complexities of the social, cultural, psychological, and educational domains. Sensitive to complexity, bricoleurs use multiple methods to uncover new insights, expand and modify old principles, and reexamine accepted interpretations in unanticipated contexts. Using any methods necessary to gain new perspectives on objects of inquiry, bricoleurs employ the principle of difference not only in research methods but in cross-cultural analysis as well. In this domain, bricoleurs explore the different perspectives of the socially privileged and the marginalized in relation to formations of race, class, gender, and sexuality.

The interdisciplinarity of bricolage is sensitive to multivocality and the consciousness of difference it produces in a variety of contexts. Described by Norman Denzin and Yvonna Lincoln (2000) in their *Handbook of Qualitative Research* as "multi-competent, skilled at using interviews, observation, personal documents," the bricoleur explores the use of ethnography, historiography, genre studies, psychoanalysis, rhetorical analysis, discourse analysis, content analysis, ad infinitum. The addition of historiography, for example, to the bricoleur's tool kit profoundly expands his or her interpretive facility. As bricoleurs historically contextualize their ethnographies, discourse analysis, and semiotic studies, they tap into the power of etymology. Etymological insight—a central feature of postformalism—involves an understanding of the origins of the construction of social, cultural, psychological, political, economic, and educational artifacts and the ways they shape our subjectivities. Indeed, our conception of self, world, and our positionalities as researchers can only become complex and critical when we appreciate the historical aspect of its formation. With this one addition educational psychologists dramatically sophisticate the quality and depth of their knowledge work.

Utilizing these multiple perspectives, the bricolage offers an alternate path in regressive times. Such an alternative path opens up new forms of knowledge production and researcher positionality (one's location in the sociocultural, political, psychological web of reality) that are grounded on more egalitarian relationships with individuals being researched. Bricoleurs in their valuing of diverse forms of knowledge, especially those knowledges that have been subjugated, come to value the abilities and the insights of those who they research. It is in such egalitarian forms of researcher–researched relationships that new forms of researcher self-awareness is developed—a self-awareness necessary in the bricoleur's attempt to understand the way positionality shapes the nature of the knowledge produced in the research process.

The French word *bricoleur* describes a handyman or handywoman who makes use of the tools available to complete a task. Some connotations of the term involve trickery and cunning and remind me of the chicanery of Hermes, in particular his ambiguity concerning the messages of the gods. If hermeneutics came to connote the ambiguity and slipperiness of textual meaning, then

bricolage can also imply the fictive and imaginative elements of the presentation of all formal research. Indeed, as cultural studies of Western science have indicated, all scientific inquiry is jerryrigged to a degree; science, as we all know by now, is not nearly as clean, simple, and procedural as scientists would have us believe. Maybe this is an admission many in the social and psychological sciences would wish to keep in the closet.

In the first decade of the twenty-first century bricolage is typically understood to involve the process of employing these methodological strategies as they are needed in the unfolding context of the research situation. While this interdisciplinary feature is central to any notion of the bricolage, I propose educational psychologists go beyond this dynamic. Pushing to a new conceptual terrain, such an eclectic process raises numerous issues that researchers must deal with in order to maintain theoretical coherence and epistemological innovation. Such multidisciplinary demands a new level of research self-consciousness and awareness of the numerous contexts in which any researcher is operating. As one labors to expose the various social, cultural, and political structures that covertly shape our own and other scholars' research narratives, the bricolage highlights the relationship between a researcher's ways of seeing and the social location of his or her personal history. Appreciating research as a power-driven act, the educational psychological researcher-as-bricoleur abandons the quest for some naïve concept of realism, focusing instead on the clarification of his or her position in the web of reality and the social locations of other researchers and the ways they shape the production and interpretation of knowledge.

In this context bricoleurs move into the domain of complexity. The bricolage exists out of respect for the complexity of the lived world. Indeed, it is grounded on an epistemology of complexity. Allow me to interrupt this analysis of the use of the bricolage in educational psychology with a brief delineation of an epistemology of complexity.

Characteristics of an Epistemology of Complexity

- Knowledge is never simply given—it is socially constructed. If educational psychologists accept this premise then an important part of their work has to involve understanding the nature and consequences of such construction. If psychological data does not just exist “out there” waiting to be discovered but is produced by human beings operating with particular blinders and in specific contexts, then postformal educational psychologists must understand the nature of this process.
- Human consciousness/subjectivity is also a social construction. Humans are more complex than mechanistic psychologists ever thought. We are not abstract, simply individualistic entities; we are connected on a variety of levels to our environments in ways that shape and mold us. This is why Vygotsky's concept of the ZPD is so important in the history of educational psychology.
- In the social construction of selfhood, power plays an extremely important role. This is why critical theory is central to the postformal reconceptualization of educational psychology. Psychological inquiry and the knowledge it produces is never neutral but constructed in specific ways that privilege particular logics and voices while ignoring and even silencing others. Thus, the culture of psychology privileges particular practices and certain methods of discerning truth. As Michel Foucault argued, truth is not relative (i.e., all worldviews embraced by different researchers, cultures, and individuals are of equal worth), but is relational (constructions considered true are contingent upon the power relations and historical context in which they are formulated and acted upon). Dominant hegemonic power-driven research orientations preclude researchers from pointing out forms of domination—such orientations obstruct attempts to encourage critical social change for the betterment of the individuals, groups, and communities being studied. An understanding of the power hierarchical relationships between researcher and researched alerts postformalists to the ways psychological research produces knowledge that regulates and shapes the consciousness of its producers and consumers. We are *in part* what power wants us to be. Importantly, we also have the power to resist such attempts to construct us.
- Focus on the nature and production of human consciousness even though it is difficult to measure in an empirical manner. For postformalists operating on the basis of this critical complex epistemology,

consciousness is a central focus of educational psychology. The mechanistic psychological tradition has never been comfortable with the notion of consciousness—some mechanists even denied its existence because of its resistance to positivist measurement. Such problems with measurability remind postformalists of the necessity of the multiple methodologies of the bricolage in educational psychology.

- The importance of logic and emotion/affect/feeling in both knowledge production and the learning process—the centrality of the cognitive dimension of empathy. The Italian social theorist Antonio Gramsci well understood this epistemological concept, when he wrote from Mussolini's prisons in the late 1920s and 1930s. The intellectuals' error, he wrote, consists of believing that one can know without "feeling and being impassioned." Postformalists learn from Gramsci and argue that a central role of educational psychologists should involve the effort to connect logic and emotion in order for them to "feel" the elementary passions of the people. Such an emotional connection would allow the educational psychologist to facilitate the struggle of men and women to locate their lived world in history. Finding themselves in history they would be empowered by a consciousness shaped by a critical informed view of the ways that macro-structural forces interact with individual lives. One cannot *make* history without this passion, without this connection of feeling and knowing, since, without it, the relationship between individuals and educational psychologists is reduced to a hierarchical formality. In such hierarchy the logic of positivism and bureaucracy prevails and the social construction of individual needs is deemed irrelevant.
- The knower and the known are inseparable—thus, the questions researchers ask shape what they come to know. In mechanistic educational psychology the notion of knower-known inseparability has not been the dominant position in research and practice. Educational psychologists need to understand that the Myth of Archimedes, the belief in an objective body of knowledge unconnected to the mind of the knower, has helped formulate how the discipline operates. Such an assumption tacitly constructs not only what counts as valid knowledge but, via the power of research, it formulates what we "know" about mind and intelligence. The myth assumes that the human perceiver occupies no space in the known world. Since the psychologists operate outside of history, they objectively know the mind, intelligence, teaching, learning, etc. In this epistemological context what they know about, say, intelligence becomes the truth. It is not simply the view of one knower operating in a particular place and time about a very complex phenomenon.
- Our view of psychological and educational phenomena in a complex epistemology is shaped by the perspectives of those individuals who have suffered as a result of existing social, cultural, political, economic, and epistemological conditions. The voices of the marginalized have been pathologized and excluded in mechanistic educational psychology. Such a move has profoundly shaped the nature and effects of the discipline over its history. Postformalists begin their explorations of educational psychology with the perspectives of the marginalized, they search for insights in unexplored perspectives of non-Western peoples. Understandings derived from the perspective of the excluded or the "culturally different" allow for new insights into diverse definitions of intelligence, the nature of justice, the nature of the mind, the invisibility of the process of oppression, and the difference that highlights our social construction as individuals. In this spirit postformal educational psychologists begin to look at their work from the perspectives of their Asian, African, Latino, and indigenous colleagues around the world. Such cognitive cross-fertilization often reveals the tacit assumptions that impede innovations. Here we see the epistemological foundation of the power of difference.
- The significance of multiple realities constructed in part by our location in the web of reality. A positivist epistemology claims to provide "the one true portrait" of reality. Using common sense, postformalists understand that people living in different times and places with differing amounts of social capital will see the world in quite diverse ways. The social study of science indicates that the social context in which scientists of any stripe operate will profoundly shape the knowledge they produce. Postformalists place great value on the multiple perspectives about mind, intelligence, teaching, learning, the production of identity, etc. provided in these diverse contexts. The domain of educational psychology is nothing if not complex. In this context the idea of relying on one privileged way of viewing psychological and educational phenomena seems to postformalists quite myopic. The epistemological roots of the bricolage sink deep into the importance of multiple perspectives and multiple realities.
- Aware of these multiple realities, educational psychologists come to appreciate where they are located in the complex web of reality—thus, they become humble scholars aware of the blinders of their place and

time. As we come to appreciate this particular epistemological point, we gain a self-knowledge that alerts us to both our strengths and weaknesses as scholars and practitioners. Where we stand or are placed in the web of reality makes a difference on how we see the world around us and our role in it. Epistemologically savvy educational psychologists can no longer rely on some universal, sacrosanct body of professional knowledge that tells them how to conduct their professional lives. Operating in their particular locale in the web of reality, these informed psychologists understand the partiality and historically and socially specific nature of their knowledge. Thus, epistemologically aware educational psychologists are fallibilists who are able to laugh at, learn from, and adjust their practice to their own fallibility. In this way they become humble scholars liberated from the arrogance of positivist certainty.

- Appreciating their location in the complex web of reality, postformal educational psychologists are better prepared to produce humble and useful knowledge. Here educational psychologists begin to act on their understanding that psychological knowledge like all information is contingent on the context in which it was produced. Positivistic psychological knowledge is typically a fragmented body of knowledge that dismisses the context in which it, itself, was produced as well as the contexts that shape the psychological processes in question. Such knowledge, postformalists understand, is better suited for storage in a file cabinet in a knowledge warehouse. The types of epistemologically complex knowledges in which postformalists are interested are kinetic forms of information. Such knowledges seek to connect with human beings in action, they seek to find relationships with diverse experiences. In this framework, these postformal knowledges seek to inform professional practice and the process of living.
- The value of producing useful knowledge for professional practice—developing a critical epistemology of practice. Postformal useful knowledge helps educational psychologists construct new conceptual frameworks for approaching new professional experiences. Such knowledge—as John Dewey helps us understand—is interested in the future reference of such information. Useful knowledge helps us to understand present situations and guides us in our formulation of what should be done to improve them. This takes us directly to the important topic referred to as the epistemology of practice. In the 1980s, questions began to emerge in a variety of fields about how one learns to engage in the practice of a profession. Profound questions were raised about the role of professional knowledge and how it is used in the process of educating practitioners in a variety of domains. Teacher educators, for example, have learned from researchers studying situated cognition and reflective practice that practitioner ways of knowing are unique, quite different from the technical ways of knowing traditionally associated with professional expertise. Indeed, professional expertise is an uncertain enterprise as it confronts constantly changing, unique, and unstable conditions in social situations, cultural interchange, sci-tech contexts, and, of course, in the practice of educational psychology. The expert practitioners studied by sociocognitivists and scholars of reflective practice relinquished the certainty that attends to positivist professional expertise conceived as the repetitive administration of techniques to similar types of problems. Advocates of rigorous complex modes of professional practice insist that practitioners can develop higher-order forms of cognition and action, in the process becoming researchers of practice who explore the intricacies of professional purpose and its relation to everyday life. Grounding their insights on this epistemological notion of useful knowledge, postformalists are fascinated with what exactly higher-order forms of cognition and action might look like in relation to the process of engaging in the practice of educational psychology.
- Coming to understand the nature of complexity, in the process overcoming positivist reductionism. Unlike positivism an epistemology of complexity understands that thinking cannot be conceived as mere problem solving. Problems, as complexity theory informs us, do not unambiguously present themselves. Positivist epistemology does not allow educational psychologists to explore the origins of a problem, the assumptions that move us to define some situations as problems and others as not problems, or the source of authority that guides us in our formulation of criteria for judging which problems merit our thinking and analysis. This is where our complex epistemological consciousness helps us understand the complexity of the work of educational psychology. Employing this epistemological tool, postformalists begin to uncover the hidden ways ideology, discourse, and other forms of power shape the questions that ground the practice of educational psychology. In this context, postformalists are prepared to rethink the very foundations of the discipline.
- Knowledge is always in process—it is always a part of larger processes. As I have alluded to throughout my contributions to this encyclopedia a central dimension of a positivist epistemology involves its

fragmentation of the world into separate and discrete parts. In a complex epistemology, processes become more important than separate entities. Thus, phenomena in the world are always in process, they have a past and a future. Any knowledge about such phenomena that claims to represent the truth about them is suffering from an epistemological naivete—what we know about them today may change tomorrow as they enter a new phase of the process of which they are a part. An entity's interaction with another entity may illustrate a larger process previously missed by scientists. This is exactly what has happened in educational psychology, as the discipline's positivist focus on the brain occluded insight into the social processes of which the mind was a part. Outside of an understanding of these processes, the field's fragmented data about the brain was at best mundane and at worst misleading.

- The necessity of interpretation in the production of knowledge—the power of hermeneutics. A complex epistemology grounds postformalism's concern with the meaning of knowledge that is produced about the psychological and educational domains. Positivism is dismissive of hermeneutics because empirical data speak for themselves. Hermeneutics takes issues with such an assertion, maintaining that all knowledge is an interpretation. Indeed, all knowledge involves many levels of interpretation. Critical postformal educational psychologists employing the research bricolage act on their understanding of these many levels of interpretation in all research and knowledge production. They are aware that the consciousness and the interpretive frames they and other educational psychologists bring to their tasks are historically situated, ever changing, ever evolving in relation to the cultural and ideological climate. The way Americans see the world and interpret world events, for example, has been quite different in the years following 9-11 than before the attacks took place. And, of course, not all American interpretations in this context have been shaped in the same way. There is nothing simple about the social construction of interpretive lenses: consciousness construction is contradictory and the result of the collision of a variety of differing ideological forces. Thus, the study of interpretation and the forces that shape it are central to a postformal psychology—there is, however, nothing simple about such analysis.
- Gaining awareness that the frontier of knowledge is located at the points where personal experience intersects with secondary information. Mechanistic educational psychology has accepted the positivist assertion that knowledge is a simple reflection of the world “out there” and as such is independent of human construction. Not only do the personal experiences of human beings shape knowledge to begin with, but also the knowledge different individuals encounter shapes them and induces them to reinterpret their lives and their professional practice. Postformal educational psychologists use their personal experiences to examine the disciplinary knowledge they encounter. How does this knowledge help us reconsider our prior experiences and their effect on our subjectivity, our view of ourselves as educational psychologists, our understanding of the goals of our profession? Secondary disciplinary knowledge, thus, always interacts with what we already know and have experienced.
- Insight into the importance of the ontological domain—constructing new forms of human being. This epistemological concept grounds much of the work of postformalism. As critical educational psychologists gain insight into their status as historical, cultural, and social beings, they begin to understand why they have embraced a particular view of the psychological domain. They understand the etymology of their own consciousness and their construction of themselves as psychological practitioners. In this context, postformalists understand not only who they are but are empowered to think about who they and their clients might become. As they question the shibboleths of positivism and the mechanistic educational psychology it supports, postformalists draw upon the bricolage of multiple perspectives to develop new definitions of useful knowledge, caring practice, intelligence, academic success, and professional expertise. In such actions they imagine new ways of being educational psychologists who are emancipatory, just, democratic, humble, and practical. The postformalist reconceptualization of educational psychology—especially in this ontological context—is one of great possibility and hope.

Understanding this epistemology of complexity we are better equipped to understand postformalism and its employment of the bricolage. One dimension of this complexity can be illustrated by the relationship between research and the domain of social theory. All observations of the world are shaped either consciously or unconsciously by social theory—such theory provides the framework that highlights or erases what might be observed. Theory in a modernist empiricist

mode is a way of understanding that operates without variation in every context. Since theory is a cultural and linguistic artifact, its interpretation of the object of its observation is inseparable from the historical dynamics that have shaped it. The task of the bricoleur is to attack this complexity, uncovering the invisible artifacts of power, and document the nature of its influence on not only their own but on scholarship and knowledge production in general. In this process, bricoleurs act upon the concept that theory is not an explanation of nature—it is more an explanation of our relation to nature. In the twenty-first-century neocolonial era this task becomes even more important.

TERMS FOR READERS

Poststructural psychoanalysis—Psychoanalysis offers hope to postformalists concerned with social justice and the related attempt to rethink cognition and intelligence as it expands the possibility of human potential. The postformalist vision of psychoanalysis is a poststructuralist psychoanalysis—poststructuralist in the sense that it reveals the problems embedded in the sciences emerging from positivism and the universal structures it constructs. As poststructuralist psychoanalysis makes use of the subversive aspects of the psychoanalytical tradition, it presents a view of humans quite different than the modernist psychological portrait. In the process, it challenges the modernist erasure of feeling, valuing, and caring in contemporary Western societies and attempts to rethink such features in light of power and its construction of consciousness.

Research in Educational Psychology: The Bricolage and Educational Psychological Research Methods—Part 2

JOE L. KINCHELOE

In its hard labors in the domain of complexity the bricolage views research methods actively rather than passively, meaning that postformalists actively construct our research methods from the tools at hand rather than passively receiving the “correct,” transcultural universally applicable methodologies. Avoiding modes of reasoning that come from certified processes of logical analysis, bricoleurs also steer clear of preexisting guidelines and checklists developed outside the specific demands of the inquiry at hand. In its embrace of complexity, the bricolage constructs a far more active role for humans both in shaping reality and in creating the research processes and narratives that represent it. Such an active agency rejects deterministic views of social reality that assume the effects of particular dominant social, political, economic, and educational processes. At the same time and in the same conceptual context this belief in active human agency refuses standardized modes of knowledge production from particular power blocs.

In many ways there is a form of instrumental reason, of rational irrationality in the use of passive, external, monological, monocultural research methods. In the active bricolage, we bring our understanding of the research context together with our previous experience with research methods. Using these knowledges we *tinker* with our research methods in field-based and interpretive contexts. This tinkering is a high-level cognitive process involving construction and reconstruction, contextual diagnosis, negotiation, and readjustment. Researchers’ interaction with the objects of their inquiries, bricoleurs understand, are always complicated, mercurial, unpredictable and, of course, complex. Such conditions negate the practice of planning research strategies in advance. In lieu of such rationalization of the process bricoleurs enter into the research act as methodological negotiators. Always respecting the demands of the task at hand, the bricolage, as conceptualized here, resists its placement in concrete as it promotes its elasticity.

Research method in the bricolage is a concept that receives more respect than in more rationalistic articulations of the term. The rationalistic, colonialist articulation of method subverts the deconstruction of wide varieties of unanalyzed cultural assumptions embedded in passive methods. Bricoleurs in their appreciation of the complexity of the research process view research method as involving far more than procedure. In this mode of analysis bricoleurs come to understand research method as also a technology of justification, meaning a way of defending what we assert we know and the process by which we know it. Thus, the education of psychological researchers

demands that everyone take a step back from the process of learning research methods. Such a step back allows us a conceptual distance that produces a critical consciousness. Such a consciousness refuses the passive acceptance of externally imposed research methods that tacitly certify modes justifying universal knowledges that are decontextualized and reductionistic.

In this context it is important to note that the use of the term, *bricolage*, in relation to multimethod, multilogical interdisciplinary research is relatively new—emerging in the mid-1990s. Norm Denzin and Yvonna Lincoln, central figures in the development and sophistication of qualitative research in the social sciences, were the first to use the term in this specific context. In the domain of qualitative research and qualitative theory numerous scholars are beginning to use the term and employ the concept. In December 2001, *Qualitative Inquiry* published a special issue on the *bricolage* in which I took Denzin and Lincoln's delineation of the concept and detailed possibilities of what it might become. Lincoln, William Pinar, and Peter McLaren responded to my essay, offering their own vision of the *bricolage*. In addition to those directly involved with developing and enacting the *bricolage*, there are numerous researchers in psychology and interdisciplinary fields such as cultural studies, education, and ethnic studies who have already embraced multiperspectival inquiry. Denzin and Lincoln (2000) in their *Handbook of Qualitative Research* describe it as a methodological diaspora where humanists migrated to the social sciences and social scientists to the humanities. Ethnographic methodologists snuggled up with textual analysts; in this context the miscegenation of the empirical and the interpretive produced the *bricoleur* love child.

UNDERMINING POSITIVIST METHODOLOGIES: TRANSCENDING NAÏVE REALISM AND REDUCTIONISM

There's impudent dimension to the *bricolage* that says "who said research has to be done this way?" Such impudence is based on a cynicism toward the notion that monological, ordered methods get us to the "right place" in educational psychological research. Postformalists use the methods that are best suited to answering our questions about a particular phenomenon. For the *bricoleur* to use the means at hand he or she must first be aware of them. Such awareness demands that the *bricoleur* devote time for rigorous study of what approaches to research are out there and to how they might be applied in relation to other methods. Do not be deceived, this is no easy task that can be accomplished in a doctoral program or a post-doctoral fellowship (Thomas, 1998). Becoming a *bricoleur*, who is knowledgeable of multiple research methodologies and their uses, is a lifetime endeavor. Such multilogicality will change educational psychology forever.

Indeed, the *bricoleur* is aware of deep social structures and the complex ways they play out in everyday life, the importance of social, cultural, and historical analysis, the ways discursive practices influence both what goes on in the research process and the consciousness of the researcher, the complex dimensions of what we mean when we talk about "understanding." In this context the *bricoleur* becomes a sailor on troubled waters, navigating a course that traces the journey between the scientific and the moral, the relationship between the quantitative and the qualitative, and the nature of social, cultural, educational, and psychological insight. All of these travels help *bricoleurs* overcome the limitations of monological reductionism, the Empire's developmentalism while taking into account the new vistas opened by the multilogical and the pluralistic. Such victories provide entrée into the diverse community of inquirers—an inclusive group that comes from academia and beyond. Such individuals critique, support, and inform each other by drawing upon the diversity of their cultural backgrounds and concerns. In this process they expose and discuss one another's assumptions, the contexts that have shaped them, and their strengths and limitations in the exploration(s) at hand. The participants in this community come

from a wide range of race, class, gender, sexual, ethnic, and religious groups and enter into their deliberations with humility and solidarity.

Norm Denzin and Yvonna Lincoln's work on the bricolage has profoundly influenced numerous researchers from a plethora of disciplines. Concerned with the limitations of monological approaches to knowledge production, we all subscribe to the "practical reason" of the bricolage that operates in concrete settings to connect theory, technique, and experiential knowledges. Here the theoretical domain is connected to the lived world and new forms of cognition and research are *enacted*. This improvisational enactment of the bricolage, buoyed by the insights of Francisco Varela and Humberto Maturana's Santiago Theory of Enactivism, moves research to a new level. This is the place where the multiple inputs and forces facing the researcher in the immediacy of her work are acknowledged and embraced. The bricoleur in educational psychology does not allow these complexities to be dismissed by the excluding, reducing impulses of monological methodology coming from particular power blocs. Such a refusal is in itself an act of subversion.

The subversive bricolage accepts that human experience is marked by uncertainties and that order is not always easily established. "Order in the court" has little authority when the monological judge is resting in *his* quarters. Indeed, the rationalistic and reductionistic quest for order refuses in its arrogance to listen to cacophony of lived experience, the coexistence of diverse meanings and interpretations in a socially, culturally, economically, and ideologically diverse world. The concept of understanding in the complex world viewed by bricoleurs is unpredictable. Much to the consternation of many there exists no final, transhistorical, transcultural, and non-ideological meaning that bricoleurs strive to achieve. As bricoleurs create rather than find meaning in enacted reality, they explore alternate meanings offered by others in similar circumstances. If this wasn't enough, they work to account for historical, social, and cultural contingencies that always operate to undermine the universal pronouncement of the meaning of a particular phenomenon. When researchers fail to discern the unique ways that historical, social, and cultural context make for special circumstances, they often provide a reductionistic form of knowledge that impoverishes our understanding of everything connected to it—the process of research included.

The monological, monocultural quest for order so desired by many social, political, educational, and psychological researchers is grounded on the positivist epistemological belief that all phenomena should be broken down into their constituent parts to facilitate inquiry. The analysis of the psychological world in this context becomes fragmented and disconnected. Everything is studied separately for the purpose of rigor. The goal of integrating knowledges from diverse domains and understanding the interconnections shaping, for example, the biological and the cognitive, is irrelevant in the paradigm of order and fragmentation. The meaning that comes from interrelationship is lost, and questions concerning the purpose of research and its insight into the human condition are put aside in an orgy of correlation and triangulated description. Information is sterilized and insight into what may be worth exploring is abandoned. Ways of making use of particular knowledges are viewed as irrelevant, and creative engagement with conceptual insights is characterized as frivolous. Empirical knowledge in the quest for order is an end in itself. Once it has been validated it needs no further investigation or interpretation. While empirical research is obviously necessary, its process of production constitutes only one step of a larger and more rigorous process of inquiry. The bricolage subverts the finality of the empirical act.

Bricoleurs make the point that empirical research, all research for that matter, is inscribed at every level by human beings. The assumptions and purposes of the researcher always find their way into a research act, and they always make a difference in what knowledge is produced. Even in the most prescribed forms of empirical quantitative inquiry the researcher's ideological and cultural preferences and assumptions shape the outcome of the research. Do I choose factor analysis or regression analysis to study the relationship of a student's IQ score to college success? The path I choose profoundly affects what I find. What about the skills included on the IQ? Are

they simply neutral phenomena free from inscriptions of culture and power? How I answer such a question shapes how my psychological research proceeds.

Such inscriptions and the complexity they produce remind bricoleurs in educational psychology of the multiple processes in play when knowledge is produced and validation is considered. They understand that the research process is subjective and that instead of repressing this subjectivity they attempt to understand its role in shaping inquiry. All these elements come together to help bricoleurs think about their principles of selection of one or another research perspective. Such decisions can be made more thoughtfully when a researcher understands the preferences and assumptions inscribed on all modes of inquiry and all individuals who engage in research. Thus, an important aspect of the work of the bricoleur involves coming to understand the social construction of self, the influence of selfhood on perception, and the influence of perception on the nature of inquiry.

BUT THERE'S NOTHING THERE: THE BRICOLAGE AND EXPLORATION OF ABSENCE

In their embrace of diverse methods, different cultural knowledges, and subjugated ways of seeing as well as their transcendence of reductionism, bricoleurs seek to identify what is absent in particular situations—a task ignored by monological, objectivist modes of research. In this context bricoleurs seek to cultivate a higher form of researcher creativity that leads them, like poets, to produce concepts and insights about the social world that previously did not exist. This rigor in the absence can be expressed in numerous ways, including the bricoleur's ability:

- to imagine things that never were,
- to see the world as it could be,
- to develop alternatives to oppressive existing conditions,
- to discern what is lacking in a way that promotes the will to act,
- to understand that there is far more to the world than what we can see.

As always bricoleurs are struggling to transcend the traditional observational constraint on social and psychological researchers, as they develop new ways and methods of exposing social, cultural, political, educational, and psychological forces not at first glance discernible. Pursuing rigor in the absence, bricoleurs document venues of meaning that transcend the words of interviewees or observations of particular behavior.

Of course, a central feature of this rigorous effort to identify what is absent involves excavating what has been lost in the naivete of monological disciplinarity and Western rational developmentalism. As postformal educational psychologists engaging in the boundary work of the interdisciplinary bricolage explore what has been dismissed, deleted, and covered up, they bring to the surface the ideological devices that have erased the lived worlds, modes of cognition, and political perspectives of those living at the margins of power. As sociopsychological researchers employ the methodological, theoretical, interpretive, political, and narrative dimensions of the bricolage, they make a variety of previously repressed features of the educational and psychological worlds visible. Because they are describing dimensions of the socio-cultural, political, economic, pedagogical, and psychological cosmos that have never previously existed, postformal bricoleurs are engaging in what might be termed the fictive (or constructivist) element of research.

The use of the term, fictive, should not to be conflated with “unreal” in this context. Scientific inventors engage in a similar process when they have created design documents for the electric

light, the rocket, the computer, or virtual reality. In these examples individuals used a fictive imagination to produce something that did not yet exist. The postformal bricoleur does the same thing in a different ontological and epistemological domain. Both the inventor and the bricoleur are future orientated, as they explore the realm of possibility, a kinetic epistemology of the possible. In the process the sophistication of knowledge work moves to a new cognitive level; the notion of rigor transmigrates to a new dimension. As in a 1950s sci-fi movie, bricoleurs in educational psychology enter the 4-D—the fourth dimension of research.

In this way bricoleurs create a space for reassessing the nature of the knowledge that has been created about the sociopsychological cosmos and the modes of research that have created it. In an era of information saturation and hegemony, this space for reassessing knowledge production and research methods becomes a necessity for democratic survival, the foundation of a pro-democracy movement, and new ways of thinking and being. Overwhelmed by corporate-produced data, befuddled by the complex of the social issues that face us, and inundated with stupidifying forms of political manipulation, individuals without access to the lenses of the bricolage often don't know how to deal with these debilitating conditions. As the bricolage provides us new insights into the chaos of the contemporary, educational psychological researchers become better equipped to imagine where we might go and what path we might take to get there through the jungle of hegemonic information surrounding us. The bricolage is no panacea, but it does allow us new vantage points to survey the epistemological wilderness and the socio-cognitive possibilities hidden in its underbrush.

NEW MODES OF RESEARCH IN EDUCATIONAL PSYCHOLOGY: MULTILOGICALITY

Thus, the bricolage in educational psychology is concerned not only with multiple methods of inquiry but with diverse theoretical and philosophical notions of the various elements encountered in the psychological research act. Bricoleurs understand that the ways these dynamics are addressed—whether overtly or tacitly—exerts profound influence on the nature of the knowledge produced by researchers. Thus, these aspects of research possess important live world political consequences, as they shape the ways we come to view the social cosmos and operate within it. In this context Douglas Kellner (1995) writes in his book, *Media Culture*, about the notion of a “multiperspectival cultural studies.” Kellner's concept is very helpful, as it draws upon a numerous textual and critical strategies to interpret, criticize, and deconstruct the social and cultural artifacts under observation. In postformalism, of course, we move these social and cultural perspectives into the psychological realm.

Employing Frederick Nietzsche's notion of perspectivism to ground his version of a multi-methodological research strategy, Kellner maintains that any single research perspective is laden with assumptions, blindnesses, and limitations. To avoid one-sided reductionism, he maintains that researchers must learn a variety of ways of seeing and interpreting in the pursuit of knowledge. The more perspectival variety a researcher employs, Kellner concludes, the more dimensions and consequences of a text will be illuminated. Kellner's multiperspectivism resonates with Denzin and Lincoln's bricolage and its concept of “blurred genres.” To better interpret, criticize, and deconstruct Denzin and Lincoln (2000) in their *Handbook of Qualitative Research* call for bricoleurs to employ “hermeneutics, structuralism, semiotics, phenomenology, cultural studies, and feminism” (p. 3). Embedded in Kellner, Denzin, and Lincoln's calls is the foundation for a new rigor—certainly in research but with implications for educational psychology and pedagogy.

Thus, in the early twenty-first century disciplinary demarcations no longer shape in the manner they once did in the way many scholars look at the world. Indeed, disciplinary boundaries have less and less to do with the way scholars group themselves and build intellectual communities.

Furthermore, what we refer to as the traditional disciplines in the first decade of the twenty-first century are anything but fixed, uniform, and monolithic structures. It is not uncommon for contemporary scholars in a particular discipline to report that they find more commonalities with individuals in different fields of study than they do with colleagues in their own disciplines. We occupy a scholarly world with faded disciplinary boundary lines. Thus, the point need not be made that bricolage should take place—it already has and is continuing in many domains. The point here, of course, is that it needs to take place in educational psychology. The research work needed in this context involves opening an elastic conversation about the ways such a bricolage can be rigorously conceptualized and enacted. Such cultivation should not take place in pursuit of some form of proceduralization but an effort to better understand the value of multiple perspectives and multilogicality, and to realize their profound possibilities.

DOING IT: PUTTING THE BRICOLAGE INTO ACTION

In my work with Kathleen Berry (*Rigour and Complexity in Educational Research: Conceptualizing the Bricolage*, 2004) on employing the bricolage, we suggest that beginning bricoleurs develop a Point of Entry Text (POET) written of course from the perspective of one or more fields of study and from particular theoretical frames of reference. While there are many possible ways of employing the bricolage, we suggest that researchers take their POET and *thread* it through a variety of conceptual maps including, for example:

- Discourses of social theory—for example, critical theory, poststructuralism, postcolonialism, complexity theory, ecological theory, constructivism.
- Research genres and methodologies—quantitative analysis, ethnography, phenomenology, psychoanalysis, historiography, semiotics, textual analysis, hermeneutics, discourse analysis.
- Cultural/social positionalities—racial (Afrocentric analysis, Chicano studies, Native American studies, indigenous studies, identity politics), class (materialist studies), gender (feminist theory, studies of alternate masculinities), sexuality (queer theory), ability, and religious (liberation theology, Islamic studies, Judaic studies).
- Disciplinary/interdisciplinary departmentalizations of knowledge: history, philosophy sociology, anthropology, political science, economics, geography, psychology, literary criticism, aesthetics, cultural studies, American studies.
- Philosophical domains—epistemology, ontology, axiology, teleology, cosmology.
- Power modes—hegemony, ideology, regulatory, discursive, disciplinary, coercive.
- Knowledge sources—oral, print, photographs, Internet, visual, works of art, cartoons, popular culture, media, historical documents, daily life, book, journals.

And there are many more categories such as these that can be enumerated.

In this context bricoleurs thread their POET through what they consider relevant conceptual maps. If my POET is an analysis of the ways contemporary racism affects cognition and school performance, then each time I engage the conceptual map I encounter knowledges that complicate my original thesis. The POET has been subjected to multiple readings, conflicting discourses, perspectives from diverse positionalities, different epistemologies, diverse modes of power, differing research methodologies, and a plethora of previously unconsidered knowledge sources. As the POET travels through these different domains, it circles back to its starting point. Each time it threads through the map the process looks more and more like a feedback loop. The bricolage process demands that this threading be repeated numerous times. The POET's interaction with the conceptual maps creates a state of turbulence, a disequilibrium that reflects a healthy feature

of complexity and autopoiesis. Indeed, such turbulence sets up the possibility for discerning relationships and processes that open new conceptual vistas for the researcher in educational psychology. In this context conditions are created for analytical and interpretive spontaneity, random associations that yield profound insights, and novelty.

The bricoleur's feedback looping process is disconcerting in its freedom from step-by-step linearity. Whereas more objectivist forms of empirical research attempt to reduce variables, the bricolage works to increase them. The feedback looping process can work to disrupt the researcher's train of thought and move them in an unanticipated direction. Monological knowledge is subverted, as the feedback looping process juxtaposes numerous perspectives and knowledge forms. Such juxtapositioning confronts the researcher with contradictions, unexpected relationships and unities, zones of interpretive possibility, disjunctions and fissures, and previously unseen processes at work. Every time the POET threads itself back through the concept maps its original composition changes. What emerges after a few loops may surprise the bricoleur in its uniqueness and unanticipated qualities. The POET's confrontation with these diverse knowledges and vantage points move the researcher to a higher and more complex level of understanding. This level of understanding is characterized by unexpected turns, re-traveled paths, reconceptualized assertions, bifurcation points, and encounters with equilibrium/near equilibrium in relation to agitation and disconcerting revelations. The bricoleur needs to develop a comfort with ambiguity.

Employing our POET on the cognitive and educational impact of contemporary racism it may be helpful to thread it through the conceptual maps previously listed. As we examine the topic from diverse theoretical perspectives we come to ask new questions of our POET. In a critical theoretical perspective, for example, we ask questions about power theory. Does our text possess a sophisticated view of racial power, the power of white supremacy and other dimensions of dominant culture that shape the nature of racism and its effects in the twenty-first century? In a postcolonial sense does contemporary racism connect to issues of European/American colonialism and its long history of exploitation of nonwhite peoples? Is there insight to be gained by contextualizing the Civil Rights Movement and the reaction to it within larger global issues of the colonial rebellion emerging in the middle decades of the twentieth century? How in a mechanistic text like Richard Herrnstein and Charles Murray's *The Bell Curve*, 1994 does this racism work to shape the discipline of educational psychology? Could use of constructivism in this context focus the bricoleur's attention on the social, cultural, and political economic forces that shape racial consciousness of educational psychologists in the twenty-first century? Constructivism's focus on the production of consciousness/subjectivity could help raise unasked questions about white racism, the ways it is produced in the contemporary *Zeitgeist*, and the process of its mutation into new forms and articulations in a variety of domains, including, of course, the field of educational psychology itself.

Looping our POET through diverse research genres and methodologies, the bricoleur asks what perspectives psychologists might gain through the use of different primary research strategies. Is there need for an ethnographic study of the way racism shapes the cognitive orientations and the school life of African American and Latino students? Is ethnography data essential in the effort to understand these dynamics? Is the question so complex that ethnographic insights need to be supplemented by phenomenological and even psychoanalytical inquiries? Is there a dimension to such effects that moves expression of them to the phenomenological realm of affect, emotion, and registers of feeling? Employing such phenomenological research the bricoleur in educational psychology may open a new realm of insight into both the nature of contemporary racism and the study of cognition. Historiographical analysis in this research project in particular may be necessary for the researcher to gain the needed understanding of how racism exhibits itself at the micro-individual level. Might the use of semiotics with its study of cultural signs and signifiers contribute to an understanding of the ways contemporary racism is encoded in various cultural

texts? Indeed, it may be semiotic analysis that exposes the subtlety of new forms of racism and the ways they are implanted in unconscious ways in popular social images. Using discursive analysis bricoleurs can make sure their POET is informed by discourses of contemporary “race talk.” This process of looping the original text through other research genres can continue (or not) through even more methodologies.

Running the POET through the category of diverse social/cultural positionalities, bricoleurs in educational psychology review their work from the perspectives of racial, class, gender, sexual, religious, ability, religious, and other groups for both the existential viewpoints they bring to observations and the theoretical orientations members of these groups have developed. In the case of our POET’s focus on impact of racism on cognition and school performance, class and gender perspectives provide new levels of insight and complexity to our study. Such perspectives undermine essentialist pronouncements that fail to understand the different relations of racism to individuals of color occupying differing rungs of the class ladder. When race intersects class (or gender, sexuality, religion, etc.) issues of racism may play out in quite different and often contradictory ways. With these understandings in mind bricoleurs in ethnic studies are better equipped to turn out thicker and more complex research studies. In this context our study is profoundly modified. Our feedback loop through social/cultural positionalities has informed us that racism manifests itself and affects particular individuals of color in multiple ways depending on its relationship to class, gender, and other positional factors.

A loop through diverse disciplinary frameworks opens our POET to more perspectives and possibilities. When previous insights are juxtaposed with, say, cultural studies and its emphasis on the discourses of popular cultural knowledges, important sources of previously unexplored information are brought to the bricoleur’s attention. The study of contemporary movies, TV shows, video games, Internet Web sites, popular music, etc. allows the bricoleur in educational psychology to explore what could be described as the “social and psychological dreams” of U. S. society in the twenty-first century. Within these unguarded sociopsychological dreams of popular culture the researcher can begin to ask questions about new forms of racial representation, racial fears of the dominant culture, and the nature and meaning of the commodification and exoticization of “racial others.” In this context the bricoleur finds unlimited resources to compare with data mined from other domains. What do these new knowledges tell us about the ways contemporary racism is constructed and disseminated? How do these media shape racial messages in ways that affect the identities of students of color? Does racism in an electronic era (hyperreality) encounter unprecedented forces that fashion it new and hard-to-discern ways—ways that complicate our understanding of its psychological/cognitive effects?

Analyzing our POET in relation to the philosophical domains allows bricoleurs to embrace a form of philosophical research often missing from research in educational psychology. Such insights remind bricoleurs of the complexity of the research act in educational psychology and the need to avoid monological forms of epistemology. Such monological forms of knowledge are often based on the assumption that knowledge reflects objective reality. In this context the researcher understands that no objective, disinterested understanding of contemporary racism and its effects is possible. The interpretations we make about contemporary racism and its effects are interpretations, the researcher’s constructions. In this context post-formalists understand the role that our diverse frames of reference—our multilogicality—have played in shaping these interpretations. Are we satisfied with this process? Do we sense that we have negated isolating and decontextualizing tendencies in epistemologically monological and mechanistic research and that in this process we have worked with multiple forms of knowledge to deepen our insight into contemporary racism and its cognitive effects? How has this exposure to epistemological difference changed the nature of our understanding of these dynamics?

A central benefit of the bricolage's threading through the philosophical, specifically the epistemological domain for educational psychology, involves the way the process works to bring previously excluded people and categories of people into the research process. "Exclude these uneducated peons," the blind monks of reductionism exclaim. Multilogical epistemological analysis reminds educational psychologists that their research is one aspect of a larger political process involved with apportioning power and resources. Bricoleurs know that racially, ethnically, and class marginalized peoples have influence in such a process. Once research is viewed as a humanly constructed process and not a transcultural and transhistorical universal enterprise, diverse and conflicting perspectives can be viewed as profound resources.

Threading our POET through the modes of power can provide compelling new insights into the power of contemporary racism. When researchers of contemporary racism pass their analysis through the filter of ideology, they begin to see the ways particular forms of Eurocentrism and white supremacy operate in the contemporary society. Ideology is grounded on the notion that particular ways of seeing the world may work to sustain existing power relations in the cognitive domain. In a bow to complexity these same ways of seeing may undermine dominant power relations in another context. A complex definition of ideology dismisses traditional viewpoints that define ideology as a coherent system of beliefs. Instead, bricoleurs move to a more complex, process-oriented, culturally sensitive perspective that views ideology in its dominant articulation as part of a larger process of protecting unequal power relations and maintaining domination. Specifically, a dominant cultural form of ideology involves sustaining these power asymmetries through the process of making meaning, producing a common sense that justifies prevailing systems of domination. Such a view of ideology corrects historical definitions of ideology as a monolithic, unidirectional entity that was imposed on individuals by a secret cohort of ruling class tsars. In concrete psychological terms ideology shapes what we call intelligence and school success.

Understanding domination in the context of concurrent struggles among different classes, racial, and gender groups and sectors of capital, students of ideology analyze the ways such competition engages differing visions, interests, and agendas in a variety of social and psychological locales. Individuals use ideology to help them organize their lived experiences, to make sense of their predicaments. In this context, bricoleurs studying contemporary racism in relation to ideology begin to discern an encoded ideology of white supremacy inscribed throughout the social, cultural, and psychological landscape. Such a hidden ideology often operates to naturalize the unequal relationships.

Indeed, ideology constructs racial and ethnic interactions in a way that erases the historical processes that have helped mould the present social order and extant racial dynamics within it. As bricoleurs in educational psychology trace this ideology of white supremacy they often discern that it induces many peoples that the world could exist only in the way that it does today. "Its just a natural fact—white people are cognitively superior to Africans and Latinos. Such ideological awareness moves our understanding of the uniqueness of contemporary racism and its cognitive and educational effects to a new level of sophistication. As educational psychologists we are empowered to act in anti-racist ways previously unimagined.

The last domain through which we will thread our POET in this example (there are many more) involves the category of knowledge sources. While there are many we will focus here on works of art, the aesthetic realm. Exploring, for example, artistic and aesthetic styles that fall outside the confines of the Euro-canon, the bricoleur discerns a whole new domain where the uniqueness of contemporary racism can be analyzed. In numerous art shows illustrating, say, African or African American art (Rose and Kincheloe, 2003) guardians of the Euro-canon worked diligently to contain perceived threats to prevailing aesthetic standards and definitions of quality. The aesthetic orientations of such artists moved the priests of high art to equate difference with

deficiency—a racist tendency that can be found in various social locales including, of course, cognition and education. Indeed, the art of the racial other in this context is seen through the constructed lenses of the canon. That which is artistically transgressive is “tamed” and rendered harmless by including it as a primitive stage of canonical development.

Representatives of the dominant culture in this social domain claim the right to establish the universal characteristics of “good art.” Bricoleurs in this example work to demystify these hidden cultural and ideological dimensions of high art. And what may be key to the study of contemporary racism and its psychological and educational effects, in this demystification process bricoleurs expose not only what is excluded but also the ideological precepts shaping the *inclusion* of the other. How can we talk about racism in the art world, many might complain in this context—the contemporary canon includes the work of more Africans, African Americans, Latin Americans, and indigenous peoples than ever before. The aesthetic commitments required for inclusion, however, are profoundly revealing to the educational psychologist studying the effects of contemporary racism. The insight researchers develop into the terms of multiracial and multiethnic inclusion in the world of high art may help them discern similar patterns in the cognitive domain.

Of course, these are merely a few of the domains bricoleurs in educational psychology can use to inform their multilogical research. Bricoleurs have to make decisions about which domains to engage as they pursue new insights and exploit the conceptual power provided by the interaction of different perspectives. Understanding a phenomenon such as the effects of contemporary racism is enhanced by exposure to these multiple categories of diversity. After the bricolage researchers in educational psychology can never view the concept of diversity in the same light. Always devoted to importance of diversity, educational psychologists in this reconceptualized context move diversity into a new conceptual terrain. On this new landscape they begin to discern the insidious ways that racism has all along worked to shape the defining assumptions of their field of study.

REFERENCE

- Rose, K., and Kincheloe, J. L. (2003). *Art, Culture, and Education: Artful Teaching in a Fractured Landscape*. New York: Peter Lang.
- Thomas, G. (1998). *The Myth of Rational Research*. *British Educational Research Journal*, 24, 2.

CHAPTER 110

The Spiritual Nature of Postformal Thought: Reading as Praxis

SHARON G. SOLLOWAY AND
NANCY J. BROOKS

The influence of educational psychology's behaviorist models has been heavy handed in shaping the policies that construct classrooms and educational experiences. In spite of years of challenge by humanist and constructivist models, behaviorist structures and practices persist, crippling students by vigilantly separating mind and body and ruthlessly denouncing spirituality as irrelevant in learning. The end result is most often students who rarely see education as an exploration of the awe and wonder in life, but regard it as simply something you do to get a grade.

Spirituality, as we define it here, is both a way of perceiving and a way of acting. As a way of perceiving, it opens our eyes to the "moreness" of our lives. We are always "more" in the sense that we possess the possibility of reaching beyond our present state—of transcending who and what we currently are. And we are always "more" in the sense that we do not dwell in the world alone; we cannot be *human* beings without others. It is this second aspect that leads us to the action of spirituality—becoming aware of our oneness with others and the world, then acting on this perception. In other words, when education is conducted in sync with our spirituality, children grow to be empathic, compassionate adults. Unfortunately, most schooling ignores the spiritual nature of human beings, and the Technorational reigns supreme as both students and knowledge are sorted and slotted in the most efficient manner. The school's spiritual mission as a work of transcending the status quo is forgotten or ignored.

The history of educational reform since the publication of *A Nation at Risk* in 1983 might be more rightly described as simply a ratcheting up of the same technorational methods that emerged early in the twentieth century in the heyday of social darwinism. While these methods have waxed and waned throughout the last hundred years, the youngest members of our society were somewhat sheltered from them. If there has been one place where the education of the whole-child has been respected, it has been in the early childhood environment. However, with the latest round of federal legislation, this is changing. It appears that the same spiritually deficient methods that have been used to categorize and normalize older students are to be foisted upon the youngest members of our society and upon their teachers. In this chapter, we call attention to changes that are emerging in the knowledge base of the field of early childhood education, discuss the implications of those changes, and present postformal thought as a heuristic for making meaning of them.

READING AS PRAXIS

While it was obvious early on that recent federal legislation would significantly impact education at all levels, the enormity of the implications for early childhood education is only now becoming evident. Subtle but substantial shifts are occurring in the official knowledge base of the field, represented in part by changes in textbooks for preservice teachers. As these changes have become evident, our concerns have grown, leading us to document the revisions of one particular textbook series. Our selection of this particular text was based on its success in the field,¹ and our observation of its evolution over the last six years.

As teachers who acknowledge the spiritual nature of education, we believe our task is not to affirm prevailing forces but to question critically what appears to be the “necessary” and to challenge what appears to be the “logical.” As repositories of expert knowledge, our selected textbooks represent the official knowledge that is sanctioned by prevailing forces. That is, in a very real sense these texts are the result of power struggles over exactly what is “knowledge.” The forces that prevail in the struggle win the right to decide what is included in the texts (the “presences” of the text) and what is left out (the “absences”), thereby determining what is “true,” what is not, what is important, and what may be ignored. Accordingly, significant social meaning is constructed by official knowledge. We wonder—in this case, what social meanings are being produced for the many preservice teachers who study this particular text? What absences in the text will limit possibilities for them by being that which it is impossible for them to even think? What presences will become for them the “logical” and “necessary”?

As we approached this project, therefore, we looked for a theoretical framework that held the potential for illuminating evidences of power struggles within the text, a process that would allow us to see through and beyond the self-evident and to perceive present social meanings that might otherwise be missed. In other words, we sought for a framework that would make our reading of these texts a type of praxis. We settled upon postformal thought as a framework compatible with our concern for transcending the status quo, especially toward the ends of social justice, human emancipation, and increased opportunity for personal agency. With its concern for emancipation via ideological disembedding, postformal thought offers the possibility of a critique that may be analogous to “spiritual warfare” and that, we believe, enables our notion of reading as praxis.

No one particular method of postformal critique exists. Our approach to the textual analysis was to begin with a general overview of the editions, examining which concepts had been chosen by the author/editors to be foregrounded by placing them in the table of contents and preface. Noted changes were further explored through the index and a general read through of the books. Our understanding of discursive (or “rhetorical”) strategies in each edition was guided by the four features of postformal thinking, as explained by Kincheloe and Steinberg in their 1993 groundbreaking article in the *Harvard Educational Review*. For this project we understand each feature as follows:

- 1) Etymology—a consideration of the possible forces producing the culture that validates the knowledge of each edition.
- 2) Pattern—a consideration of the assumptions that underlie the conceptualization/implementation of presences and absences within the three editions. This feature provides a perspective for understanding the connecting patterns and relationships that undergird the lived world of such positions.
- 3) Process—a consideration of the presences and absences across the three editions in order to consider not only what it is possible for early childhood professions to do, but how (or if) it is possible for them to challenge the necessary, the logical, and the taken for granted authority (of people or ideas).
- 4) Contextualization—a consideration of the embeddedness of the presences and absences across the three editions in political, social, and cultural positions.

We see these four features as configuring a web of “reality” through which we may map and understand the implications of our findings.

BACKGROUND—THE NEW PARADIGM

The first of our texts appeared in 1998. For those who survived the decade of the nineties (in a professional sense) it is remembered as a time of increasing governmental regulation of education at all levels. Technologies of standardization and surveillance tightened their grip on the local schoolhouse. In the aftermath of *A Nation at Risk* in 1983, the world of education entered full-throttle into the new paradigm of outcomes-based education: Everything can be measured and everything will be; a place for everyone and everyone in her place as determined by standardized assessment instruments. We believe it is important to remember here that most traditional preservice teachers remember *no other paradigm* of education.

As a part of the first wave of top-down reform efforts, the federal government had authorized funds for the creation of national standards. This movement died due to controversies over content and fears over the loss of the tradition of local control. Those same fears, however, did little to curb the growth of regulation at the state level. States jumped on the band wagon to stem the “rising tide of mediocrity” in schools through the creation of core curricula and high stake exams that held students accountable for learning by withholding promotion and/or diplomas.

As the failure of the earliest wave of educational reform began to be apparent, twin forces of increasing governmental regulation and the efforts of higher education agencies conspired to conceive and bring forth an incestuous new phenomenon christened the “professionalization” of the teaching field.² This movement involved setting a higher bar for who could be a teacher, determined by a bevy of new tests, including both entry and exit exams. At one point in the nineties, preservice teachers in some states had to perform satisfactorily on as many as four exams to receive state certification. Following the medical model, certification was also delayed until the candidate had completed an internship, overseen typically by local teachers, administrators, and higher education representatives operating within the framework of state legal requirements.

All this was legitimized by a new set of directives concocted by the nation’s political/business establishment and signed by America’s first education president, the elder Bush, in 1991. The first directive of *America 2000* was “All children will start school ready to learn.” This goal, which was no doubt set with the best of intentions, set the stage for increased surveillance of young children, making it possible for them to be increasingly observed and monitored to determine their developmental levels and the needed experiences that could lead to more advanced forms of readiness. With the election of Clinton the list of goals morphed into “Goals 2000” and grew to total of eight directives. Number eight declared, “Every school and home will engage in partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.” This goal, combined with the first goal and with the original Head Start requirement of parental involvement (also set with the best of intentions) effectively set the stage for greater surveillance of the family of the preschool child.

As the nineties closed, the preface to the eighth edition of our text crowed, “We are in the golden age of early childhood education” (Morrison, 2001, p. vii).

MAPPING THE TEXT

In our analysis of these three texts we found that what was remarkable was not so much the number of changes across the editions, but how far apart the seventh and ninth editions were on certain key issues and the subtlety with which this move was made across a rather wide ideological chasm. We will not attempt to cover in this chapter all the changes we noted, but

will focus instead on the two most directly related to our concern for human emancipation and a sense of personal agency (for both teachers and students). Those issues, not surprisingly, relate to the increasing emphasis on accountability and control and the identity this requires the fledgling early childhood professional to assume.

One clear and immediate indication of change in this area is seen in the tables of contents. Assessment becomes increasingly emphasized—moving from only a couple of subheadings over short sections in the seventh edition to a full chapter near the end of the book in the eighth edition, to being a chapter in Part I in the ninth edition (following a chapter reconfigured to feature “public policy”). Such space allotment and placement indicate valuation. Naturally, as one topic moves up the value scale, something else must move down. In this case, that appears to be the notion of child-centered education and related topics. We find this especially disturbing since early childhood education has, in many regards, been the last bastion of a concern for educating the whole person in our schools.

As of the seventh edition, child-centered education is “alive and well” in the primary grades (Morrison, 1998, p. 261). It is recommended for preschoolers, with a gentle warning to “strive to provide a balance between academics and all areas of development” (p. 216). A lengthy section on Open Education describes it as child-centered education:

Adults do not do all the talking, decision making, organizing, and planning when it is children who need to develop these skills. Open education seeks to return the emphasis to the child, where it rightfully belongs. Open education teachers respect students and believe children are capable of assuming responsibility for their own learning. Teachers consider themselves primarily teachers of *children*, not of subject matter . . . (1998, p. 87; emphasis in original)

In addition, child-centered education is featured prominently in the seventh edition in a Chapter 1 section entitled “The Return of Child-Centered Education” (p. 55). The same section appears in the eighth edition (2001, p. 95), although it is downgraded from Chapter 1 to Chapter 3 (“The Past and the Present: Prologue to the Future”). Significantly, this section disappears in the ninth edition and the term “child-centered” begins to morph into a concept more compatible with the age of accountability. Readers are told it is “a widely used term misunderstood by many” (p. 104). Indeed, Chapter 1 implies the need for a redefinition of the term as it ends with a section entitled “A new meaning of child-centered education”

Everything we discuss in this book is based on the child being the center of the teaching and learning processes. Unfortunately, not all teachers have practiced child-centered approaches, nor have they made children’s learning a high priority. This is changing. Included in the child-centered approach are the ideas that children can learn at high levels of achievement; that children are eager to learn; and that they are capable of learning more than many people thought they could. So a new concept of child-centeredness embraces the whole child in all dimensions: social, emotional, physical, linguistic, and cognitive. (2004, p. 24)

A comparison of these two descriptions of child-centered education shows an unfortunate trend away from a pedagogy that is compatible with human emancipation. Success becomes synonymous with “achievement,” instead of with an increasing capacity for personal agency.

In spite of the ninth edition’s satisfaction that the new child-centeredness embraces the whole child, we are concerned with the apparent move to value only that which is in line with current school reform goals of achievement on standardized tests for the purpose of bulking up the nation’s twenty-first-century workforce. Although the holistic approach in editions seven and eight is considered valuable for the fact that it met a wide range of needs for children and their

families, including health, the ninth edition emphasizes, “When children are healthy, they achieve better” (2004, p. 34). Achievement, of course, refers to a cognitive response to artificial stimuli that does little to nurture the child’s sense of awe and wonder at existence or nuanced relationships to self and the world on a web of interdependency.

The space that is created by dropping some of the emphasis on child-centeredness, whole language, open education, etc., in the seventh edition, allows for more than just increased coverage of assessment. Several new pages on School to Work appear in the eighth edition (“School to Career” in the ninth). Preservice early childhood teachers read about kindergartners who research jobs, salaries, and required skills and hear how schools like Western Dubuque Community Elementary emphasize the world of work for their youngest constituents:

For the past three years, counselors have developed career portfolios on each child to build a record of the activities completed. All first graders used the new portfolios and the national Career Guidelines to track career awareness. Third graders visited area businesses and then created newspaper ads . . . (2004, p. 359)

We wonder what happens to the soul when exposed so young to life goals embodied as a series of steps to your place in society’s economic machine.

As we consider these strategies that draw our youngest learners into the governmentality of educational reforms, we think of the failure of the accountability-driven system to reduce inequities in academic achievement. In spite of such failure, educational reformers continue to support the very techniques that have generated the inequalities in the first place: higher standards (which stigmatize average performance), increased surveillance (which, through tougher codes of conduct, further restricts opportunities to learn self-agency), and more explicit punishment and reward systems.

As the discourse of early childhood education more and more adopts this same ideology of standardization and accountability, we run the risk of subjecting children at ever younger ages to a system that stigmatizes them. It increasingly robs them of the opportunity to understand living as a nuanced journey of awe and wonder punctuated with both joy and sorrow. We worry that such texts too closely suggest a curriculum and classroom practice that demands for both teacher and young students unnecessary conformity and the inherence of a neglect of difference. In spite of that danger the textbooks examined here continue to increasingly define the necessary for early childhood professionals as observing, testing, and normalizing. This change in discourse is not pointed out to preservice teachers after the seventh edition. In addition, the soon-to-be professionals are seldom challenged to critique any position. Indeed at one point they, as readers, are told that in spite of the controversy over testing children as young as preschoolers, they “will probably be involved in discussions that help assume that this process of evaluation is developmentally appropriate” (2004, p. 218).

IMPLICATIONS

What do the discursive strategies noted above mean for students in early childhood teacher education programs? How does the presentation of official knowledge across the three editions shape what it is possible for them to think about the education of young children? How is their understanding of themselves as early childhood educators affected? How are their beliefs constrained regarding their own personal sense of agency for advancing a concern for social justice and the honoring of multiple perspectives in order to challenge the status quo? Unfortunately, it appears that current preservice teachers are being molded into agents of the status quo, who are taught implicitly not to think critically about their work or their world.

This analysis provides an illustration of the value of postformal thought as a heuristic for reading as praxis in the early childhood teacher education classroom. The use of current political language, the privileging of its values (as seen, for example, in space allotment and placement of text), and the absence of alternative perspectives are problematic for future teachers in early childhood classrooms. The education of young children is being framed more and more as academic preparation for externally designed assessments. To be an early childhood teacher is to unquestioningly implement public policy rather than model teaching and learning as an ongoing inquiry into one's place in the interconnectedness of life. The lack of encouragement for critical reading of multiple social, historical, political, and cultural positions inhibits preservice teachers from developing an awareness of a need to challenge dominant ideologies. They remain unaware of the way their unexamined compliance with authority contributes to the production of their identities and ability to function in the world. Furthermore, the invisibility of their oppressions produces teachers with a diminished capacity for personal agency in regard to recognizing and effecting social justice for all their students. Our analysis points to the urgency for more postformalist classrooms where the teaching is comprised of human acts that assist students in forming ethical frameworks, emotional balance, and spirituality to guide their lives.

SPIRITUAL NATURE OF POSTFORMAL THOUGHT

Using postformal thought to move reading into a praxis of seeing other possible realities, opens awareness to the way dominant educational discourses can limit human possibilities and of the way an openness to multiple perspectives can cultivate an appreciation for the interconnectedness of life. This praxis offers opportunities for developing spiritual relationships on a web of compassion; as children recognize their relatedness to others, as they collaborate to reach common goals, sharing resources and knowledge, they grow to be empathic, compassionate adults.

Compassion in this sense becomes a radical form of criticism. It is not a compassion whose empathy stops with the intellectual and heart-felt acknowledgment of the oppression of the other. Rather, compassion as a radical form of criticism moves acknowledgment into positive action to overturn the oppression. This is compassion that does not rest upon, but acts out the implications of the interconnectedness experienced. We see this kind of spirituality in Virginia Durr, who provided the financial backing for Rosa Parks' two-week stay at the Highlander Folk School in Monteagle, Tennessee, just months before Mrs. Parks refused to give up her seat on the bus in December 1955. This is a spirituality that is a way of perceiving *and* a way of acting.

CONCLUSION

The erosion of the landscape of early childhood education by the forces of traditional educational psychology ideologies that preclude the possibility of thinking beyond their boundaries is sinister in its subtlety. Postformal thought as a way of reading early childhood textbooks offers not a new grand narrative, but a heuristic that might act as a "force" in the sense where force breaks up that which would constrain and breaks open new visions/readings, revealing oppressions and injustices and igniting acts of solution. In addition, it may provoke the sort of shift in consciousness that effects cultural transformation. Postformal thought, when applied as a reading praxis, facilitates the erasure of socially constructed boundaries and the liberation of oppressed peoples.

When spirituality is recognized as that experience which opens our awareness and frees us to *slow experience down*, we can see in between the lines, so to speak. And what we find there is what was not possible to see or think within the confines of the judgment that language requires

when reading is practice, not praxis. Postformal thinking moves thought to those spaces between the lines to reveal the need for asking what unacknowledged assumptions invisibly inhere there. It reconceptualizes traditional educational psychology ideologies, creating space for spirituality to be understood as a critical part of an education which is “. . . not to make you fit into the social pattern; on the contrary, it is to help you to understand completely, deeply, fully, and thereby break away from the social pattern . . .” (Krishnamurti, 1964/1970, p. 95). Deep awareness of the power of culture to establish unquestioned hierarchies offers the opportunity to see differently. The spirituality of postformal thought lies in the living out of answers to the question: Who benefits when postformal thought as a way of being in the world orients the reader to a praxis in the in-between-spaces where we meet the other as an enfoldment of ourselves?

TERMS FOR READERS

Discourse—the medium by which ideas are exchanged; a field’s discourse is a system of knowledge or a “language map” by which the truth of statements related to that field can be determined.

Governmentality—A centralization and increase of government power, which produces reality through “rituals of truth.” Governmentality also includes a growing body of knowledge that presents itself as “scientific,” and which contributes to the power of governmentality.

Normalize—To mold people into “normal” as opposed to “abnormal” forms, and the process by which a culture encourages each individual to regulate and achieve his or her own conformity with the established rules. This is achieved through governmentality.

Praxis—Cycle of reflection and action of individuals upon their world to transform it.

Surveillance—As used here, this term means more than simply “observation.” It refers to part of the technique by which individuals are continuously observed, categorized, and disciplined, so that they are normalized, so that they docilely fit into the machinery of society’s needs.

Technorational—An approach to education which values efficiency and effectiveness above all else.

NOTES

1. Evidenced by the fact that it is now in its ninth edition. We wish to emphasize here that our purpose is not to debase the work of any other early childhood educators. These texts serve merely as an example of the construction and function of discourse in the field.

2. Gail Cannella, a well-known scholar of early childhood education, points out that professionalism is a double-edged sword that (1) could lead to strengthening of position and increased respect, but (2) has more often resulted in increased domination by those in power.

FURTHER READING

Cannella, G. (1999). Postformal Thought As Critique, Reconceptualization, and Possibility for Teacher Education Reform. In J. L. Kincheloe, S. R. Steinberg, and L. E. Villaverde (Eds.), *Rethinking Intelligence: Confronting Psychological Assumptions About Teaching and Learning*, pp. 145–163. New York: Routledge.

- Huebner, D. E. (1985/1999). Spirituality and Knowing. In V. Hillis (Ed.), *The Lure of the Transcendent: Collected Essays by Dwayne E. Heubner*, pp. 340–352. Mahwah, NJ: Lawrence Erlbaum Associates. (Original work published 1985).
- Kincheloe, J. L., and Steinberg, S. R. (1993). A Tentative Description of Postformal Thinking: The Critical Confrontation with Cognitive Theory. *Harvard Educational Review*, 63(3), 296–320.
- Krishnamurti, J. (1964/1970). *Think on These Things*. New York: Harper Perennial, HarperCollins.
- Moffett, J. (1994). *The Universal Schoolhouse: Spiritual Awakening Through Education*. San Francisco: Jossey-Bass.
- Morrison, G. S. (1998). *Early Childhood Education Today* (7th ed.). Upper Saddle River, NJ: Prentice-Hall, Inc.
- . (2001). *Early Childhood Education Today* (8th ed.). Upper Saddle River, NJ: Prentice-Hall, Inc.
- . (2004). *Early Childhood Education Today* (9th ed.). Upper Saddle River, NJ: Pearson Education.

Index

- Abalos, David, 420
- Aboriginal communities:
communal work integral to, 395; research conversations in, 389–90; socialization in, 398–99
- Aboriginal cultural socialization, 388
- Aboriginal students: cultural influences on, 392–98; indirect statements influencing, 394–95; individualized instruction benefiting, 398; learning development pathways of, 385; in school system, 388; study data of, 388–89
- Abstraction, 607
- Abstruse academic exercise, 821–22
- Abuse of power, 840
- Academic achievement, 398
- Academic intelligence, 62, 553
- Academic performance, 247–48, 576, 578
- Academic pursuits, 738
- Academic setting, 682
- Academy of Eating Disorders, 404
- Accommodation, 193; assimilation and, 655; cognitive structures adjusted in, 756; critical, 756
- Accountability environment, 824–25
- Accountability systems, 289–90
- Achievement gaps, 144, 147, 963–64
- ACT. *See* Adaptive Control Theory
- Action research: ethical issues in, 493–94; Great Britain emerging with, 491–92; history of, 485–86; politicizing, 494–95; research methodologies in, 489–90; types of, 487–88
- Actions, 725–26
- Active learning, 285–86, 831
- Activity settings: cultural knowledge acquired in, 381; in mediated agency, 382–83
- Activity systems, 783–84. *See also* Human activity systems
- Activity theory framework, 381
- Adams, Anna, 421
- Adams, John, 806
- Adaptive Control Theory (ACT), 44
- Addams, Jane, 69
- Addressivity, 500
- Adler, Alfred, 42, 168
- Adler, Felix, 109
- Adolescence: cognitive skills in, 54; moral development in, 655
- Adolescent Aggression* (Walters), 50
- Adorno, Theodor, 443, 878
- Adults, 745; concept, 58–59; education, 357; learning, 354–55
- Advertising, 187
- Advisory teacher, 580
- Aesthetic Dimension* (Marcuse), 166
- The Aesthetic Dimension: A Critique of Marxist Aesthetics* (Marcuse), 165
- African Americans: achievement gaps of, 144, 147; children of, 143; communality of, 577; learning environments of, 565–66
- African goddess, 704–7
- Afrikaner identity, 365
- Agassiz, Louis, 125
- Agency, 727; anticolonial discursive framework conceptualizing, 660; mediated, 377–78, 381–83; in situated cognition, 718–19; structure dialectic, 573;

- Agency (*cont.*)
 structure relationship with,
 743; teachers, 742–43
- Agents of change: parents/
 counselors as, 349–50;
 teachers as, 348
- Age of Enlightenment, 164,
 440–41
- Age of Reason, 4
- Agnello, Mary Frances, 4, 8, 9
- Aichhorn, August, 75
- Akhurst, J. E., 8
- Alberta, Canada, 769–70
- Alienation, 161, 334, 794–95
- Alpha beta tests, 221–22, 808
- Alternative possibilities, 777–78
- Alternative systems, learning,
 790
- Althusser, Louis, 323
- American culture:
 disconnection's necessary in,
 122; femininity in, 680–81
- American education, 441
- American Historical
 Associations Committee of
 Five, 928
- American Psychological
 Association (APA), 41, 44,
 109
- Americans, 20
- The American School* (Spring),
 127
- Analogies chart, 299–301
- Analytical reasoning, 860
- Anarchists: formal education's
 purpose to, 99–100; laboratory
 psychology of, 95
- Anastasi, Anne, 43
- Anderson, Edward, 149
- Anderson, John Robert, 44
- Angelico, Fra, 841
- Angelou, Maya, 842
- Anglo-Saxon male values, 900
- Animal behaviorist, 254–55
- Animal behaviors, 873–74
- Animal Intelligence* (Thorndike),
 226
- Anonymous authority, 335
- Anticolonial agency, 660
- Anticolonial discursive
 framework: agency
 conceptualized in, 660;
 educational problems engaged
 through, 651
- Anticolonial rebellion, 20
- Anticolonial struggles, 657
- Anti-intellectualism, 61
- Anti-oppressive education, 803
- APA. *See* American
 Psychological Association
- Apartheid: education influenced
 by, 365–70, 372–73; future
 impact of, 370–72; South
 Africa with, 365
- APEL. *See* Assessment of Prior
 Experiential Learning
- Apollo, 628
- Applied psychology, 222–23
- Appropriation, 382–83
- A priori knowledge, 595–96
- Archeological genealogy, 588
- Aristotle, 316, 630, 806, 847
- Army alpha beta tests, 221–22
- Aronson, Joshua M., 45
- Art, 315; creating, 843–44;
 deconstructing, 843;
 representational, 843
- Artaud, Antonin, 315
- Art categories, critique, 840
- Artifacts: appropriation and,
 382–83; cultural historical
 activity theory choosing, 381;
 diversity-based, 382
- Artifacts mediation, 376
- Artificial neural networks, 614
- “Artificial unity,” 64
- The Art of Loving* (Fromm), 335
- “Art of movement,” 233
- Asante, Molefi Kete, 656
- Assemblage idea, 435
- Assessment, 533, 963; authentic,
 289, 832, 833; of
 constructivism results,
 289–91; education needing,
 822; formative, 294;
 measurement v., 819; practices
 in, 289; of social value,
 820–22; standards foundation
 for, 819–20; summative, 294
- Assessment of Prior Experiential
 Learning (APEL), 533
- Assimilation, 655
- Assimilation-accommodation
 dyad, 857
- Assimilation Blues: Black
 Families in a White
 Community* (Tatum), 211, 214
- Assimilation theory, 265
- Assisted performance, 282
- Associative process, 188
- Associative theory, 187
- Assumptive disengagement,
 321–22
- Asymmetric power relations,
 344–45
- Atkinson-Shiffrin model, 594
- Attention, 723
- Attributes-implications chart,
 303
- Attributes tree, 301–3, 307
- Augustine, Jane, 319
- Augustine, Saint, 847
- Austin, J. L., 501
- Australian culture, 742
- Authentic assessment: engaged
 learning practices with, 289;
 personal growth through, 833;
 student learning evaluation in,
 832
- Authentic consciousness, 934
- Authentic situations, 541
- Authoritarian educators, 100
- Authority, 753; anonymous, 335;
 educational system with, 229;
 rejection of, 96; scientific, 18;
 teacher's unquestioned, 457
- Autism, 435–36
- Automaton conformity, 334–36
- Autonomous systems: closed
 organization in, 475–76;
 language as, 476
- Autopoiesis theory, 474–75, 896
- Awareness, 354–55
- Backpropagation, 614
- Backward conditioning, 186
- Bacon, Francis, 116, 440, 608,
 806, 918
- Bagley, William C., 223
- Bakhtin, M. M., 500, 528, 859
- Banathy, Bela H., 729, 733
- Bandura, Albert, 44; background
 of, 49–50; honors of, 55–56;
 hyperaggression studied by,
 50; observational learning
 developed by, 49

- Banking method, 191; of education, 103; students' repositories in, 97–98
- Bantu Education, 366
- Barnard, Henry, 64
- Bartenieff, Irmgard, 234
- Bateson, Gregory, 886
- The Beauty Myth* (Wolf), 92
- Beck, Ulrich, 524
- Beecher, Henry Ward, 109
- Behavior(s), 203; animal, 254–55, 873–74; consequences of, 875; of human beings, 51, 254–55; learning, 204–5; maladaptive, 54–55; operant, 873; purposive, 713–174; social interactions changing, 241; of teacher, 737; women and, 679
- Behavioral problem, 98
- Behavioral psychology, 96–97
- Behaviorism, 11, 126; child experiments in, 255–56; foundation laid for, 254–55; functionalism shift to, 256–57; psychology influenced by, 257–58; Watson shifting to, 252–53
- Behaviorist conception, 229–30
- Behaviorist models, 960
- Being, 711
- Being and Time* (Heidegger), 710
- Being-in-the-world, 480; learning from, 23, 714–15
- Belenky, M., 682
- Belief systems: scientific research supporting, 619; teachers uncovering, 275
- Bell, Charles, 807
- Bell curve, 933
- The Bell Curve* (Hernstein/Murray), 11, 20, 45, 893, 956
- Belonging needs, 169–70
- Benjamin, Walter, 878
- Bentham, Susan, 45
- Berkeley, George, 806, 807
- Berry, Kathleen, 4, 84, 219, 877, 955
- BESS. *See* Body, Effort, Shape, and Space
- Bethe, Hans, 316
- Bibring, Edward, 75
- Bicultural existence, 215
- Bifurcation, 643
- Billett, Stephen, 543
- Binarisms, 921–22
- Binet, Alfred, 42, 220, 654, 806, 815
- Binet-Simon Scale, 220, 221
- Binet-Stanford IQ test, 515
- Bingham, Walter, 221
- Biological body, 468–69
- Biological definition, 464
- Biological environments, 386
- Bion, W.R., 634
- The Birth of Pleasure* (Gilligan), 91–92
- Bjork, Daniel, 125
- Black culture, 215
- Blackman, Lisa, 248
- Blackness, 675, 705–6
- Blacks: in Canada, 667–70; devaluation of, 901; hyper-visibility of, 671; as “intruder,” 216; psyche of, 219; racial consciousness about, 669; racial identity of, 673; school cafeteria space for, 214–15; schools of, 369, 370; social networks of, 219; as threat, 670; white community with, 215–16
- Black Students and School Failure: Policies, Practices, and Prescriptions* (Irvine), 901
- Blackwells Biographical Dictionary of Twentieth-Century Philosophers* (Brown/Collinson/Wilkinson), 64
- Black women: oppression of, 641; pride/identify of, 638; stereotypes of, 639, 674; story of, 704–7; struggle of, 637; as undifferentiated category, 670; victimization of, 640
- Blake, William, 315
- Blood memory, 659
- Bloom, Benjamin, 43
- Blos, Peter, 75
- Blumer, Herbert, 602
- Blurred genres, 954
- Bly, Robert, 319
- Bobbitt, John Franklin, 227
- Bobo doll study, 50–52
- Body, Effort, Shape, and Space (BESS), 234, 235
- Body images, 764
- Body–mind dualism, 532–33, 585
- Body politic, 469
- Bohr, Neils, 316
- Boorman, Joyce, 234
- Bopry, Jeanette, 22, 26, 34, 37
- Borges, Jorge Luis, 315
- Botella, Luis, 12, 31
- Boundary crossings, 583
- Bower, Gordon, 206
- Brace, Donald, 808
- Brain function: computer analogy of, 596–97; environment interaction with, 155; neuron connections in, 595; neuroscience mapping, 612; parallel distribution process of, 613
- Brainstorming, 298–99
- Breeding, 221
- Breton, Andre, 315
- Bricolage, 39; interdisciplinarity of, 944; knowing/inquiring of, 14; methodological strategies in, 945; philosophical research defined in, 5–6; research methods in, 950; subversive, 952
- Bricoleurs: diverse methods used by, 953; in educational psychology, 959; feedback looping process of, 956; as handyman/woman, 944–45; postformal, 954; research methods understood by, 950–51; social structure awareness by, 951–52
- Brigham, Carl, 221
- British Medical Association, 403
- Britzman, Deborah, 537, 679
- Brock, Rochelle, 21
- Bronfenbrenner, Urie, 429
- Brookfield, Stephen, 32, 33
- Brooks, Donna, 406
- Browell, Kelly D., 405
- Brown, Deborah, 9
- Browning, Elizabeth Barrett, 314

- Brown, Roger, 44
 Bruch, Hilde, 407
 Bruner, Jerome, 10, 18, 43, 44, 243; anti-intellectualism criticized by, 61; background of, 57–58; Cognitive Revolution lead by, 57; Sputnik launch influencing, 58
 Buchner, E. F., 256
 Buck, Carrie, 221
 Buddhism: educational psychology reviewed through, 411–12; mindfulness practiced in, 413–14; suffering teachings of, 416
 Bulger, Jamie, 644
 Burlingame, Dorothy, 75
 Burman, Erica, 432
 Burnham, W. F., 41
 Bush Administration, 329
 Bush, George H. W., 962
 Bush, George W., 810
 Business management principles, 811
 Butler, Judith: as academia superstar, 62; educational system improvement interest of, 62–63
 CAAP (Critical Thinking Test), 322
 Cabral, A., 657
 Cadre for Authentic Education, 272–77
 Cage, John, 319
 CALM. *See* Campaign Against Living Miserably
 Campaign Against Living Miserably (CALM), 648
 Campbell, Leslie, 407
 Canada: aboriginal cultural socialization in, 388; blacks in, 667–70; cultural background of, 666–67; racial/ethnic identities in, 667
 Canon, 455
 Capacity, 821
 Capitalism, 324, 325
 Carlyle, Thomas, 124
 Carroll, J. B., 43
 Carpenter, Karen, 400
 Carter, Joseph, 316
 Cartesian, 538; dualism in, 439–40, 585, 860; post, 837; psychology, 87; rationalism, 887; reductionism, 860
 Cartesian-Newtonian: modes of, 889; scientific method of, 15, 440–41; teaching approaches of, 654
 Cartesian-Newtonian-Baconian (CNB), 857, 859; binarisms in, 921–22; dualism of, 917; epistemology of, 916, 918, 919; post-epistemology of, 920
 Cary, Richard, 84
 Case study, of student perspectives, 748–49
 Castello, Montserrat, 12, 31
 CAT. *See* Complete act of thought
 Cat experiments, Thorndike's, 225–26
 Cattell, James McKeen, 41, 42, 654, 808
 Caucasian groups, 395
 Centralized power, 99
 Central processing mechanism (CPM), 17–18
 Cesaire, Aime, 657
 CEWL. *See* Co-operative Education and Workplace Learning
 Chacras, 890
 Changeovers, 722–23
Changing Multiculturalism (Steinberg), 876
 Character education, 182
 CHAT. *See* Cultural-historical activity theory
 Checkland, P., 781, 782
 Chee Kit Looi, 22, 34, 37
 Cherednichenko, Brenda, 21
 Cherryholmes, Cleo H., 442, 444
 Child-centered classrooms, 176–77, 963
 Child-centered curriculum, 72, 82–83
 Child-centered education, 108–9
 Child development, 141; cultural views in, 433; Dewey's stages of, 558–59; gendered attributes in, 642; Montessori Method changing perspective of, 177; Walkerdine's evaluations of, 246
 Childhood: behaviorism experiments in, 255–56; bifurcation of, 643; dualism in, 646; hooks and, 119–20; human development learning in, 429; process/potential signifiers in, 644–45; professionals in, 964
Childhood and Society (Erikson), 78–80
 Childhood textbooks, 965–66
 Children: adult concept and, 58–59; with autism, 435–36; cognitive capacities of, 180; contradictory concerns about, 643–44; critical pedagogy and, 73–74; decentering capabilities of, 656; deemed unintelligent, 941–42; deficient, 174; development of, 32; eating disorder condition of, 408; educational needs of, 171; homeschooling benefiting, 772–73; homeschooling meeting needs of, 777; identity-needs of, 77; interactive student-centered instruction needed for, 284; language and, 241–42; learning explored by, 195–96; learning motivation of, 175; learning stages of, 59–60, 175–76; learning style of, 775; Montessori treating, 173; moral development in, 655; Oedipal complex and, 633–34; parents understanding, 776; physiology of, 429; reasoning power of, 191; school system judging, 771; self-regulation in, 156–57; sensory stimulation needed by, 173–74; social interaction changing thoughts/behaviors of, 241; trial-error learning by, 190; universal truths about, 177–78; worthwhile function found for, 940–41; ZPD identifying readiness of, 243
 Chin, Peter, 24
 Chomsky, Noam, 43

- Christian National Education (CNE), 366
- Churchland, Paul, 613, 614, 615
- Citizenship: promotion of values and, 450–51; students prepared for, 684
- Civil Rights Movement, 144–45, 525; contextualizing, 956; events sparking, 844
- Clancey, William, 709
- Classical conditioning, 653
- Classical empiricists, 439
- Classification, 771
- Class inequality, 899
- Classroom-based language development strategies, 244
- Classrooms: assemblage idea applied to, 435; child-centered, 176–77; cognition and, 896–97; collective activity discussions in, 535; communities contributing to, 734; community extension of, 838–39; community of learners in, 795–96; community of practice in, 482; constructivist characteristics in, 277–78; contextual uniqueness in, 506; creative problem solving in, 298; critical engagement in, 762, 766; critical organization of, 759–60; critical thinking how-to's in, 703; culture in, 861; diversity respect in, 518; educational setting relationship with, 269; empowering learning conditions in, 747; Eurocentric white privilege dominating, 798; ideal learning experience in, 786–87; improvement practices for, 292–93; as learning communities, 268; learning factors in, 562; learning process and, 97; meaningful communication in, 794; outside factors influencing, 579–80; philosophical practices in, 560; politics of power in, 797; power redistribution in, 750; practices in, 284–87; problem solving in, 307–9; race/gender in, 666; racism reproduced in, 675; recommended changes for, 286–87; self-directed learning in, 333–34; selfhood/cognition intersect in, 896–97; spatially equitable environment in, 513; spirituality occluded from, 661; teacher/student interactions in, 880; teacher/student partnerships in, 122, 291; underachievement in, 902; Vygotsky's theory impacting, 244
- Claude-Pierre, Peggy, 400; common sense methods of, 401; medical model and, 408; theories criticized, 407; Women's Health conference inviting, 404
- Client-centered therapy, 198
- Clifford, William, 127
- Clinical approach, 232
- Clinical Treatment of the Problem Child* (Rogers), 198
- Clinton, Hillary, 403
- Closed organization, 475–76
- CNB. *See* Cartesian-Newtonian-Baconian
- CNC. *See* Confirmed Negativity Condition
- CNE. *See* Christian National Education
- Coemergence, 535, 538, 539
- Cogenerative dialogism, 569–71, 577
- Cognition: becoming situated, 724–25; classroom and, 896–97; complex, 28–30; decontextualization process of, 937; emotion inseparable from, 593–94; enactivism redefining, 467–68; formal level of, 40; identity inseparable from, 884; in information processing, 594–95; linear process of, 596–97; moral development and, 656; nested interpretations in, 469; as political activity, 941–42; postformalism and, 34–36; setting/motivation in, 726–27; situated cognition and, 709; social/contextual dimensions of, 714; sociocultural approach to, 149–50; sociohistorical context inseparable from, 862–63; sociopsychological inquiry modes making sense of, 938; world constructed through, 28–29
- Cognition construction, 27
- Cognition in Practice* (Lave), 148, 150, 152
- Cognitive activity: information and, 481; mechanistic reductionism expressing, 5
- Cognitive apprenticeship* (Brown, Collins, Duguid), 152
- Cognitive autopoiesis, 894
- Cognitive balance, 193
- Cognitive capacities, 180
- Cognitive components, 326
- Cognitive cubism, 882
- Cognitive development: identity formation and, 139–40; language tool in, 241–42; meaningful settings critical to, 174; Piaget's theory of, 192–93; postformal view of, 938–39; stage theory influencing, 194
- Cognitive learning theory, 655
- Cognitive levels, 926
- Cognitive process: of teachers, 736; understanding, 16–17
- Cognitive psychology, 418
- Cognitive Revolution, 57
- Cognitive skills, 54
- Cognitive structures: accommodation adjusting, 756; in self-system, 52
- Cognitive theory of enactivism, 218
- Cognitivism, 11; computer gestalt metaphor of, 476; social constructivism superseding, 491
- Cohen, Leonard, 319
- Coherent structures, 601

- Cole, Michael, 150, 375, 386, 522, 782
 Cole, Willie, 843
 Collaborative learning, 292, 795
 Collective activity discussions, 535
 College component, 700
 Colonial assumptions, 656
 Colonial conquerors, 886
 Colonial states, 657
 Colonized people, 19–20
 Committee of Ten, 111
 Common sense, 401, 479
 Communalism, 577
 Communal work, 395
 Communications: attention exhibited in, 723; classrooms meaningful, 794; as deterministic, 480; dialogic, 758; gaining/maintaining turns at, 722–23; Greek meaning of, 799; of minorities regulated, 653–54; situated cognition in, 724–25; teacher/student disconnection of, 794, 801; teaching/learning disconnect of, 795
 Communicative action theory, 105
 Communicative conception, 548, 550–51
 Communicative dynamics, 766
 Communicative intelligence, 553
 Communicative learning, 355, 357
 Communicative modality, 758
 Communities: barriers in, 349; classroom extended into, 838–39; classrooms and, 734; consensus in, 524; cultural exchanges in, 657; direct fields of influence in, 739; identity of, 377; involvement in, 695; learning opportunities in, 351; learning supported by, 393–94; liberation of, 346; oppression in, 344–45; psychology and, 6–7; wellness of, 343; white supremacy culture and, 121–22
 Communities of difference, 381–82
 Communities of Practice: *Learning, Meaning and Identity* (Wenger), 542
 Community of learners, 795–96
 Community of practice, 148, 282, 482, 546, 734; ESD and, 729; identity commensurate with, 382; knowledge acquisition in, 543; for professional development, 278–79; project-based learning in, 151–52; social system design intersected by, 732
 Comparative brain approach, 615–16
 Comparative psychology, 253–54, 257–58
 Compassion, 415, 416
 Complete act of thought (CAT), 72
 Complex, 449–50
 Complex adaptive systems, 535, 536, 539
 Complex cognition, 28–30
 Complex interrelated actions, 783–84
 Complexity science, 472; diverse fields creating, 463–64; knowledge systems in, 465; social sciences research and, 464–65; transdisciplinary attitude in, 469
 Complexity theory, 12, 39, 945–49; binding relationships in, 535–36; multiple forces in, 516–17; teaching, 471; transformational seeds generated in, 537–38
 Complex phenomena: as emergent, 463; as structure determined, 463
 Complex relationships, 542–43
 Computer, 917–18; brain analogy as, 596–97; memory compared to, 588, 593, 596–97
 Computer gestalt, 476
 Computer technology, 242–43
 Comte, Auguste, 441
 Concepts of self, 395
 Conceptual divergences, 267–68
 Conceptual education, 328
 Conceptual maps, 955–59
 Conditioned response/reflex, 185–87
 Conditioning response, 186
 Conditioning theory, 188–89
 Confidentiality, 493
 Confirmed Negativity Condition (CNC), 403
 Conflicts, 537, 799–800
 Conscience, 633
 Conscientization, 352
 Consciousness: approaches to, 26; cultures interrelationship with, 845; of human beings, 156; mechanistic psychology dismissal of, 36; phenomenological approach constructed by, 517; postformalism and, 30–32; of self, 637, 888–89; self-reflective, 730; social dimensions of, 377–78
 Conscious reflexivity, 742
 Conservative counterreaction, 20
 Conservatives, 504–5
 Constructed knower, 683
 Constructivism, 282, 294; assessing results of, 289–91; biological body concern of, 468–69; classroom practices of, 277–78, 284–87; educational psychology approaches of, 76, 266–69; four-part approach to, 276; immersion/distancing principles of, 278; knowledge in, 266, 490–91, 504, 507, 567, 603–4; learner principles of, 272; social collaborations in, 566–67; student understanding in, 746; three forms of, 362; unity/diversity in, 264–66
 Constructivist conception, 550
 Constructivist epistemology, 21–22
 Constructivist metatheory, 263–64
 Constructivist perspective, 361–63
 Constructivist theory, 468; engaged learning practices and, 283–84; learners active participants in, 193–94

- Consumerism, 336–37
 Consumer society, 160–61
 Content, 606, 609
The Contents of Children's Minds (Hall), 110
 Content standards, 294
 Context: situated cognition and, 709; transformative learning theory and, 361
 Contextual dimensions, 714
 Contextualization, 446–48, 956, 961
 Contextual subtheory, 207
 Contextual uniqueness, 506
 Contextual utterances, 500–501
Contingency, Hegemony, University: Contemporary Dialogues on the Left (Butler/Laclau/Zizek), 64
 Controversial figure, 94
 Convergent intellect, 311
 Conversations: patterns of, 789–90; postmodernism, 457–58; semiotic mediation tools and, 787–89; understanding promoted through, 212–13
 Co-operative Education and Workplace Learning (CEWL), 545
 Cooperative learning model, 487–88
 Copernicus, 806
 Corey, Stephen, 485
 Corrigan, Philip, 653
 Cosmology, 359, 363
 Cottrell, Garrison, 614
Counseling and Psychotherapy (Rogers), 198
 Counselors, 349–50
 Counter-hegemony, 324–27
 Counter-memory, 589–90
Counterrevolution and Revolt (Marcuse), 165
Counting Girls Out: Girls & Mathematics (Walkerdine), 247
 Cozier, William, 873
 CPM. *See* Central processing mechanism
 Crazy wisdom, 887
 Creation of learning, 555
 Creative assignments, 308–9
 Creative problem solving: in classrooms, 298, 307–9; curriculum using, 305–7; enrichment approach to, 296; strategies for, 297–304
 Creative process: meditation for, 319; rituals for, 318–19; solitude for, 318
 Creativity, 295, 320; domain-based, 312; in educational psychology, 319–20, 848; intelligence separate from, 311–12; mental health requiring, 296; metaphors facilitating, 610; neural pathways and, 615; psychology and, 310–11; psychometric approaches to, 311–13; self-discipline leading to, 313; soul adding, 849–50
 Criminals, 616
 Crit and Create: Race in America: first stage of, 838–43; second stage of, 843–44; third stage of, 844–45
 Critical accommodation, 756, 903
 Critical classroom organization, 759–60
 Critical consciousness, 352, 453, 870, 951; critical engagement for, 762, 766; critical pedagogy developing, 756–57; critical rhetoric fostering, 761; developmental stages of, 347; dialogue developing, 755; educational process awakening, 357; generative process of, 913; mediated images and, 765–66; multidimensional approach improving, 843; oppressive sociocultural conditions awareness through, 757–58; student-centered dialogue developing, 757
 Critical constructivism, 217–18, 859; guiding principles of, 858–59; reality not external/unchanging, 860–61; reconceptual education and, 507–8; theory in, 855–57
 Critical educationalist, 649
 Critical engagement, 762, 766
 Critical epistemology, 512
 Critical immanence, 218
 Critical inquiry, 741–42
 Critical interpretivist approach, 4, 27
 Critical interrogation, 864
 Criticality, 909
 Critical learners, 178
 Critical literacy, 209, 812
 Critical multiculturalism, 883; individual construction in, 876; multilogicality of, 879–83; in postformal educational psychology, 878–79
 Critical ontology: crazy wisdom in, 887; dominant cultural perspectives shaping, 885–86; indigenous knowledge and, 889–90; individuals in, 893; mechanistic psychology and, 859–60; postformalism and, 36–38, 894–95
 Critical organization, 759–60
 Critical pedagogy, 539; child's life relevance and, 73–74; critical consciousness developed with, 756–57; New York City educators committed to, 516; student empowerment from, 746
Critical Pedagogy: A Primer (Kincheloe), 215
 Critical pragmatism, 444–45
 Critical psychological discourses, 882
 Critical reflection, 360
 Critical rhetor: diverse interpretations sought by, 763; student-centered dialogue and, 760–61
 Critical rhetoric: critical consciousness fostered by, 761; social structure transformation envisioned from, 763–64; students engaged by, 760–61; theory of, 755
 Critical theory: avenues explored in, 134; body politic in, 469; contemporary forms of, 443–44; educational

- Critical theory (*cont.*)
 psychology intersecting with, 936–37; education reconceptualized in, 444; power distribution and, 516–17; self problems in, 333; social, 757
- Critical thinking, 290; African Goddess of, 704–7; assumptive disengagement required in, 321–22; Bush Administration's lack of, 329; classroom how-to's of, 703; cognitive components of, 326; as counter-hegemony, 324–27; dominant ideology and, 323; educations purpose and, 829–30; ideology critique informing, 322–23, 328; rejection beginning, 327; working-class activism and, 327; world's deconstructed/reconstructed by, 636, 638, 641
- Cronbach, Lee J., 43
- Cross-cultural research, 150
- Crossing Over to Canaan* (Ladson-Billings), 145
- Cross, William, 213, 419
- Crozier, William J., 202
- Cruishank, Julia, 534
- Crutchfield, Richard, 43
- Cubberley, E. P., 42, 222
- Culminating assignments, 305
- "Cult of the expert," 116–17
- Cultural affinity, 738
- Cultural artifacts, 386
- Cultural aspects, 418, 424
- Cultural assumptions, 250
- Cultural background, 666–67
- Cultural being, 420
- Cultural collisions, 157–58
- Cultural critic, 119
- Cultural environments, 386
- Cultural exchanges: knowledge produced in, 657; in society, 523–24
- Cultural expectations, 430–31
- Cultural historical activity theory (CHAT), 374, 375; artifacts chosen in, 381; as design framework, 783; human activity systems in, 379–80, 781–85; learning environments designed through, 780; mediated human development in, 383; responsive design from, 792; social inheritance in, 378; systems design through, 781
- Cultural historical approach, 387
- Cultural–historical theory, 376
- Cultural identity, 76–77; creating symbol of, 426; indigenous knowledge and, 657–58; internalized oppression and, 425; as spiritual experience, 422; spirituality and, 419–21
- Cultural influences, 392–98
- Cultural integrity, 705–6
- Cultural intelligence, 553
- Cultural knowledge, 381, 421–22
- Cultural learning styles, 387
- Culturally masculine model, 648
- Culturally relevant pedagogy, 143–45
- Culturally responsive educational psychology, 425–27
- Cultural mediation: in learning, 386; mental development and, 386
- Cultural memory, 596
- Cultural norms, 642
- Cultural psychology, 61, 374–78
- Cultural resources, 567–68
- Cultural socialization, 385, 386
- Cultural sources, 375–78
- Cultural stories, 426
- Cultural tool, 242–43
- Cultural views, 433
- Culture(s): in classroom, 861; consciousness interrelationship with, 845; development and, 436; indigenous knowledge and, 659; mind's interrelationship with, 933; nominalization of, 765; postformalism and, 30–32; teaching and, 427. *See also* American culture; Dominant culture; White supremacy culture
- Culture-epochs theory, 109
- Cupid, 628
- Current event interpretations, 335
- Curriculum: decontextualized, 227–28; disciplines organizing, 226–27; disruptions minimized in, 571; diversity reflected in, 661–62, 750–51; external factors shaping, 738–39; harmony in, 928; hidden, 798; interpretative framework for, 741; IQ testing determining, 227; materials, 391; motivational value in, 830–31; multiculturalism/diversity in, 750–51; problem solving in, 298, 305–7; reductionism, 825; school challenges of, 544; sociocultural theory developing, 244; state mandated outcomes of, 825–26; teachers designing, 837; thinking skills programs in, 737; transformative, 888–98; units of, 305–7
- Curriculum and Cognition Reconsidered* (Eisner), 866
- Daddy's Girl* (Walkerline), 248
- Dai, David, 45
- Dalai Lama, 411, 415, 474
- Damasio, Antonio, 615
- Dance: educators, 234; notation, 231–32
- Dance education, 231–32; Laban's contribution to, 233–34; language of, 233, 235–36; language reconceptualization for, 236–39
- Darwin, Charles, 220, 247, 432, 463, 806, 808
- Dasein, 711
- Data collection, 502–3
- Davenport, Charles, 221
- Davis, Elaine, 838
- de Beauvoir, Simone, 63, 678
- Decentering capabilities, 656
- Decentralized control, 470
- Decision-making, 339. *See also* Political decision making
- Declarative knowledge: as "not easily put into words," 540–41; theoretical reasoning and, 541

- Decolonizing agency, 659
 Decontextualization process, 227–28, 937
 Deductive logic, 608
 Deductive process, 440
 Deep curriculum, 653
 Deficit model, 18–19
 Deficit states, 170
 Dei, George, 18, 20, 31
 Deleuze, Gilles, 434, 617
 Delgado-Gaitan, Concha, 688
 Democracy: in education, 801; political decision making in, 106–7; student enriched in, 845–46
Democracy and Education (Dewey), 72, 544
 Democratic revolutions, 525
 Democratic society: character education desirable in, 182; university system in, 106–7
 Denzin, Norman, 944, 952
 Derrida, Jacques, 443, 724
 Descartes, Rene, 4, 116, 439, 860, 917; mind as subject matter from, 806–7; “structures of thought” by, 609
 Descriptive research, 269
 Desegregation, 120
 Design: educational system, 785–87; learning environments, 791, 792
 Design conversations: as semiotic mediation tools, 791; as socially constructed processes, 788
 Designers, 733
 Design framework, 783
Designing Social Systems in a Changing World (Banathy), 733
 Desire, 536
 Determinism: communication as, 480; as deductive process, 440
 Deutsche, Helene, 75
 Development, 32; postmodern/cultural questions about, 436; postmodern perspective on, 433–34; psychological model, 98; spheres, 849
 Developmental constructivism, 265
 Developmentalism, 775–76
 Developmental level, 434
 Developmentally arrested, 939
 Developmental opportunities, 271
 Developmental paths, 436–37
 Developmental pathways, 385
 Developmental principles, 434
 Developmental psychology: child study movement and, 110–12; normative regulation in, 430
 Developmental stages, 347
 Developmental theories, 431–32
 Dewey, John, 4, 10, 12, 27, 28, 33, 41, 42, 64, 69, 70, 73, 108, 124, 127, 227, 386, 412, 441, 485, 530, 541, 544, 801, 851; as greatest thinker, 67; professional career of, 68–69; theory of learning from, 558–59
 Dialectic, 725–26
 Dialectical relation, 727
 Dialectic engagement, 802, 803
 Dialogic assumption, 759
 Dialogic communications, 758
 Dialogic encounter, 802, 803
 Dialogic experience, 528
 Dialogic inquiry, 527
 Dialogic learning: diversity/equity in, 556; in educational practice, 556; intelligence types in, 554; principles of, 548, 552–56; transformation and, 554
 Dialogic modernity, 523, 529
 Dialogic teaching practices, 756
 Dialogic turn, 529
 Dialogism, 527; cogenerative, 569–71; learning approach of, 522, 526; social dimension of self and, 521
 Dialogue, 181; about education, 751–52; in communicative conception, 550–51; critical consciousness developed through, 755; social movements and, 524–25; in social theory, 525–26; systems design process needing, 789
Dialogue (Galileo), 910
 Didactic function, 842–43
 Differentiated Education System, 366
 Dihybrid cross, 566, 568, 571, 572
 Direct fields of influence, 739
 Direct learning, 51
 Direct reinforcement, 50–51
 Disciplinary power, 935–36
Discipline and Punish (Foucault), 912
Disciplined Mind (Gardner), 86
 Disciplines, 226–27
 Disconnect, 122, 794, 795, 801
 Discourse, 966
 Discourse structure, 501
 Discrimination, 368
 Discursive power, 939–40
 Discussion discourse, 789
 Disengagement, 321–22
 Dispossession, 510
 Distancing, 272–75, 278–79, 282
 Distributed cognition, 717
 Divergent intellect/production, 311
 Diverse fields, 463–64
 Diverse interpretations, 763
 Diverse methods, 953
 Diversity, 884–85; artifacts based in, 382; classrooms respecting, 518; in constructivism, 264–66; curriculums with, 661–62, 750–51; in dialogic learning, 556; in education, 509, 522, 674, 795–98; educational psychology needing, 20–21; in educational system, 661–62; gender, 887–88; issues of, 143; knowledge with, 944; multivoicedness reflecting, 383; neural pathways numerous for, 614–15; at SFSU, 761–62; in society, 665–66; teaching for, 145
 Diversity-rich contexts, 380, 381
 Dogs, 185–87, 652–53
Doing Pragmatics (Grundy), 502
 Domain, 311
 Domain-based creativity, 312
 Dominant culture, 901; critical ontology shaped by, 885–86; internalized oppression caused by, 420; parents/students

- Dominant culture (*cont.*)
 disengaging from, 687; in
 school system, 651–52;
 student relationship with, 30,
 687
- Dominant ideology, 323
- Domination, 162–63, 344, 505
- Donald, D., 372
- Dostoevsky, Fyodor, 315
- Do the Right Thing* (film), 840
- Douglas, Delia, 21
- Douglas, Frederick, 842
- Downs, Hugh, 402
- Doyle-Wood, Stanley, 18, 20,
 31
- Dramatic improvisations, 296
- The Dream Book* (Freud), 633
- The Dreamkeepers*
 (Ladson-Billings), 143
- Dream life, 633
- Dreams, 316
- Dual code theory, 595
- Dualism, 890; body-mind,
 532–33, 585; Cartesian,
 439–40, 585, 860; in
 childhood, 646; of CNB, 917;
 developmental principles
 framed as, 434; in human
 development, 431; technical
 rationality with, 442
- Dubois, W.E.B., 124, 842,
 878
- Dubuffet, Jean, 315
- Duchamp, Marcel, 880
- Durham, Jimmy, 843
- Durkheim, Emile, 820
- Durr, Virginia, 965
- Dyer, Wayne, 319
- Dylan, Bob, 851
- Dynamic methodology, 500
- Eating disorders: children's
 condition of, 408; news
 program on, 402–3; public
 interest of, 400–401; treatment
 approaches to, 405
- Ebbinghaus, Hermann, 652, 808
- Ecofeminism, 466
- Ecological attitude, 472
- Ecology, 472; humanities role in,
 465–66; relationships studied
 in, 465–67
- Economic recession, 647
- Economic systems, 878
- Ecopsychology, 466
- Ecospiritual movements, 466,
 467
- Educating Psyche: Emotion,
 Imagination and the
 Unconscious in Learning*
 (Neville), 623, 627
- Educating the Reflective
 Practitioner* (Schon), 542
- Education: anticolonial
 discursive framework and,
 651; anti-oppressive, 802;
 apartheid influencing, 365–70,
 372–73; approaches to, 511;
 assessment needed in, 822;
 banking method of, 103, 191;
 children's needs understood
 for, 171; community
 consensus in, 524;
 conservative control of,
 504–5; critical constructivism
 in, 855–57; critical theory
 reconceptualizing, 444;
 critical thinking and, 829–30;
 decisions, 337; democracy in,
 801; developmental
 psychology in, 770; didactic
 function of, 842–43; different
 orientations to, 449–50;
 discourse, 812; diversity in,
 509, 522, 674, 795–98;
 economic recession impacting,
 647; epistemological
 framework in, 511–12; equity
 of learning in, 180; excitement
 lost for, 805–6; experiences,
 960; federal legislation
 impacting, 961; forums, 752;
 government regulation of,
 962; hidden curriculum in,
 798; history, 923–24;
 institutions of, 145; lifelong
 learning goal of, 832–33;
 mechanistic educational
 psychology undermining,
 515–16; models for, 803;
 modernism in, 432–33, 774;
 money spent on, 187; morality
 aim of, 179–80; movement,
 769–70; North America
 changing, 652; objective
 redefined in, 519–20; ongoing
 dialogue about, 751–52;
 organizational frame for, 70;
 parents involvement in, 778;
 philosophy/psychology in,
 451; in pluralistic societies,
 656–57; political/ideological
 purposes in, 451–52; political
 projects converging with, 645;
 postformalism
 reconceptualizing, 913–14;
 power relations changing in,
 746–47; processes in, 357;
 professions in, 810;
 progressive influence in,
 441–42; progressive principles
 for, 70–73; psyche in, 630–31;
 psychoanalysis assisting, 635;
 psychological principles of,
 226; psychology and, 627;
 public state-controlled
 centralized, 811;
 reconceptualization of,
 827–33; reform of, 190–91;
 regulatory power shaping, 8;
 school v., 850; scientific
 approach to, 68; social control
 from, 126–27; in social policy,
 648–49; social/psychological
 context of, 741; as society's
 lifeblood, 72–73; society
 transformed by, 527–28; soul
 reincorporated into, 847–48;
 spiritual nature of, 961;
 structures in, 749;
 student-directed learning in,
 200; teacher/student
 dissatisfaction with, 796;
 testing of, 810; test
 measurements in, 814–15;
 theoretical approaches in, 517;
 theories of, 748;
 transformative force of, 518;
 United Kingdom girls', 647;
 Western science influencing,
 513–14; "What could be"
 questions changing, 178. *See also* Dance education; Formal
 education; Public education;
 Vocational education; Western
 education
- Education: A First Book*
 (Thorndike), 226
- Educational achievement, 647

- Educational Adaptations in a Changing Society* (Malherbe, editor), 558
- Educational policy:
domination/subjugation in, 505; NCLB as, 900; student perspectives changing, 752–53
- Educational policy makers:
business management principles and, 811; literacy objectives of, 350–51; neo-positivist, 893; Sputnik changing focus of, 811–12
- Educational practice: dialogic learning in, 556; sociocultural rules guiding, 378–79
- Educational psychology, 618–19;
behaviorist conception in, 229–30; beneficiaries of, 416; bricoleurs in, 959; Buddhism reviewing, 411–12; conceptual divergences in, 267–68; as Constructivism, 76; constructivist approach to, 266–69; creativity in, 319–20, 848; critical, 350; critical theory intersecting with, 936–37; “cult of the expert” in, 116–17; culturally responsive, 425–27; cultural psychology in, 374–75; cultural socialization reconsidered in, 385; diverse insights needed in, 20–21; Enlightenment and, 116; epistemology and, 14–16; “ethic of care” in, 181; Eurocentric patriarchal roots of, 410; Eurocentric teaching/learning from, 652; experiential learning in, 530; explicit vision lacking in, 412–13; first course in, 42; Freudian theory extensions transforming, 865; Herartian model fragmented to, 115; Herbert first in, 41; historical context of, 411; human development/learning influencing, 178; human minds potential in, 619–20; individual learning studied in, 780; intelligence testing from, 654; interactionist tradition in, 522–23; interdisciplinary methodologies in, 502–3; interpretivists rethinking, 13–14; James’ contribution to, 125–27; Kohlberg’s contributions to, 134; language/identity in, 140; Lave’s work on, 152; lifeless language of, 623–24; mechanism still ruling, 9–10; mechanistic metaphor used in, 9; mechanistic tradition of, 3–4, 6; memory studies of, 586–89; multilogical research in, 954–55; new practices/perspectives for, 415; objective knowledge used for, 4–5; operant conditioning applied to, 203–5; oppressive dimensions analyzed in, 8–9; Piagetian formalism embraced by, 755–56; polar camps of, 3; political dimensions in, 32–34, 940–42; postformal movement in, 866–67; postmodern ideas in, 454; psyche and, 626; psyche uncomfortable for, 630; psychology’s scientific development and, 414; race in, 666; reductionist animal psychology theories brought into, 257; reductionistic, 937; remembrance in, 599; repression/progress distinction in, 163–64; Scientific Revolution reflected by, 5; social changes and, 7; social debates and, 33; social equity and, 250; social mobility barriers deconstructed by, 740; social norms perpetuated by, 622; South Africa and, 371; specific content teaching/learning in, 269–70; students and, 182, 744; students’ disempowered participants view of, 744; students’ learning styles in, 677–78; teachers/students liberated in, 851; teachers teach/learners learn dedication of, 182, 744; theory of learning from, 6; traditional approach of, 267, 899; transforming, 21–23; victim-blaming approaches avoided by, 19; Vygotsky’s influence in, 245; Watson transfiguring, 252
- Educational Psychology* (Thorndike), 226
- Educational Psychology in a Social Context* (Donald), 372
- Educational research: dynamic methodology in, 500; paradigm shifts in, 488–90
- Educational setting: classrooms relationship with, 269; multiculturalism in, 120–21; parent/school relationships in, 693–94
- Educational system: authority degrees in, 229; Butler’s improvement interest in, 62–63; CHAT designing, 780; colonial assumptions in, 656; crisis of, 510–11; critical idealistic outcomes of, 453; designing, 785–87; diversity in, 661–62; Eurocentric upper-middle-class male in, 65; externalization/internalization processes in, 784; imaginative alternative strategies for, 849; instrumental dimension learning in, 554; mutual responsibilities in, 105; navigating, 692; politicizing, 508–9; reconceptualized environment of, 827; self-directed learning in, 336–37; social system interconnected with, 730; in South Africa, 364–65, 370; students empowered in, 66; for white learners, 366
- Educational Systems Design (ESD), 735; community of practice and, 729; enactions connection with, 731–32; stakeholder-based changes in, 733
- Educators: authoritarian, 100; gender social construction and, 684–85; hope provided

- Educators (*cont.*)
 by, 852; mind location and, 601–2; multilogical framework of, 848; postformal texts for, 927–28; spirituality influencing, 421; in structural coupling, 482; students/teachers as, 97; Thorndike's influence on, 229–30
- Effective action, 480
- Egalitarian dialogue, 550, 552–53
- Egan, Kieran, 45
- Ego, 633
- Eigen, Michael, 634
- Einstein, Albert, 884, 895
- Electra complex, 633–34
- The “elevator thing,” 720
- Eliot, Charles William, 125
- Elitism, 144–45
- Elitist assumptions, 932–33
- Elitist knowledge, 64
- Ellis, Julia, 18
- Eluard, Paul, 315
- Emancipatory interests, 104
- Emancipatory learning models, 537
- Emancipatory transformation, 357–58
- The Embodied Mind: Cognitive Science and Experience* (Varela, Thompson, Rosch), 535
- Embodiment, 534–35
- Embryos, 109–10
- Emergence, 472
- Emerson, Ralph Waldo, 124
- Emic perspective, 215
- Emotion, 593–94
- Emotional intelligence, 803
- Emotionally derived knowledge, 838
- Empirical knowledge, 505
- Empiricism, 610; groundwork laid for, 607; James and, 127–28; natural phenomenon understood in, 507
- Empiricists, 608
- Empowering learning conditions, 747
- Empowerment movement, 486
- “Empty mechanism,” 10
- Enactions, 731–32, 735
- Enactive framework: concepts of, 475; intelligence in, 481–82; preexisting world/mind not assumed in, 479
- Enactive stage (learning), 59–60
- Enactivism, 473, 853; cognition redefined in, 467–68; interpretivism drawing on, 24–26; postformalism and, 895–96; postformal self and, 896–98
- Endogenic epistemologies, 264
- Engaged learning practices, 294; authentic assessment practices of, 289; constructivist theory and, 283–84; implementation of, 287–89; independent thinkers created by, 285
- Engel, Frederich, 463
- Engeström, Ritva, 782
- Engeström, Y., 376, 782
- The Engine of Reason, the Seat of the Soul: A Philosophical Journey into the Brain* (Churchland), 615
- English—second language (ESL), 797
- Enlightenment: educational psychology grandchild of, 116; ontology, 892–93; philosophical revolution of, 585; rationality, 912
- “The Enlightenment,” 456
- Enrichment approach, 296
- Environment: brain interaction with, 155; child's physiology and, 429; classroom, 513; learner's interaction with, 562; nervous system interacting with, 479–80
- Epistemic body, 469
- Epistemic value, 263–64
- Epistemology, 39; appropriation in, 545–46; of CNB, 916, 918, 919; of complexity, 945–49; constructivist, 21–22; critical, 512; developments in, 682; dominant/marginalized, 115–16; educational psychology and, 14–16; exogenic, 264; foundation of, 946; framework for, 511–12; genetic, 192; knowledge process of, 681–84; knowledge/truth study of, 5, 492; new terrain of, 16–17; participatory, 467; positivist, 103–4, 504–5, 514, 946; post, 920; post-Cartesian—Newtonian—Baconian, 920, 921; scientific, 117; of situated cognition, 713
- Epistemology of the Closet* (Sedgwick), 866
- Equilibration theory, 193
- Equity: of differences, 555–56; of learning, 180
- Erikson, Erik, 75–78, 429
- Erikson, Joan, 78
- Eros, 628–29
- Eros and Civilization* (Marcuse), 162, 165, 881
- Escape from Freedom* (Fromm), 334
- ESD. *See* Educational Systems Design
- ESL. *See* English—second language
- An Essay on Liberation* (Marcuse), 165
- Essays in Radical Empiricism* (James), 126, 128
- Essick, Ellen, 32
- Esteem needs, 170
- Ethical action, 471–72
- Ethical attitude, 472
- Ethical discourse, 790
- Ethical issues, 493–94
- Ethical Know-How* (Varela), 25
- “Ethic of care,” 180; in educational psychology, 181; from Noddings, 179
- The Ethics of Belief* (Clifford), 127
- Ethnic identity: in Canada, 667; religious identity v., 424
- Ethnic sources, 375–78
- Ethnography, 39, 389; methodology in, 389; perspectives in, 747; researchers in, 943
- Ethnomethodology, 498–99
- Etic perspective, 215
- Etymological insight, 944
- Etymology, 909, 961

- Eugenics, 221
Euro-American school system:
Anglo-Saxon male values of, 900; dominant/minoritized body consequences in, 651–52
Eurocentric learning process, 652, 655, 798
Eurocentric roots, 410
Eurocentric science, 116
Eurocentric upper-middle-class male, 65
Eurocentric values, 65
European art, 842
Europeans, 818
European scholarship, 806
Evans, Scot, 19, 21, 23, 33
Evolutionary consciousness, 735
Evolutionary theory, 432
Evolving criticality, 39
Excited Speech (Butler), 63
Exclusionary disciplinary practices, 83
Existential intelligence, 82
Exogenic epistemologies, 264
Experience: knowledge from, 121, 406; levels of, 478; meaning perspective acquired through, 355–56; transformative learning theory interpreting, 354–55
Experience and Education (Dewey), 69
Experiential Learning (Kolb), 531
Experiential learning:
conceptual/practical problems in, 531; conflicts worked through in, 537; in educational psychology, 530; exclusionary aspects of, 533–34; management of, 533; mentalist reflection in, 532–33
Experiential subtheory, 207
Experimental psychology, 192
Experimental research, 269
Externalization processes, 784
External performances, 376–77
Extinction, 186
Extremist groups, 673–74
Facilitative conditions, 199
Facilitator's role, 71
Facts, 774–75
Faculty meetings, 579–80
Fairbairn, R.D., 634
Families: homeschooling experienced by, 769; violence influencing, 369–70
Fanon, Frantz, 657
Farrell, Suzanne, 314
Fascism, 162
“Father of progressivism,” 69
Federal legislation, 961
Feedback looping process, 956
Feminine ethics, 90
The Feminine Mystique (Friedan), 90–91
Femininity, 646; in American culture, 680–81; societies construction of, 678–79
Feminism, 63; of Gilligan, 135; Postcolonial, 115–16; Postcolonial theory and, 114; postformal theories using, 92
Fenwick, Tara, 22, 23, 29, 37
Fermi, Enrico, 316
Ferrari, Michel, 45
Ferrer y Guardia, Francisco, 94, 95
Ferster, Charles B., 43
Feynman, Richard, 316
Fictive imagination, 954
Field, 311
Fight or flight response, 169
Figurative (sensory) knowledge, 603
Fineberg, Jonathan, 844
Fiske, John, 936
Five senses (Aristotle), 806
Flack, Audrey, 318
Folkways (Sumner), 167
Forcing connections: in analogies chart, 299–300; in attributes tree, 301–3
Formal education: Anarchists purpose of, 99–100; development psychological model from, 98; medications used in, 98–99; self-directed education marriage with, 331
Formalism, 914; Enlightenment rationality and, 912; postformalism response to, 913
Formative assessment, 294
Forums, 750–51
Foucault, Michel, 249–50, 315, 432, 443, 622, 805, 912, 945
Founding fathers, 806
Fowler, James, 419
FP. *See* Fundamental Pedagogics
Frames of Mind (Gardner), 81, 83, 85, 86
Franklin, Aretha, 421
Frankl, Viktor, 629
Freire, Paulo, 27, 97, 103, 347, 357–58, 444, 521, 757, 801
Freud, Anna, 43, 75, 632
Freudian theory, 865
Freud, Sigmund, 42, 75, 124, 136, 162–63, 205, 249, 632, 808
Friedan, Betty, 90
Friedman, Mabel Caminez, 88
Friedman, William, 88
Fromm, Erich, 163, 168, 334
Frost, Robert, 201
Functionalism, 256–57
Fundamental Pedagogics (FP), 367–68
The Fundamentals of Learning (Thorndike), 226
Future projection chart, 304
Gagne, Roger M., 44
Galileo, 910
Galison, Peter, 616
Galton, Francis, 220, 806, 815
Gandhi, Mahatma, 842
Gandhi, Mohandas, 20, 657
Gandhi's Truth (Erikson), 80
Gardner, Howard, 44, 45, 312; eight intelligences by, 81–82; Project Zero involving, 81; sociopsychological ideas of, 85
Garrison, Mark, 4, 8, 17
Gastric juices, 184–85
Gender: attributes, 642, 646; boundaries, 672–73; in classrooms, 666; diversity, 887–88; educational achievement and, 647; power relations of, 648–49; social construction of, 677–78, 684–85; in textbooks, 925
Gender differences: academic performance and, 247–48; moral development and, 135

- Gender-specific teacher training programs, 683
Gender Trouble (Butler), 64, 65
 Generative process, 913
 Genetic epistemology, 192
 Genetic factors, 429
 Genre analysis, 501
 Gergen, Ken, 27, 264
 Gerofsky, Susan, 31
 Gesell, Arnold, 429
 Gestalt psychology, 14
 Gestures, 722, 727
 Gherardi, Sylvia, 537
 Gibbens, Alice Howe, 125
 Gibson, James, 149
 Giftedness, 312
 Gilligan, Carol, 88–89, 679;
 background of, 88–89;
 feminist perspective of, 135;
 postformal thought embodied
 by, 92; psychology books
 resulting from, 92; as social
 activist, 89–90
 Ginsberg, Allen, 315, 319
 Giotto, 841
 Giroux, H., 519, 849
 Glasersfeld, Ernst von, 608
 Glazer, Susan, 810
 Glenn, Cathy, 34
 Global ecosystems, 469
 Globalization, 521–22, 916
 Goal-directed actions, 791
 Goal setting, 581–82
 God, 605–6
 Goddard, Henry, 110, 221
 Goldberg, Alan, 401, 402, 406
 Goldman, Emma: as
 controversial figure, 94; the
 oppressed dedication of, 101
 Government, 452
 Governmentality, 966
 Government regulation, 962
 Graham, Martha, 318
 Gramsci, Antonio, 324, 862, 946
 Gravity, 895
 Gray, John, 92
 Great Britain, 491–92
 Greek, 799
 Greek legend, 627–28
 Greene, Maxine, 218, 258, 867
 Green, Nicole, 32
 Greer, Robert D., 45
 Gresson, Aaron, 45
 Gris, Juan, 315
 Gross, Alan, 616
 Group dynamics, 213–14
 Group psychology, 249
 Group trust, 314
*Growing Up Girl: Psychosocial
 of Gender and Class*
 (Walkerdine), 248
 Grundy, Peter, 502
 Guattari, Felix, 434, 617
 Guidance system, 733–34
 Guilford, J. P., 311
 Gutierrez, Julia, 422
 Habermas, Jurgen, 103, 443,
 524
 “Habitations Dissertation,” 161
 Haeckel, Ernst, 109
 Hall, G. Stanley, 41, 67, 124,
 654; achievements of, 109;
 child-centered natural
 education advocated by,
 108–9; child study movement
 of, 110–12; on women,
 110–11
 Hamilton, Carol, 437
*Handbook of Qualitative
 Research* (Denzin/Lincoln),
 944, 951, 954
 Harcourt, Alfred, 808
 Harding, Sandra, 113–14
 Harré, Ron, 44
 Hartley, David, 807
 Hartmann, Heinz, 75
 Hayles, N. Katherine, 616
 Head Start program, 60
*The Heartbeat of Indigenous
 Africa: A Study of the Chagga
 Educational System* (Mosha),
 889
 Hegemonic articulation, 914
 Hegemonic knowledge, 654–55
 Hegemonic power, 934–35
 Hegemony, 8, 40, 323, 338, 803
 Heidegger, Martin, 22, 160, 617,
 709, 710
 Heinz’s dilemma, 131–32
 Hemingway, Ernest, 315
 Hendrix, Jimi, 848–49
 Henle, Mary, 44
 Heraclitus, 630
 Herbartian model, 115
 Herbert, Jonathan Friedrich, 41
 Heredity: human intelligence
 from, 223; power of, 110
 Hermeneutics, 909, 948; in
 Gestalt psychology, 14;
 truth—human construction in,
 517
*The Hermeneutics of
 Postmodernity* (Madison),
 128, 849, 854
 Herr, Kathryn, 18, 37
 Hermstein, Richard, 11, 20, 45,
 893, 910, 956
 Heyen, William, 319
 Hidden Curriculum, 803
 Hierarchy of needs, 167–71
 Higher education, 371
 Higher order thinking, 894, 905
 Higher status careers, 541–42
 High-level cognitive process, 950
 High school: history textbooks
 in, 924; parental involvement
 lacking in, 688;
 teaching/learning together in,
 748–49
 Hillman, James, 627
 Hinchey, Patricia H., 45, 866,
 869
 Hirsch, E.D., 851
 Historical context, 873
 Historical-hermeneutic sciences,
 104
 Historical materialism: from
 Luria, 154; from Vygotsky,
 155
 Historiographical approach, 927
 History, 592
 History education, 923–24;
 controversy of, 930–31;
 pedagogy of, 928–30;
 positivist pedagogy of,
 928–29; postformalism
 lessons in, 926; students
 experiencing, 929
 Hoffman-Singleton graph, 919
 Holistic context, 831
 Holistic interactive learning, 563,
 564
 Holistic views, 445–46
 Hollo, Anselm, 319
 Holmes, Leilani, 659
 Holmes, Oliver Wendell, 124,
 221
 Holon, 342

- Home, 578
- Homeschooling, 779; assignment completion in, 768; children's needs met through, 777; child's confidence preserved through, 772–73; families experience of, 769; learning improved by, 772–73; pedagogy of, 774
- hooks, bell, 119–20
- Horkheimer, Max, 443, 878
- Horn, Ray, 6, 13, 21, 38, 855
- Horton, Myles, 337
- Howard, John, 29
- How We Think* (Dewey), 28, 71
- Huebner, Dwayne, 622
- Hughes, Langston, 842
- Human activity systems, 791; in CHAT, 379–80, 781–85; complexity of, 725; for diversity-rich contexts, 380; ZPD and, 376
- Human beings, 402; alienation of, 161, 794–95; behavior and, 51, 254–55; cognition of, 149–50; comparative psychology and, 253–54; complex adaptive systems of, 536; complexity of, 128; consciousness of, 156; construction by, 517; existence of, 54; innate goodness of, 197; intelligence construction of, 26; intentional activity of, 784; knowledge constructed by, 263, 512–13; learning by-product of, 558–59; machines mimicked by, 593; mechanistic psychology and, 13; motivation of, 53; movement of, 231–32; natural law relationships described for, 807; as natural teachers, 470; nature of, 247; needs of, 799; part-time existence of, 163; postformalism and, 35; psyche of, 136; psychology's study of, 622; ready-at-hand from, 715; relationships of, 711; remembrance essential to, 598–99; schools teaching how to be, 511–12; science and, 806–7; students viewed as, 199; thought distortions of, 541
- Human body: capabilities explored of, 232; comprehensive movement theories of, 233; systems interacting in, 184
- Human development: assumptions in, 430; childhood learning in, 429; dualism in, 431; educational psychology and, 178; eight stages of, 79; modernism inherent in, 432; psychosocial stages of, 77–78
- Human Development Index, 644
- Humane surroundings, 174
- Human intelligence: distinct stages in, 194–95; as hereditary possession, 223; longitudinal study of, 222; objective measurements of, 226; Sternberg studying, 206
- Humanistic approach, 483
- Humanistic psychology, 7–8, 43, 319–20
- Humanities: ecology and, 465–66; global ecosystems and, 469; qualitative research of, 498
- Humanness, 34
- Hume, David, 187, 608, 807
- Hung, David, 22, 34, 37, 545
- Hutchinson-Guest, Anne, 234
- Hutchinson, Nancy, 24
- Huxley, Aldous, 315
- Hyperaggression, 50
- Hyperreality, 33, 862, 863, 916
- Hyper-visibility, of blacks, 671
- Iconic gesture: knowing in action expressed in, 722; utterance with, 724
- Id, 633
- Idea(s): histories, 31; trees, 299, 300, 305; words stand for, 608
- Ideal culture, 684
- Ideal speech condition, 105
- IDEIA. *See* Individual with Disabilities Education Improvement Act
- Identity: of black women, 638; cognition inseparable from, 884; with community of practice, 382; educational psychology and, 140; ethical action appreciating, 471–72; individual/cultural, 76–77; learning and, 716; social interactions shaped by, 381–82; transformation process of, 709; understanding, 772–73
- Identity formation: cognitive development and, 139–40; contradictions in, 142; Lacan and, 137–38; learning inseparable from, 37–38
- Identity: Youth and Crisis* (Erikson), 80
- Ideology: complex definition of, 958; in education, 451–52; power of, 934
- Ideology critique tradition: critical thinking informed by, 322–23, 328; self-directed learning rejected by, 332–33
- “Idiot children,” 173
- IES. *See* Institute of Educational Sciences
- Ignorance: intelligence interrelationship with, 908–9; moral illiteracy consequence of, 341
- Imagery, 316
- Imagination, 316–17
- Imaginative alternative strategies, 849
- Immersion, 272–75, 278, 279, 282
- Implicature, 500–501
- Implicit orders, 868
- In a Different Voice* (Gilligan), 90, 91
- Inclusion, 433
- Incubation processes, 296–97, 300, 317–18
- Independence: colonial states seeking, 657; colonized people seeking, 19–20
- Independent thinkers, 285
- Indigenous cultures, 518; formal empirical knowledge deemed inferior of, 505; knowledge of, 889; schools oppressing, 518–19

- Indigenous knowledge: critical ontology and, 889–90; cultural identities in, 657–58; culture and, 659; lived realities in, 661; power of difference in, 891; schools ignoring, 686–87; spirituality and, 659–60; as transformative, 656–61; in Western education, 658–59
- Indirect learning, 51
- Indirect statements, 394–95
- Individual(s): critical multiculturalism and, 876; in critical ontology, 893; cultural learning styles and, 387; developmental theories focusing on, 431–32; Enlightenment ontology and, 892–93; growth of, 146; identity, 76–77; impaired memory of, 598; learning focused on, 291; learning, study of, 780; many selves of, 800; psychogenesis, 399; psychology and, 6–7; in self-directed learning, 335; self-efficacy of, 155; situated cognition interactions by, 718; society's relationship with, 8, 157; as subjects, 205
- Individual-context interaction, 21–22
- Individualized instruction, 398
- Individual with Disabilities Education Improvement Act (IDEIA), 45
- Individuation, 933
- Industrialism, 412
- Information, 481
- Information processing: memory/cognition in, 594–95; philosophy roots in, 602–3; radical constructivism and, 603
- Information society, 523, 529, 549
- Inner human mental processes, 154
- Inner life, 626
- In Pedagogy and the Politics of Hope* (Giroux), 850
- Inquiry-based instruction, 283
- Insight, 317
- Inspiration, 314–16
- Institute of Educational Sciences (IES), 441
- Institutions, 524
- Instructional design, 729–30
- Instructional practices, 146
- Instructions, 826
- Instrumental dimension, 554
- Instrumental learning, 355
- Intellectual development, 682–83
- Intellectual enactment, 870
- Intellectual functions, 908
- Intelligence: academic, 62, 553; communicative/cultural, 553; contextual subtheory conceptualizing, 207; creativity separate from, 311–12; critical interrogation of, 864; in dialogic learning, 554; emotional, 803; in enactive framework, 481–82; existential, 82; experiential subtheory addressing, 207; Gardner and, 81–82; human beings constructing, 26; ignorance's interrelationship with, 908–9; model of, 208; multiple, 81–87, 206, 210, 312, 803; positivistic methods defining, 515; postformalism and, 910; practical, 527, 553; problem solving through, 868; sociopsychological inquiry modes making sense of, 938; spiritual, 82; Terman investigating, 220–21; testing of, 654; threshold of, 311; Triarchic Theory of Intelligence synthesizing, 207–10; unique forms of, 904; Western society rethinking, 770
- Intelligence Reframed* (Gardner), 86
- Intentional activity, 784
- Interactionist tradition, 522–23
- Interactive student-centered instruction, 284
- Interdisciplinarity, 944
- Interdisciplinary approach, 837, 842, 845
- Interdisciplinary methodologies, 502–3, 831–32
- Interdisciplinary research methods, 499
- Internal coherence criterion, 608–9
- Internalization, 376–77, 784
- Internalized oppression: cultural identity and, 425; dominant culture superiority causing, 420; spirituality unlearning, 422–23
- International Convention of the Rights of the Child, 352
- Internet: knowledge restructuring by, 456; learning communities formed by, 243
- Interpersonal liberation, 345–46
- Interpersonal oppression, 344
- Interpersonal styles, teachers, 395–98
- Interpersonal wellness, 342
- Interpretation: of meaning, 714–15; reality as, 710
- Interpretative framework, 741
- Interpretivism, 10; educational psychology rethought in, 13–14; enactivism and, 24–26; mechanism rejected by, 12–13; situated cognition and, 23–24
- Interpretivist psychology, 12–13
- Interrelationships, 527
- Interrogation, 909
- Intersubjective dialogue, 556–57
- Intersubjectivity, 529
- Intertextuality, 528
- In-the-head theorists, 602
- Introspection, 254–55
- Intruder, 216
- Intuition, 317, 607
- IQ testing, 30; curriculum determined by, 227; failures of, 38; postformalism and, 910; psychological science and, 807–10; uses of, 221
- Iraq, 328–29
- Isomorphic, 817
- Is Science Multicultural? Postcolonialism, Feminisms and Epistemologies* (Harding), 113
- Is There a Queer Pedagogy?* (Britzman), 679

- Itard, Jean, 174
- Jacobs, Jane, 463
- James, William, 41, 808;
background of, 124–25;
education psychology
contributions of, 125–27;
postformalism and, 124;
rationalism/empiricism
distinguished by, 127–28
- Jefferson, Thomas, 806, 811
- Jenlink, Patrick M., 730
- Jensen, Arthur, 410, 910
- Jesus, the Christ, in the Light of
Psychology* (Hall), 108
- Johnson, Ben, 668
- Johnson, Lyndon, 60
- Johnson, Timothy, 402
- Johnson, Tony W., 70
- Joint attention, 470
- Jones, Harold E., 43
- Jordan, Jacqueline, 901
- Journals, 390
- Jung, Carl, 124, 354, 627
- Jupiter, 628
- Kahneman, D., 44
- Kantian manner, 106
- Kant, Immanuel, 608, 609
- Keller, Evelyn Fox, 616
- Keller, Helen, 911
- Kelley, Harold H., 43
- Kellner, Douglas, 954
- Kelly, George A., 265
- Kemmis, Stephen, 486
- Kendall, Samantha, 401, 406
- Kerouac, Jack, 315
- Kilpatrick, William H., 42
- Kincheloe, Joe L., 44, 45, 69, 92,
96, 115, 123, 177, 215, 250,
654, 841, 849, 850, 856, 866,
869, 877, 886
- King, Martin Luther, Jr., 20, 842
- Kinnucan-Welsch, Katheryn, 38
- Klein, Melanie, 634
- Kliebard, Herbert, 227
- K-n* graph, 919–21
- Knight, George R., 70
- Knowing in action, 542, 546, 722
- Knowledge, 505–6; acquiring,
148–49, 228–29, 839–40; in
action, 541; bricolage and, 14;
community of practice
acquiring, 543; constructing
new, 286; in constructivism,
266, 490–91, 504, 507, 567,
603–4; critical epistemology
studying, 512; critical
self-reflection emphasized in,
104–5; cultural, 381, 421–22,
659; cultures/community
exchanges producing, 657;
de-monopolization of, 524;
dialogic learning acquiring,
548; direct experience
creating, 406; diverse forms
of, 944; emotionally derived,
838; epistemology studying, 5,
492, 681–84; experiential,
121; as figurative (sensory),
603; formal/informal value in,
506; hegemonic, 654–55;
historical-hermeneutic
sciences creating, 104; human
beings constructing, 263,
512–13; indigenous cultures
and, 505, 889–90; as
instrument, 603–4; Internet
restructuring, 456; intuition
beginning of, 607; language
acquiring, 602–3; measuring,
818; memory linking in, 595;
multiculturalist approach to,
877; objective, 4–5; as
operative (logical), 603;
origins of, 121; patterned
relevant activities exhibiting,
718; personal construction of,
550; politicizing of, 508–9;
positivism observing/
measuring, 490, 848; in
postformal thinking, 188; a
priori, 595–96; producing
useful, 947, 948; as racially
neutral, 655; rationally
derived, 838; socially
acquired, 603; student
psychology and, 70; students
using, 736–37; systems, 465;
teachers source of, 15–16;
Thorndike decontextualizing,
227–28; valid, 505–7; value
of, 505; Western society views
toward, 26–27. *See also*
Education; Elitist knowledge;
Emotionally derived
knowledge; Empirical
knowledge; Figurative
knowledge; Hegemonic
knowledge; Indigenous
knowledge; Learning;
Operative knowledge;
Practical knowledge;
Procedural knowledge;
Scientific knowledge;
Student(s); Teacher(s);
Theoretical knowledge
- Knowledge and Human Interests
(Habermas), 103
- Knowledge-constitutive
interests, 104
- Knowles, Abraham, 44
- Koestler, Arthur, 342
- Kohlberg, Lawrence, 429, 655;
biography of, 130–31;
education psychology
contributions of, 134; morality
stages of, 132–33
- Köhler, Wolfgang, 43
- Kolb, David, 531
- Kris, Ernest, 75
- Laban Movement Analysis
(LMA), 234–36
- Laban, Rudolph von: dance
education contributions by,
233–34; dance
education/dance notation by,
231–32
- Laboratory techniques, 205
- Lacan, Jacques: human psyche
explanations by, 136; identity
formation and, 137–38;
psychoanalytical work of,
136–37
- Ladson-Billings, Gloria:
achievements of, 144; African
American children focus of,
143
- Lagemann, Ellen, 230
- Language: as autonomous
system, 476; cognitive
development and, 241–42; of
dance education, 233, 236–39;
descriptive dance, 235–36; of
educational psychology,
623–24; educational
psychology and, 140; game,
462; human social interaction

- Language (*cont.*)
 held together by, 478; identity and, 137–38; as knowledge acquiring mechanism, 602–3; as learning tool, 154; linguistics analyzing, 499; metaphors nonliteral use in, 501; of normalcy, 249; politics in, 799; power of, 796–97; primitive games in, 459–62; psyche understood through, 622–23; recursivity in, 468; roles distinguished through, 778; self-contained system of, 713; as semiotic mediation tools, 786–88; theory, 141; Western culture preoccupied with, 724
- Language and Cognition* (Luria), 156
- Language systems: learners needing, 789; semiotic mediation tools and, 781
- Latin America, 880–81
- Latour, Bruno, 616
- Lave, Jean, 23; education psychology and, 152; social theory interest of, 148
- La Virgen do Guadalupe*, 422
- Law of Effect, 226
- Law of Exercise, 226
- Lawrence, Jacob, 842
- “Laws of learning,” 68
- Leadership skills, 693
- Learner-centered approaches, 286–87
- Learner-centered critical thinkers, 285–86
- Learner-centered principles, 372–73
- Learner-engaged disciplines, 831
- Learners: constructivism principles for, 272; in constructivist theory, 193–94; cultural stories of, 426; educational decisions controlled by, 337; environmental interaction with, 562; language systems needed for, 789; in structural coupling, 482; tutorship program with, 368; ZPD and, 156, 787; ZPD scaffolding, 217
- Learning: active, 831; actual/potential, 528; agency-structure dialectic and, 573; alternative systems for, 790; associative process of, 188; associative theory in, 187; authentic assessment of, 832; in authentic situations, 541; behaviors not conducive to, 204–5; being-in-the-world and, 23, 714–15; by-doing, 149; central issues in, 568; children exploring, 195–96; children motivated for, 175; children’s style of, 775; children’s trial-error, 190; classroom experiences in, 786–87; classrooms factors in, 562, 747; communicative conception in, 548; communities of, 243, 268, 604; in community of practice, 151–52; community supporting, 393–94; comparative psychology and, 253–54; complex systems in, 536; continuous invention/exploration of, 22–23; creating space for, 426; cultural mediation in, 386; cycle, 562; decentralized control and, 470; developmental pathways in, 385; dialogic nature of, 526; dialogism approaching, 522; dimensions of, 12; direct reinforcement of, 50–51; disability, 98; in distributed cognition, 717; dynamic process of, 527; educational psychology and, 269–70, 780; embodied approach to, 534–35; equity in, 180; Eurocentric process of, 798; experience/practice and, 546; formal classroom and, 97; goal setting for, 581–82; goals of, 391; holistically interactive, 563, 564; home issues influencing, 578; homeschooling improving, 772–73; human beings and, 558–59; humanness and, 34; identity and, 716; identity formation inseparable from, 37–38; improvement in, 428–29; individualizing, 291, 776; informed choices in, 338; language as, 154; learners responsibility, 482; lifelong process of, 96, 290, 832–33; macro-perspective on, 561–64; mechanism theories of, 653; memory in, 584–86, 593–94; micro-perspective on, 559–61, 563–64; Montessori’s fascination with, 175; in objective conception, 549–50; observational/imitating approach to, 392–93; personal knowledge in, 505–6; physical movement/sensation in, 561; through reflection, 531; relationships built for, 736–37; rote/recall in, 9; scaffolding supporting, 394; shared responsibility in, 570; situated cognition contextualizing, 715; as social event, 562; social modeling of, 55; social practices in, 732; sociocultural activities occurring with, 374; sociocultural theory contributing to, 527; spiritual knowing enhancing, 660–61; stages, 59–60, 175–76; stakeholder design in, 730–31; structure important in, 59–60; student participation in, 802; students directing, 200; students improving, 742; students involved in, 49–50; students ready for, 433; students’ strategies of, 243; students’ styles of, 677–78; systems, 786; teachers mediating, 569; theories of, 609; theory of deviance in, 367; together, 288; transformational, 785; transformative education modes in, 359; understanding process of, 16–17; understandings of, 549; white

- supremacy culture influencing, 122; whole person involved in, 558; in workplaces, 543, 544–45; ZPD and, 35, 888.
See also Student learning; Teaching/learning
- Learning environments, 196; of African Americans, 565–66; CHAT designing, 780; designing, 791, 792; interactions in, 845; optimal, 568
- Learning in the Workplace* (Billett), 543
- Learning opportunities: from community organizations, 351; working class schools changing, 739
- Lecture formats, 755–56
- Lee, Spike, 840
- Left Back* (Ravitch), 68, 73, 111
- Legitimate peripheral participation, 377
- LEGO, social policy of, 648–49
- Leontiev, A. N., 155, 241, 782
- Lerner, M. J., 44
- Lesbians, 66
- Levine, Mel, 487
- Levi-Strauss, Claude, 136
- Lewin, Kurt, 485
- Lewis, Carl, 668
- Liberation, 352; movements, 20, 525; oppressive forces resisted for, 345–47; political literacy starting, 346–47; theologians, 880–81
- Liberatory teaching practices, 801, 865, 870
- Libratory education, 94–95, 100
- Libratory psychology, 95
- Lickona, Thomas, 655
- Life and Confessions of a Psychologist* (Hall), 110
- The Life Cycle Completed* (Erikson), 78
- Lifelong learners, 96, 290, 832–33
- Lifelong learning, 832–33
- Lifeworld, 582–83
- Lincoln, Yvonna, 944, 952
- Lindeman, Eduard, 530
- Linear expectations, 775–76
- Linear process, 596–97
- Linguistics: competencies in, 526; language analysis in, 499
- Li Po, 315
- Lippmann, Walter, 223
- Listening, 753; attention exhibited for, 723; gaze acknowledging, 722
- Literacies of Power: What Americans Are Not Allowed to Know* (Macedo), 216
- Literacy, 812; expanded meaning of, 809; objectives, 350–51; scientific testing of, 812; for wellness/liberation, 347
- Literacy of power: marginalized positions influenced by, 937; in postformalism, 936
- Little Albert Experiment, 255
- Lived realities, 661
- Living My Life* (Goldman), 95
- Living systems, 474–75, 896
- LMA. *See* Laban Movement Analysis
- Local administrators, 494–95
- Locke, John, 440, 607, 620, 806, 807
- Loewen, James, 841
- Logistical challenges, 749
- Longitudinal study, 222
- Long-term memory, 594
- Lorenz, Konrad, 44
- Lovell, Whitefield, 843
- Lowenthal, Leo, 878
- Lower-level thinking skills, 826
- Lucey, Helen, 248
- Ludwig, Carl, 109
- The Lure of the Transcendent* (Huebner), 622
- Luria, Alexander, 241, 782; historical materialism from, 154; postformal thinking of, 158
- Lyotard, Jean-Francois, 455, 458, 908
- Macedo, Donaldo, 216
- Mace, William, 926
- Machines, 593
- MACOS. *See* Man: A Course of Study
- Macro-perspective, 561–64
- Madison, G. B., 128, 849
- Magnetic Resonance Imaging (MRI), 614
- Mainstream educational developmental psychology, 769
- “Major cultural shift,” 135
- Maladaptive behaviors, 54–55
- Malcom X, 155–56
- Malherbe, E.G., 558
- Malott, Richard W., 45
- Man: A Course of Study (MACOS), 58, 60–61
- Manhattan Project, 316
- Mann, Horace, 64, 811
- Man’s Search for Meaning (Frankl), 629
- Marcuse, Carl, 159
- Marcuse, Herbert, 32, 327, 334, 336, 443, 878, 881; in postformal movement, 166; radical social/political movements and, 159; SDP joined by, 159–60
- Marginalization: literacy of power influencing, 937; opportunities shut out from, 113; by psychologization, 937–38
- Marples, Roger, 45
- Marx, Karl, 160
- Marx social revolution, 160
- Masculine nature, 116, 680
- Maslow, Abraham, 43, 44, 167–71
- Mass Hysteria* (Walkerdine), 248
- Master signifiers, 140
- “Masters of change,” 86
- Material, 719
- Maternal model, 180
- Mathiessen, F.O., 124
- Maturana, Humberto, 24–25, 474, 894, 895, 952
- Maximum learning, 557
- MBTI. *See* Myers Briggs Type Indicator
- McClure, Michael, 315
- McKerrow, Raymie, 755
- McLaren, Peter, 863, 951
- McLellan, Wendy, 401
- Mead, George H., 523
- Mead, Herbert, 602
- Mead, Margaret, 684

- Meaning: interpretation of, 714–15; perspective, 355–56; social dimensions of, 526–27
- Meaningful relationships, 343
- The Meaning of Truth* (James), 128
- Meaning schemes, 355
- Measurement: assessment v., 819; of human intelligence, 226; knowledge, 818; movement, 228; nature of, 816–17; standards foundation for, 819–20
- Mechanical system, 514
- Mechanism, 12–13
- Mechanistic educational psychology, 882–83; CPM of, 17–18; educational approach of, 511; education undermined by, 515–16; naïve realism accepted by, 15; positivistic methodology used by, 933; reductionistic framework of, 943–44; social regulation from, 7–9; sociopolitical issues ignored by, 941
- Mechanistic metaphor, 9
- Mechanistic paradigm, 7–9
- Mechanistic psychology: consciousness irrelevant dismissed by, 36; critical ontology freeing ourselves from, 859–60; deficit model and, 18–19; human meaning lacking in, 13; naïve realism and, 10–11; recovery role of, 19–20; as regressive ideology, 35
- Mechanistic reductionism, 5
- Mechanistic tradition, 3–4, 6, 9–10
- Media: coverage, 403; current event interpretations of, 335; fragments of, 762–63; poverty-negative representations through, 248; withholding information, 407
- Media Culture* (Kellner), 954
- Mediated agency: activity settings in, 382–83; in communities of difference, 381–82; consciousness social dimensions in, 377–78
- Mediated human development, 383
- Mediated images, 765–66
- Mediated representations, 765
- Mediating artifacts, 784
- Medical model, 408
- Medications, 98–99
- Meditation, 319
- Meehl, Paul E., 43
- Melody, June, 248
- Memmi, Albert, 657
- Memory: as archeological genealogy, 588; blood, 659; body/spirit separate from, 585; computer compared to, 588, 593, 596–97; counter, 589–90; educational psychology studying, 586–89; history recorded by, 592; impaired, 598; in information processing, 594–95; in learning, 584–86, 593–94; in postmodernism, 589–90; psychological phenomenon of, 597–98; public, 599–600; teaching/learning and, 584–86; traditional theory of, 589; visual, 60
- Men, 91
- Men Are from Mars, Women Are from Venus* (Gray), 92
- Mental development, 386
- Mental functions, 932
- Mental health, 296
- Mental illness, 602
- Mentalist reflection, 532–33
- Mental mechanism model, 807–8
- Mental models, 268
- Mental process, 386
- Mental testing, 223
- Merleau-Ponty, Maurice, 719
- Merrill, David, 44
- Merrill, James, 318
- Merwin, W. S., 319
- Metacognition, 545, 546, 829
- Metacognitive awareness, 740
- Metacomponents, 207
- Meta-narratives, 455, 462, 911–12
- Metaphorical cognition, 929
- Metaphors: beliefs/practices examined through, 275; creative perception facilitated by, 610; languages nonliteral use as, 501; study group, 278
- Metatheories, 263
- Method in History* (Mace), 926
- Methodological strategies, 945
- Methodologies: action research, 489–90; in educational research, 500; qualitative/quantitative research, 489
- Mezirow, J., 355, 358, 362
- MI. See Multiple intelligence
- Micro-perspective, 559–61, 563–64
- Middle ages, 605
- Mill, James, 806, 807
- Mill, John Stuart, 187, 807
- Mind, 626–27; biological/cultural environments and, 386; as computer, 917–18; cultures interrelationship with, 933; Descartes and, 806–7; dualism, 532–33, 585; educational psychology's potential of, 619–20; enactive framework and, 479; interacting parts in, 866; location of, 601–2; nominalism walling-off, 604–5; unconscious, 623
- Mind–body dualism, 532–33, 585
- Mindfulness, 413–14, 416
- Mindfunk, 705, 707
- Mind in Society* (Vygotsky), 150, 542
- Mind-in-the-world theorists, 602
- Minorities: communications of, severely regulated, 653–54; psychometric testing and, 902; in school system, 651–52
- Miró, Juan, 315
- Mirror concept, 137
- Mission statements, schools, 291
- Model of intelligence, 208
- Modernism: in education, 432–33, 774; human development inherent of, 432
- Modernist education, 779
- Modernistic thinking, 441

- Modernity: dialogic experience
in, 528; educational profession
and, 810
- Modern life, 334
- Modern School movement,
95–96; formal setting and,
100–101; Goldman
developing/promoting, 94;
libratory education of, 100
- Modern school movement,
postformal thinking mirrored
by, 97–98
- Monologic, 914
- Monological reductionism, 951
- Monologic teaching, 755–56
- Monologic universal principles,
888
- Montclair Fund for Educational
Excellence, 839
- Montessori, Maria, 42; children
treated by, 173; educational
psychology influenced by,
178; learning process
fascination of, 175
- Montessori Method, 174–75,
177
- Montreaux's treatment:
controversy of, 405; magic of,
405–7; media coverage of,
403; miracle spreading of,
401–3; outcome study not
done of, 407–8; as residential
treatment facility, 400; success
rate of, 404
- Monuments, 841–42
- Moore, Gordon, 253
- Moral development: in
childhood/adolescence, 655;
cognitive side of, 656;
feminine ethics and, 90;
gender differences not found
in, 135; six stages of, 130–
32
- Morality: choices for, 131–32;
education in, 179–80; as
education's aim, 179–80;
illiteracy in, 341; reasoning in,
615; significance of, 88;
stages, 132–33; superego as,
633
- Moran, Daniel J., 45
- "Moratorium," 77
- Morris, Maria, 85
- Morss, John, 432
- Mosha, Sambuli, 889
- Motivation: in cognition,
726–27; teachers lacking,
370–71; universal theory of,
85–86; value of, 830–31
- Movements: anticolonial, 877;
child study, 110–12; civil
rights, 144–45, 525, 844, 956;
ecospiritual, 466, 467;
educational, 769–70;
liberation, 20, 525;
measurement, 228; Modern
School, 94–98, 100–101; New
Curriculum, 58; political, 159;
postformal, 166, 866–67;
social, 159, 351–52, 524–25;
student, 369; teachers
empowerment, 486; theories
of, 233; vital logical, 34
- MRI. *See* Magnetic Resonance
Imaging
- Mullis, Kary, 318
- Multicultural dialogue, 881
- Multiculturalism, 486–87, 614;
Act, 667; curriculums with,
750–51; in educational spaces,
120–21
- Multiculturalist approach, 877
- Multidimensional approach,
critical consciousness
improved by, 843
- Multidimensional backgrounds,
686–87
- Multilogical interdisciplinary
research, 951
- Multilogicality, 29, 867, 870,
914; of critical
multiculturalism, 879–83;
critical ontology and, 887; of
educators, 848; idea histories
traced in, 31
- Multilogical research, 954–55
- Multiperspectival cultural
studies, 954
- Multiple data collection
methods, 389
- Multiple forces, 516–17
- Multiple identities, 425
- Multiple intelligence (MI), 81,
83, 206, 210, 312, 803; from
Cartesian psychology, 87;
postformalism and, 84–85
- Multiple Intelligences
Reconsidered* (Kincheloe), 84,
85
- Multiple interactions, 538
- Multiple perspectives, 732–33,
944
- Multiplicity, 682
- Multivoicedness, 383
- Munby, Hugh, 24
- Murray, Charles, 11, 20, 45, 893,
910, 956
- Music, 315
- Muslim community, 424
- Mussolini, Benito, 136
- Mutua, Kagendo, 19
- Mutual specifications, 535
- Myers Briggs Type Indicator
(MBTI), 317
- Myers, Gerald, 125
- My Pedagogic Creed* (Dewey),
70, 71
- Naïve realism: deficiencies of,
10; mechanistic educational
psychology accepting, 15;
mechanistic psychology and,
10–11; things-in-themselves
in, 23
- Naiveté (openness), 313
- Namagiri (goddess), 315
- Narrative: emplotment, 265;
psychology, 264–65
- Narrative therapy, 349
- National Defense Education Act,
117
- Nationalism, 807
- Nationalist government, 367
- Nationalistic consciousness, 860
- A Nation at Risk* (National
Commission on Excellence in
Education), 960, 962
- Nations, Cynthia Chew, 15
- Naturalization, 933
- Natural law, 807
- Natural phenomenon, 507
- Natural teachers, 470
- Nature, 315
- NCLB. *See* No Child Left
Behind
- Negative socialization, 772–73
- Negativism, 327–28
- Neo-positivists, 893
- Neo-Vygotskian research, 779

- Nervous system: environmental interactions interpreted by, 479–80; gastric juices secretion determined by, 184–85
- Neshat, Shirin, 843
- Nesting cups, 146
- Network components, 476, 477
- Neural pathways: of criminals, 616; diversity and, 614–15
- Neurodevelopmental profiles, 487
- Neurons: connections of, 595; predisposed functions of, 614; synaptic connections in, 612
- Neuropolitics, 22, 616
- Neuroscience: brain map understood in, 612; psychological debates rethought in, 614; public policy assisted by, 617
- Neville, Bernie, 623, 627
- New Curriculum movement, 58
- Newell, Allen, 43
- News program, 402–3
- Newton, Isaac, 9, 116, 440, 806, 807, 884, 917
- New York City educators, 516
- Nietzsche, Frederick, 954
- Nkrumah, Kwame, 657
- Nobel Peace Prize, 177, 184
- No Child Left Behind (NCLB), 9, 64, 65, 66, 171, 181, 228, 439, 449, 504, 519, 688, 810, 811, 812, 814; accountability environment fostered by, 824–25; as educational policy, 900; quantitative research-based strategies in, 826–27
- Noddings, Nel, 179
- Nominalism, 61; content/process distinction from, 606; mind walled-off in, 604–5; Western thought basis in, 604
- Normal accidents: Living with high-risk technologies* (Perrow), 868
- Normalcy, 249
- Normalization, 765, 966
- Norman, Donald, 44
- Normative regulation, 430
- North America, 652
- Notes on Child Study* (Thorndike), 226
- November Revolution cultural revolution, 160
- Nuclear power plants, 868–69
- OBE. *See* Outcomes-based education
- Object: permanence, 429; relations theory, 634–35
- Objectified cognition, 585
- Objective: conception, 549–50; knowledge, 4–5, 541
- Objectivity, 118
- Observational approach, 392–93
- Observational learning, 49
- Occasioning, 471
- OED. *See* Oxford English Dictionary
- Oedipal complex: as children's struggles, 633–34; sexual desire satisfaction in, 138–39
- O'Keeffe, Georgia, 880
- One-Dimensional Man* (Marcuse), 160, 164, 336
- One-dimensional thought, 336–37
- One Mike group, 899–906
- Ontogeny, 109–10
- Ontological domain, 948
- Ontology, 5, 863. *See also* Critical ontology
- An Open Heart* (Dalai Lama), 411
- Operant behavior, 873
- Operant conditioning: educational psychology with, 203–5; from Skinner, 201, 653; stimulus reinforcement in, 202–3; theory created of, 872; variable reinforcement in, 873
- Operative (logical) knowledge, 603
- Oppenheimer, Robert, 316
- Opportunities, 113
- Oppositional practice, 337–39
- Oppression, 8–9, 99, 101, 352; asymmetric power relations in, 344–45; of black women, 641; critical consciousness awareness of, 757–58; cultural identity and, 425; cycles perpetuated of, 345; dominant culture superiority causing, 420; education without, 802; of indigenous cultures, 518–19; interpersonal/personal, 344; liberation resisting, 345–47; reproductive cycles resisted of, 583; sex, 637; social, 345; spirituality and, 422–23; taking action against, 357–58
- The Order of Things* (Foucault), 315
- Organization(s): learning opportunities from, 351; structure/relationships in, 475
- Organizational closure, 475–77
- Organizational frame, 70
- Organizational liberation, 346
- Organizational oppression, 344
- Organizational wellness, 343, 348
- Orienstein, Peggy, 680
- O'Sullivan, E., 359–61
- Otis, Authur S., 808
- Outcomes-based education (OBE), 364–65, 372–73, 962
- Outcome study, 407–8
- Outer environment, 154
- Oxford English Dictionary* (OED), 815–16
- Paid-labor market, 649–50
- Paradigm shift: in educational research, 488–90; teacher cognition research and, 486–87
- Parallel distributed processing model, 595
- Parallel distribution process, 613
- Paralogy, 458, 461, 462
- Parent counselor, 690
- Parents: aboriginal, 394; as agents of change, 349–50; child's image explored by, 776; dominant culture and, 687; educational involvement desired by, 778; high school involvement lacking by, 688; leadership skills of, 693; multidimensional backgrounds of, 686–87;

- school communities involving, 690; school relationships with, 693–94; schools connecting with, 686; underachieving students, 689–90
- Parks, Rosa, 965
- Participant-observer research, 498–99
- Participation assignments, 765, 766–67
- Participatory epistemology, 467
- Partnerships, 689
- Patriarchal society, 681
- Patriarchal roots, 410
- Patriarchy, 91
- Pattern, 961
- Patterned relevant activities, 718
- Pavlov, Ivan, 42, 806, 872; dogs used by, 185–87, 652–53; Nobel prize for, 184
- PCP. *See* Personal construct psychology
- PCR (Polymerase Chain Reaction), 318
- PDA. *See* Preventative dental assistant
- Pedagogue, 779
- Pedagogy, 294; culturally relevant, 143–45, 144; of history, 928–30; of homeschooling, 774; instructional, 826; technology uses in, 599–600
- Pedagogy and the Politics of Hope* (Giroux), 519
- The Pedagogy of the Heart* (Freire), 521
- Pedagogy of the Oppressed (Freire), 347
- Peirce, Charles, 124, 127, 605
- Perceptions, 16
- Perceptual filters, 356
- Perform femininity, 684
- Perry, Ralph Barton, 128
- Perry, William, 682, 938
- Persephone, 628
- Personal construction, 550
- Personal construct psychology (PCP), 265–66
- Personal experiences, 764
- Personal growth, 833
- Personal identity, 468
- Personal Knowledge: Towards a Post-Critical Philosophy* (Polanyi), 540
- Personal liberation, 345
- Personal narratives, 764
- Personal oppression, 344
- Personal warmth, 397
- Personal wellness, 342
- Personhood, 434
- Perspective, 753
- Perspective consciousness, 791
- Perspective transformation, 355–56
- PET. *See* Positron Emission Tomography
- Peterson, Roger Tory, 315
- Phantasy, 634
- Phenomenal domains, 478
- Phenomenological approach: consciousness constructing, 517; student neurodevelopmental profiles from, 487
- Phenomenology, 40, 853, 910
- Philosophy: constructivist, 149; counseling in, 627; in education, 451; educational, 367–68; postmodern, 249–50; practices in, 560; radical constructivism in, 602–3; research in, 5–6; revolution of, 585; science v., 617
- Phonemics, 499
- Phonetics, 499
- Phonics, 810
- Phylogeny, 109–10
- Physical aggression, 577
- Physical environment: purposive behavior associated with, 713–174; social environment and, 562–63
- Physical movement, 561
- Physiological needs, 168–69
- Piagetian formalism, 755–56
- Piaget, Jean, 10, 25, 27, 58–59, 98, 130, 149, 242, 265, 362, 429; background of, 191–92; children's trial-error learning from, 190–91; cognitive development theory of, 192–93; cognitive learning theory of, 655
- Piirto, Jane, 18
- Pinar, William, 951
- Pipher, Mary, 92
- Planetary consciousness, 359–60
- Planetary transformation, 359–61
- Plato, 630, 806, 866
- Plotnitsky, Arkady, 616
- Pluralistic societies, 656–57
- Poe, Edgar Allen, 315
- POET. *See* Point of Entry Text
- Point of Entry Text (POET), 955–59
- Poitier, Elise, 422
- Polanyi, Michael, 540
- Policy Futures in Education* (Smith), 877
- Political activity, 941–42
- Political assumptions, 250
- Political decision making, 106–7
- Political dimensions, 32–34, 940–42
- Political educational psychology, 32–34
- Political literacy, 346–47
- Political projects, 645
- Political psychology, 941
- Politics: action research and, 494–95; cultural, 87; in education, 451–52; educational psychology and, 32–34, 940–42; of history, 638; knowledge and, 508–9; in language, 799; movements in, 159; of power, 797; in psychology, 941; of representation, 638; in schools, 900
- Popkewitz, Thomas S., 227
- Popular culture, 639
- Positionalities, 40
- Positivism, 10, 491–92, 514; cognitive psychology grounded in, 418; education and, 929–30; epistemology and, 103–4, 504–5, 514, 946; foundations of, 439–42, 620; history of, 925; knowledge approach of, 848; knowledge objectively observed/measured in, 490; pedagogy of, 928–29; scientific knowledge valid in, 441

- Positivistic methods, 414;
 intelligence defined by, 515;
 mechanistic educational
 psychology using, 933
 Positron Emission Tomography
 (PET), 614
 Post-Cartesian–Newtonian–
 Baconian epistemology, 920,
 921
 Postcolonial discursive
 framework, 657
 Postcolonial feminism, 115–16
 Postcolonialism, 40
 Postcolonial theory, 114
 Post-discourses, 40
 Postfeminist era, 647
 Postformal educational
 psychology: criticality
 dimensions in, 909; critical
 multiculturalism in, 878–79;
 meta-narratives in, 911–12
 Postformalism, 21, 27–28,
 859–63, 870–71, 914;
 bricoleurs of, 954;
 characterizing, 912–14;
 cognition quest of, 34–36;
 cognitive development viewed
 by, 938–39; complex cognition
 and, 28–30; concepts of, 694;
 consciousness/culture
 interrelationships in, 30–32;
 critical ontology and, 36–38,
 894–95; defining, 62;
 democratic post-Cartesian
 roots of, 837–38; discourse in,
 790–91; education of, 96–97,
 101–2; education
 reconceptualized in, 913–14;
 educators texts in, 927–28;
 enactivism and, 895–98;
 etymological insight in, 944;
 features of, 867–70;
 formalism and, 913; history
 lessons from, 926; human
 being ingenuity of, 35;
 intelligence/IQ test and, 910;
 interconnections in, 889–91;
 James and, 124; knowledge of,
 888–89; language theory in,
 141; literacy of power in, 936;
 meaning in, 864–65;
 metaphorical cognition of,
 929; MI articulation in, 84–85;
 political/cultural assumptions
 exposed by, 250; political
 educational psychology based
 on, 32–34; power of difference
 in, 886–88; problem detection
 and, 911; research approaches
 in, 951; sociohistorical context
 of, 862–63; sociopolitical
 construction of self in, 123;
 spirituality of, 966;
 teaching/learning
 reconceptualized in, 445–
 48
 Postformal movement: in
 educational psychology,
 866–67; Marcuse important
 figure in, 166
The Post-Formal Reader: Cognition and Education
 (Kincheloe/Steinberg/
 Hinchey), 849, 866, 874
 Postformal theories: feminist
 theories used in, 92;
 intellectual functions in, 908
 Postformal thinking: behavioral
 psychology and, 96–97;
 childhood textbooks read in,
 965–66; contextualization
 understood in, 446–48;
 Gilligan embodying, 92;
 holistic views in, 445–46;
 knowledge discovery in, 188;
 Luria's characteristics of, 158;
 modern school mirroring,
 97–98; power of difference in,
 884; reading as praxis,
 961–62, 965; social cognitive
 theory and, 53–54; spiritual
 nature of, 965; students
 enabled in, 840
 Postman, Leo, 43
The Postmodern Condition: A Report on Knowledge
 (Lyotard), 908
 Postmodernism, 611;
 conversations in, 457–58;
 eclectic, 455–56; in
 educational psychology, 454;
 foundations of, 442–43;
 fragmentation of, 436;
 memory in, 589–90; new ideas
 emerging in, 458; perspective
 of, 433–34; point of view, 135;
 skeptical, 454; skepticism of,
 455–57; teachers of, 455;
 visionary, 454
 Poststructural analysis, 909
 Poststructuralism, 853
 Poststructural psychoanalysis,
 949
Poststructural psychoanalysis,
 943
 Potentially-for-Being
 (*Seinkonnen*), 712
 Poverty, 248
 Powell, Scott, 590
 Power: blocs, 936; distribution,
 516–17; dynamics, 752;
 redistribution, 750; relations,
 746–47; relationships, 557;
 theory, 85–86, 956
 “Power literacy,” 85
 Power of difference, 897–98;
 epistemological foundation of,
 946; in indigenous knowledge,
 891; in postformalism,
 886–88; in postformal
 thinking, 884;
 self-consciousness and,
 888–89
 Practical intelligence, 527, 553
 Practical knowledge, 104
 Pragmatics, 499; applied, 502;
 subcategories of, 500
Pragmatism (James), 126, 127
 Prawat, Richard, 4
 Praxis, 869, 966
 Predictive capacity, 30–31
 Preston-Dunlop, Valerie, 234
 Presupposition, 501
 Preventative dental assistant
 (PDA), 545
 Prilleltensky, Isaac, 19, 21, 23,
 33
 Primitive language games,
 459–62
Principles of Psychology
 (James), 125, 126
The Principles of Scientific Management (Taylor), 873
 Problem-based learning, 284,
 294
 Problem detection, 868;
 postformal notions, 911;
 problem solving counterpart
 to, 930

- Problems in the Poetry of Dostoevsky (Bakhtin), 528
- Problem solving, 572; in classrooms, 307–9; through intelligence, 868; positivist education emphasizing, 929–30; problem detection counterpart to, 930
- Procedural knowledge, 683
- Process, 606, 609, 644–45, 961
- The Process of Education* (Bruner), 58, 59
- Professional development: action research in, 494; community of practice for, 278–79; sustained engagement of community for, 280; teachers as learners for, 281–82
- Professionals, 964; career, 68–69; knowledge base, 495–96
- Programmed instruction, 204
- Progressive education, 803
- Progressive influence, 441–42
- Progressive principles, 70–73
- Project-based learning, 151–52, 285, 294
- Project Zero, 81
- Proscription: as humanistic, 483; what not to do from, 731
- Proudhon, Pierre-Joseph, 99
- Psyche, 624; from ancient Greek legend, 627–28; in education, 630–31; educational psychology and, 626; educational psychology's discomfort with, 630; language understanding, 622–23; overlapping parts of, 633; psychoanalysis study of, 632; psychology studying, 626; re-minding itself, 626–27; science of, 621–22; transformation of, 629
- The Psychic Life of Power* (Butler), 63
- Psychic relations, 634–35
- Psychoanalysis: education assisted by, 632–33, 635; Erikson influencing, 75–78; psyche's social relationships studied in, 632
- Psychoanalytical learning theory, 536, 537
- Psychoanalytical process, 140
- Psychoanalytical work, 136–37
- Psychogenesis, 399
- Psychohistory, 77
- Psychological context, 741
- Psychological debates, 614
- Psychological health, 466–67
- Psychological interventions, 371
- Psychological phenomenon, 597–98
- Psychological principles, 226
- Psychological process, 861
- Psychological science, 807–10
- Psychological Society of South Africa (PsySSA), 372
- Psychologist of America, 197
- Psychologization, 937–38
- Psychology: Age of Reason spawning, 4; behaviorism/cognitivism move in, 11; books on, 92; comparative psychology/behaviorism influential in, 257–58; creativity and, 310–11; in education, 451; education and, 627; elitist assumptions in, 932–33; founding constructs of, 620; group, 249; historical ideas/images of, 622; human beings studied by, 622; human nature truths studied through, 247; as human science, 806–7; individual/community and, 6–7; individuation caused by, 933; political, 941; psyche studied in, 626; rational unitary subject of, 645–46; reading studied in, 808–9; of school, 598; scientific development and, 414; student, 70; subversive view of, 367; visible/verifiable desired for, 258–59; Walkerdine's valuable research in, 250. *See also* Applied psychology; Behavioral psychology; Cognitive psychology; Cultural psychology; Developmental psychology; Educational psychology; Gestalt psychology; Group psychology; Humanistic psychology; Interpretivist psychology; Laboratory psychology; Mechanistic educational psychology; Mechanistic psychology; Personal construct psychology; Political educational psychology; Political psychology; Postformal educational psychology
- Psychometrically defined groups, 222, 902
- Psychometrics, 320, 817; approaches to, 311–13; OED meaning of, 815–16; testing, 18, 83
- Psychophysics, 807–8
- Psychosocial identity theory, 77–78
- Psychosocial stages, 77–78
- Psychotherapy, 198–99, 200
- PsySSA. *See* Psychological Society of South Africa
- Public: interest, 400–401; memory, 599–600; policy, 617
- Public education, 811; alternative possibilities for, 775–76, 777–78; devaluing, 823; general dissatisfaction of, 771–72; governmental intrusions in, 452; reconceptualization needed in, 778–79, 827–33; vocational education in, 543
- Purposive behavior, 713–174
- Qualitative research: methodologies in, 489; social sciences/humanities contributing to, 498
- Quantitative research: methodologies in, 489; statistical methods used in, 497–98
- Quantitative research-based strategies, 826–27
- Al Queda, 329

- Quinton, Anthony, 847
- Race: beliefs about, 667; black culture voided of, 215; in educational psychology, 666; grouping phenomenon of, 213–14; multidimensionality of, 212; relations, 214, 845; social concept of, 665–66; in textbooks, 925; understanding, 839
- Racial authenticity, 675
- Racial boundaries, 672–73
- Racial consciousness, 669
- Racial identity: of blacks, 673; in Canada, 667; stages of, 213, 419–20
- Racially neutral knowledge, 655
- Racial structuring, 674–75
- Racial superiority, 365
- Racionero, Sandra, 8, 17, 21
- Racism, 344; acts of, 214; black psyche and, 219; classrooms reproducing, 675; contemporary, 956–57, 958; cultural ideas of, 249; daily lives and, 665; denial of, 671–72; emic/etic perspective of, 215; everyday, 675; expressions of, 666; extremist groups of, 673–74; internalized, 216; not named as, 670–71; pervasiveness of, 212; power of, 903; sexist society with, 704–5; spiritual strength from, 707; Tatum studying, 211–12; war against, 637
- Radical constructivism, 264; information processing and, 603; internal coherence criterion from, 608–9; philosophy roots in, 602–3
- Radical educator, 119
- Radical transformation, 538
- Ramanujan (math genius), 315
- Rational discourse, 360–61
- Rationalism, 611, 860; James and, 127–28; “mind in the head” from, 608
- Rationally derived knowledge, 838
- Rational unitary subject, 645–46
- Ravitch, Diane, 68, 73, 111
- Rayner, Rosalie, 42, 653
- Reading, 808–9
- Reading as praxis, 961–62, 965
- Ready-at-hand, 715
- Realist constructivism, 609, 611
- Reality, 28–29; critical constructivism and, 860–61; as interpretation, 710; principle, 633; social interactions in, 480
- Real-world concepts, 830
- Reason, 621
- Reason and Revolution* (Marcuse), 161
- Reasoning power, 133, 191
- Recognition, 16, 587
- Reconceptual education, 507–8
- Reconceptualization, 236–39, 442–48, 452–53, 778–79, 827–33, 913–14
- Reductionism, 440; as analytical reasoning, 860; avoiding, 858; curriculum, 825; educational psychology and, 937; formalism in, 29; framework of, 943–44; mechanistic, 5; monological, 951; psychological process in, 861
- Reductionist animal psychology theories, 257
- Reed, Ronald F., 70
- Reference, 500
- Reflection, 531
- Reflection-on-action, 542
- The Reflective Practitioner: How Professionals* (Schon), 542
- Reflective practitioner perspective, 486
- Regressive ideology, 35
- Regulatory power, 8
- Reich, Wilhelm, 162
- Reigeluth, Charles M., 730
- Reinforcement schedules, 203
- Reinforcement stimulus, 204
- Rejection, 327
- Relational constructivism, 266
- Relational intimacy, 800–801
- Relationless world, 606
- Relationships: in complexity theory, 535–36; creative assignments igniting, 308–9; learning through, 736–37; power, 557; selfhood constructed in, 896–97; in structural coupling, 894; studies of, 465–67
- Relativism subordinate, 682
- Relaxation, 296–97
- Releasing the Imagination* (Greene), 218, 258, 867
- Religion, 605
- Religious identity, 424
- Remembrance, 598–99
- Re-minding self, 626–27
- Renzulli, Joseph, 312
- Repetition, 587
- Representational art, 843
- Representations, 710
- Repressed memories, 634
- Repressive tolerance, 163–64, 329
- Reproduction, 52
- Research conversations, 389–90
- Researcher, 415
- Researching Lived Experience* (Van Manen), 851, 853
- Research methods: action research as, 489–90; bricolage with, 950; bricoleur understanding, 950–51; instruments used in, 390
- Residential treatment facility, 400
- Resources, 567, 727
- Respect, 396
- Responsive design, 792
- Rethinking Intelligence* (Kincheloe), 69, 73, 654
- Retreats, 279
- Reviving Ophelia* (Pipher), 92
- Rice, Joseph Mayer, 42
- Rifkin, Jeremy, 592
- Rigor and Complexity in Educational Research* (Berry/Kincheloe), 219, 875, 877, 955
- Risk and Prevention Program, 133
- Risk-taking, 313–14
- Rituals, 318–19
- Roe v. Wade*, 89
- Rogers, Carl, 7, 43; client-centered therapy espoused by, 198; as Psychologist of America, 197;

- psychotherapy and, 198–99, 200
- Rogoff, Barbara, 522
- Role, 753
- Rope activity, 279
- Rorty, Richard, 602
- Rosch, Eleanor, 535
- Rube Goldberg machine, 719–22, 725–26
- Rucker, Naomi, 634
- Rugg, Harold, 925
- Rule-based social actions, 788
- Rules of engagement, 759
- Rumelhart, D. E., 44
- Russell, Joan, 234
- Russian psychologist, 3
- Russian Revolution, 101
- “Sacred face,” 425, 426
- Safety needs, 169
- Sage, Henry, 109
- Salih, Sara, 63
- Same-race grouping
phenomenon, 213–14
- Sanders, Chery, 45
- The Sane Society* (Fromm), 334, 335
- San Francisco State University (SFSU), 761–62
- Saranson, Seymour, 45
- Sarbin, Theodore R., 264
- Scaffolding, 157; learning
support through, 394; ZPD
using, 217, 242
- SCAMPER, 313
- Schema theory, 501, 727
- Schneider, Gary, 838
- Scholar-practitioner, 833
- Scholastic realism, 605
- Scholes, J., 782
- Schon, Donald, 486, 542
- School(s): accountability
systems for, 289–90; cafeteria
in, 214–15; citizenship
readiness by, 684;
communities, 690; curriculum
challenges in, 544; as
development spheres, 849;
diversity issues in, 143;
education v., 850; egalitarian
dialogue in, 552–53;
environment, 739; guidance
in, 368; human being lessons
in, 511–12; indigenous
cultures oppressed in, 518–19;
indigenous knowledge ignored
by, 686–87; issues mediating
participation in, 575–76, 578;
mission statements of, 291;
multiple functions of, 450–51;
parent connections in, 686;
parent relationships with,
693–94; political dimensions
in, 900; psychological
interventions in, 371;
psychology of, 598; social
culture changes in, 157; South
Africa’s special needs in, 369;
structures of, 580–81;
students’ perspectives on, 750;
student support in, 582–83;
team members’ connections
with, 691. *See also* Education;
Learning
- The School and Society* (Dewey),
73
- School system, 365–66;
aboriginal students in, 388;
children judged in, 771;
dominant/minoritized body
consequences in, 651–52;
student/teacher consensus
negotiated in, 523–24
- Schultz, Alfred, 866
- Schwab, Joseph, 44
- Science, 414; approaches in, 68;
authority in, 18; conceptual
perspective of, 566; cultural
resources transforming,
567–68; epistemologies in,
117; Harding redefining,
113–14; human beings and,
806–7; inquiry in, 440–41;
laboratories for, 188–89;
literacy testing in, 808;
methodologies in, 15, 104,
440–41, 514; multiple
explanations of, 118;
philosophy v., 617; of psyche,
621–22; research in, 619;
resource availability in, 567;
revolution in, 4, 5; testing in,
812
- Scientific knowledge: human
thought distortions absent in,
541; positivism and, 441
- Scott, William Dill, 221
- Scotus, John Duns, 604–6
- Scribner, Sylvia, 150, 522
- SDP. *See* Social Democratic
Party
- Searle, John, 501
- Secord, Paul, 44
- The Secret Language of Eating
Disorders* (Claude-Pierre),
400, 403, 404
- Sedgewick, Eve, 866
- Seguin, Edouard, 174
- Self: actualization, 170–71;
advocacy, 692; awareness,
888–89, 897; consciousness,
637, 888–89; construction,
896; contained system, 713;
critical reflection of, 104–5;
directed education, 331;
discipline, 313; disclosure,
734, 763–64, 766, 800–801;
efficacy, 53, 155; esteem, 168;
interrelationships making up,
527; reflection, 939; reflective
consciousness of, 730;
re-minding, 626–27;
sociopolitical construction of,
123; system, 52
- Self-directed learning, 331; as
automaton conformity,
334–36; in classrooms,
333–34; decision-making in,
339; hegemony and, 338;
ideology critique rejecting,
332–33; individual yearnings
in, 335; as one-dimensional
thought, 336–37; as
oppositional practice, 337–39;
self required for, 332
- Selfhood: critical theory
perspective and, 333;
monitoring, 26; relationships
constructing, 896–97
- Self-regulation: in children,
156–57; social norms
violation engaging, 52–53
- Self-study, teachers, 742–43
- Semali, Ladislaus, 850, 886
- Semantics, 499
- Semiotic mediation tools, 781;
conversation discourse and,
787–89; design conversations
as, 791; language as, 786–88

- Semiotics, 40, 787–88
 Senghor, Leopold, 657
 Sensation, 561
 Sensation collection, 607
 Sensitive periods, 176
 Sensory experience, 439
 Sensory input, 607
 Sensory stimulation, 173–74
 Setting, 726–27
 Setup stage, 695–97
 Sex, 677
 Sexism, 704–5
 Sex oppression, 637
 The Sex Pistols, 99
 Sexual desire, 138–39
 Sexual identity, 423
 Sexuality: from id, 633; language controlling perception of, 249; in social transformation, 165
 Sexual relationships, 138–39
 SFSU. *See* San Francisco State University
 Shapin, Steve, 616
 Sharp, Stella Emily, 808
 Shaull, Richard, 347
 Shavinina, Larisa V., 45
 Shaw, Marvin E., 43
 Shawver, Lois, 12
 Sherr, Lynn, 402
 Shotter, John, 15
 Shulman, Lee, 487
 Sibelius, Jean, 315
 Simon, Herbert A., 43
 Simon, Theodore, 42, 220, 654
 Simpson, Douglas, 12
Since Socrates (Perkinson), 73
 Singer, Harry, 809
 Situated action, 725–26
 Situated cognition, 12, 546, 735; acting/inquiry process and, 714; agency/structure in, 718–19; in communication, 724–25; complex relationships in, 542–43; context/cognition inseparable in, 709; context/practice in, 375–76; fundamental epistemologies of, 713; interpretivism drawing on, 23–24; learning contextualized in, 715; object/peoples interactions in, 718; problem posed by, 76; representation creation in, 710; situatedness aspects in, 709–10; social system design intersected by, 732; thrown-into-the-world in, 712
 Situated learning: knowledge acquisition in, 148; real-world concepts in, 830; from sociocultural theory, 149; sociocultural theory and, 150–51; teaching and, 151–52; theory of, 150
Situated Learning: Legitimate Peripheral Participation (Lave), 148, 152
 Situatedness, 709–10
 Situation, 725
 “Skeptical postmodernism,” 454
 Skepticism, 455–57
 Skinner, B. F., 42, 43, 44, 58, 808, 872; historical context of, 873; operant conditioning theory from, 201, 653; theory adaptation of, 874–75
 Skinner box, 202, 873
 Skinner, Fred, 149
 Slaven, Kerry, 401
 Slovic, P., 44
 Smith, Adam, 877
 Smith, David G., 877
 SMPY. *See* Study for Mathematically Precocious Youth
 Snedden, David, 67
 Snyder, Gary, 319
 Social activist, 89–90
 Social boundaries, 672–73
 Social changes, 521–22
 Social cognition theory, 49, 52; direct/indirect learning and, 51; postformal thought and, 53–54
 Social collaborations, 566–67
 Social concept, 665–66
 Social construction: educators and, 684–85; of gender, 677–78
 Social constructivism, 264, 609, 830; cognitivism superseded by, 491; epistemic bodies concern of, 469; interactions in, 831; language/knowledge acquiring mechanism in, 602–3
 Social context, 741
 Social contextualization, 938
 Social control, 126–27, 367
 Social convention, 817
 Social-cultural melding, 155
 Social culture, 157
 Social debates, 33
 Social Democratic Party (SDP), 159–60
 Social dimensions, 377–78, 521; cognition and, 714; of meaning, 526–27
 Social environment: physical environment and, 562–63; purposive behavior associated with, 713–174
 Social equity, 250
 Social event, 562
 Social evolution, 730
Social Foundations of Thought and Action (Bandura), 55
 Social inheritance, 378
 Social interactions, 831; children’s thoughts/behavior changed by, 241; conflict in, 799–800; identity shaping, 381–82; language holding together, 478; language politics in, 799; power of, 796–97; in reality, 480
 Socialization, 398–99
 Social language, 786
 Social liberation, 346
 Socially constructed processes, 788
 Socially constructivist process, 507
 Socially situated actions, 725–26
 Social mobility barriers, 740
 Social modeling process, 51, 52, 55
 Social movements: dialogue increasing in, 524–25; young people driving, 351–52
 Social networks, 219; boundary crossings for, 583; proactive intervention of, 576–77
 Social norms, 52–53, 622
 Social oppression, 345
 Social policy: education/development in, 648–49; racial structuring in, 674–75

- Social political movements, 159
- Social practices, 732
- Social reality, 550
- Social regulation, 7–9
- Social relations: in discourse structure, 501; psyche and, 632; in standpoint theory, 114–15
- Social reproduction, 580–82
- Social sciences: complexity science research and, 464–65; qualitative research of, 498
- Social standards, 680
- Social structures: academic setting and, 682; bricoleurs aware of, 951–52; critical rhetoric transforming, 763–64
- Social studies class, 391
- Social Studies for the Twenty-First Century* (Zevin), 927
- Social system: educational system interconnected with, 730; objective knowledge and, 541
- Social system design: enaction and, 731–32; in instructional design, 729–30; situated cognition intersecting with, 732; in stakeholder communities, 734
- Social theory: complexity and, 948–49; dialogue in, 525–26; ethnographic researcher and, 943; Lave interested in, 148
- Social transformation, 165
- Social value: ability/capacity in, 821; assessing, 820–22; standardized testing marking, 818–20, 822
- Social wellness, 343
- Society: centralized power enslaving, 99; cultural exchanges in, 523–24; education lifeblood of, 72–73; education transforming, 527–28; femininity constructed in, 678–79; individuals relationship with, 8, 157; power redistribution in, 750; racially diverse people in, 665–66; racist/sexist, 704–5; sciences transforming, 414; social standards in, 680; stratified assessment of, 820; technology/consumerism dominating, 336–37; women's appearance/behavior in, 679
- Sociocultural theory: activities in, 374; approach of, 609; conditions of, 757–58; context of, 740; core principles of, 242; critique of, 762–63; curriculum developed with, 244; human cognition approached by, 149–50; learning contribution of, 527; practices of, 788; rules of, 378–79; situated learning and, 150–51; of Vygotsky, 241
- Sociogenesis, 399
- Sociohistorical context, 862–63
- Sociological theory, 522
- Sociopolitical construction of self, 123
- Sociopolitical issues, 941
- Sociopsychological ideas, 85
- Sociopsychological inquiry modes, 938
- Sociopsychological researchers, 953
- Socratic wisdom, 628
- Solidarity, 555, 583
- Solitude, 318
- Soul, 629–30, 847–48, 852; creativity adding to, 849–50; enactivist approach searching for, 853; searching for, 850; spiritual life expressed through, 849
- South Africa: apartheid emerging in, 365; educational psychology and, 371; education system in, 364–65, 370; FP education philosophy in, 367–68; schools special needs in, 369
- South America, 890
- Soweto riots, 369
- Speaker, 721, 723
- Spearman, Charles Edward, 808
- Special Theory of Relativity, 884
- Species evolution, 109–10
- Speech act theory, 501, 526
- Sperry, Roger, 44
- “Spiral of effects,” 268
- Spirituality: awareness opened up through, 965–66; classrooms occluding, 661; cultural aspects of, 418, 424; cultural identity as, 419–21; in education, 961; educators influenced by, 421; indigenous knowledge in, 659–60; intelligence and, 82, 803; internalized oppression unlearned through, 422–23; learning enhanced through, 660–61; multiple identities mediating with, 425; positive cultural identity and, 419–20; of postformalism, 966; of postformal thinking, 965; psychological health improved by, 466–67; as reaching beyond present state, 960; resistance to, 660; strength from, 707; summarizing, 420; teaching needing, 905
- Spiritual life, 849
- Spring, Joe, 127
- Sputnik launch, 58, 811–12
- SQ3R. *See* Survey, Question, Read, Recite and Review
- Stack, Michelle, 33
- Stage theory, 194
- Stakeholder: based changes, 733; communities, 734; design, 730–31
- Standardized testing, 515, 962; diverse student characteristics not measured by, 770; elitist knowledge and, 64; Eurocentric values tested with, 65; measuring something with, 814; poor students inferior from, 901; postmodern teachers questioning, 455; predictive capacity of, 30–31; racist cultural ideas basis of, 249; rise of, 805; score interpretations of, 815; social value marked by, 818–20, 822; student achievement measured by, 824–25; student success and, 228–29; teach-and-test models using, 290; Thorndike creating, 68; vertical

- Standardized testing (*cont.*)
 classifications from, 820; in
 western schools, 654
- Standards, 819–20
- Standpoint theory, 114–15
- Stanford-Binet testing, 654
- State mandated curriculum,
 825–26
- Statistical methods, 497–98
- Steele, Claude, 901
- Steinberg, Shirley, 27, 44, 45, 92,
 250, 866, 869, 876, 941
- Stereotypes, 639, 674
- Stereotypical thinking, 843–44
- Sternberg, Robert, 45, 206
- Sternberg Test of Mental
 Abilities (STOMA), 206
- Stern, William, 808
- The Stigma of Genius*
 (Kincheloe, Steinberg,
 Tippin), 217, 895
- Stimulus/reflexive response
 theory, 652
- Stimulus-response ideology,
 257
- Stimulus-response model,
 202–3, 254, 561
- Stimulus-response pairings, 149
- STOMA. *See* Sternberg Test of
 Mental Abilities
- Stop Reading Straight
 (Britzman), 679
- Storytelling method, 392
- The Straight Mind and Other
 Essays* (Wittig), 63
- Stratification, 820
- Strictness, 396–97
- Strober, Michael, 403
- Structural coupling, 473,
 477–78; attentions/activities
 entangled in, 469–70;
 educators/learners relationship
 in, 482; relationships in, 894
- “Structural coupling,” 22
- Structural determination, 476–77
- Structure, 473, 719, 727; agency
 relationship with, 743;
 biological definition of, 464;
 determinism, 463, 473; of
 Intellect, 311; in situated
 cognition, 718–19
- “Structures of thought,” 609
- Stryk, Lucien, 319
- Student(s): academic
 achievement, 398;
 achievement testing of,
 824–25; adults listening to,
 745; arbitrarily imposed
 constraints of, 303; in banking
 method, 97–98; capabilities
 reduced of, 771; centered
 instruction, 826; citizenship
 preparation of, 684; constant
 probing of, 765; cooperative
 learning model perceptions by,
 487–88; critical pedagogy
 empowering, 746; critical
 rhetoric engaging, 760–61;
 culturally relevant pedagogy
 empowering, 145; directed
 learning, 200; as
 disempowered participants,
 744; dominant culture
 relationship with, 30, 687;
 educational forums for,
 752–53; educational
 psychology and, 182, 744,
 851; educational system
 empowering, 66; education
 unsatisfactory to, 796; as
 educators, 97; exclusionary
 disciplinary practices against,
 83; faculty meetings assisting,
 579–80; history study
 experienced by, 929; insights
 offered by, 749–50; instruction
 centered on, 284; journals,
 390; knowledge used by,
 736–37; leadership skills of,
 693; learning by, 49–50;
 learning improving for, 742;
 learning participation by, 802;
 learning readiness of, 433;
 learning strategies for, 243;
 learning styles of, 677–78;
 lowest cognitive levels for,
 926; movements, 369;
 neurodevelopmental profiles
 of, 487; parents
 underachieving, 689–90;
 participatory democracy
 enriching, 845–46; perspective
 of, on schools, 750;
 population, 766; postformal
 thinking enabling, 840;
 postmodern fragmentation
 with, 436; psychology, 70;
 schools supporting, 582–83;
 single developmental ladder
 of, 434; standardized testing
 and, 228–29, 770, 901;
 subjective experience of, 904;
 teacher consensus with,
 523–24; teachers’ relationship
 with, 348; understanding, 746;
 viewed as human beings,
 199. *See also* Teacher/
 student
- Student-centered dialogue, 755;
 as communicative modality,
 758; critical consciousness
 developed through, 757;
 critical rhetor alternative to,
 760–61; limitations of, 758–60
- Student learning: authentic
 assessment evaluating, 832;
 educational psychology and,
 677–78; interconnectedness
 of, 839; ZPD and, 35, 244–45
- Student perspectives, 745; case
 study of, 748–49; educational
 policy changing to, 752–53
- Student/teacher partnerships,
 122, 291
- Study for Mathematically
 Precocious Youth (SMPY),
 312
- Study group, 278
- Study of History in Secondary
 Schools* (American Historical
 Associations Committee of
 Five), 928
- Styles of attachment, 803
- Subjective experience, 904
- Subjugated knowledge, 40
- Substances, 315
- Subversive view, 367
- Suffering, 415–16
- Sully, James, 4
- Summative assessment, 294
- Sumner, Graham, 167
- Superego, 162, 633
- Supreme Court, 221
- Surveillance, 966
- Survey, Question, Read, Recite
 and Review (SQ3R), 809
- Survival of the fittest, 808
- Sustained engagement of
 community, 280

- Swadener, Beth Blue, 19
- Symbolic interactionism, 602
- Symbolic representations, 764
- Symbols, 426
- Symbol systems, 786
- The Symposium* (Plato), 866
- Synaptic connections, 612
- Synaptic connection weights, 614
- Syntax, 499
- System components, 120
- Systems design, 735; CHAT framework for, 781; dialogue critical to, 789; social language/symbol systems basis of, 786
- Tae Kwon Do, 768
- Talking, 721
- Talks to Teachers on Psychology* (James), 41, 126
- Tallchief, Maria, 314
- Tatum, Beverly Daniel, 211–12
- Taylor, Frederick Winslow, 227, 811, 873
- Teach-and-test models, 290
- Teacher(s): action research projects by, 487–88; agency, 742–43; as agents of change, 348; behaviors of, 737; belief systems uncovered of, 275; cognitive process of, 736; community barriers broken down by, 349; community of practice for, 278–79; competent assistance for, 280–82; cultural affinity by, 738; curriculum designed by, 837; developmental opportunities lacking for, 271; different approaches needed by, 291–93; educational psychology interest in, 182; education unsatisfactory to, 796; as educators, 97; effectiveness of, 619; empowerment movement, 486; facilitator's role of, 71; facts transmitted by, 774–75; immersion/distancing experiences for, 272–75; interpersonal styles of, 395–98; as knowledge source, 15–16; learning environments created by, 196; learning mediated by, 569; metacognitive awareness of, 740; motivation lacking of, 370–71; natural, 470; organizational wellness by, 348; as parent counselor, 690; primitive language games taught by, 459–62; psychoanalysis assisting, 632–33; role of, 12; self-study, 742–43; student consensus with, 523–24; student relationship with, 348; thinking, 742; thinking skills programs of, 738; traditional teaching models and, 287–88; transformative, 293; as transformative intellectuals, 849; undervaluing, 796; as unquestioned authority, 457. *See also* Educators
- Teacher-centered instruction, 826
- Teacher cognition: critical inquiry of, 741–42; paradigm shift researching, 486–87; sociocultural context of, 740
- Teacher-researchers: professional knowledge base from, 495–96; in reconceptualized environment, 507–8
- Teachers as Researchers: Qualitative Paths to Empowerment* (Kincheloe), 856
- Teacher/student: communication disconnection between, 794, 801; educational psychology liberating, 851; education dissatisfaction of, 796; interactions of, 880; partnerships, 122, 291; as scholar-practitioner, 833
- The Teacher's Word Book (Thorndike), 226
- Teach for Diversity (TFD), 145
- Teaching: Cartesian-Newtonian approaches to, 654; culturally responsive, 427; ecological/ethical attitude toward, 472; educational psychology and, 269–70; improving, 737–38; machine, 203–4; memory in, 584–86; objectives, 838; rethinking practices of, 589–90; situated learning and, 151–52; spirituality essential for, 905; strategies, 761–62; transformative, 802
- Teaching and Learning Together, 748–49
- Teaching/learning: communication disconnect in, 795; critical pragmatism reconceptualizing, 444–45; positivistic foundations of, 439–42; postformalism reconceptualizing, 445–48; postmodern foundations reconceptualizing, 442–43; reconceptualizing, 452–53
- TEAM (Teacher Efforts—Advocating/Motivating), 686–88, 690; activities of, 697–99; college component of, 700; eight posits of, 691; postformalism concepts in, 694; self-advocacy in, 692; setup stage of, 695–97; underserved families in, 701–2; workshop model of, 698–99
- Team members, 691
- Technical rationality, 442
- Technological revolution, 521–22
- Technology, 242–43, 336–37, 599–600
- The Technology of Teaching* (Skinner), 204, 873
- Technorational, 966
- Temple, Shirley, 248
- Terman, Lewis M., 42, 110, 431, 654; intelligence investigations of, 220–21
- Test-centered instruction, 826
- Testimonials, 405
- Textbooks: childhood, 965–66; history, 924; methods, 926–28; race/gender in, 925
- Textual analysis, 915
- TFD. *See* Teach for Diversity
- Theoretical approaches, 517

- Theoretical consciousness, 326
 Theoretical dimensions, 538
 Theoretical knowledge, 541
 Theoretical reasoning, 541
 Theory of deviance, 367
 Theory of learning, 6; critical points of, 560; of Dewey, 558–59
 “Theory of multiple talents,” 87
 Therapeutic methods, 349
 Thiam Seng Koh, 22, 34
 Thibaut, John, 43
 Thich Nhat Hanh, 413
 Things-in-themselves, 23
 Thinking process awareness, 829
 Thinking skills programs, 737, 738
 Thompson, E., 535
 Thoreau, Henry David, 124
 Thorndike, Edward, 4, 41, 68, 124, 126, 149, 167, 221, 412, 441, 652, 817, 822, 873; cat experiments of, 225–26; education/psychological principles from, 226; educators influenced by, 229–30; knowledge decontextualized by, 227–28; measurement movement and, 228; standardized testing created by, 68; stimulus/reflexive response theory pursued by, 652
Thought and Language (Vygotsky), 150, 242
 Thought distortions, 541
 Threshold of intelligence, 311
 Thrown-into-the-world, 712
 Thurstone, L. L., 42
 Tichener, Edward, 807
 Tinbergen, Nikollaas, 44
 Tippins, Deborah J., 45
 Tolliver, Derise, 427
 Torrance Test of Creative Thinking (TTCT), 312
 Totalizing narratives, 915
 Total relativism, 682
Toward a Rational Society (Habermas), 106
 Traditional approach, 267
 Traditional teaching models, 287–88
 Transcendence, 465, 467
 Transcript analysis, 281
 Transdisciplinary attitude, 469
 Transference, 634
 Transformation: complexity theory generating, 537–38; dialogic learning and, 554; of educational psychology, 21–23; as identity creation process, 709; Psyche story of, 629; radical, 538
 Transformative curriculum, 888–98
 Transformative force, 518
 Transformative intellectuals, 849
 Transformative learning, 363, 785; adult education through, 357; constructivist perspective of, 361–63; context and, 361; as cosmological in nature, 359; experience interpretations in, 354–55; indigenous knowledge in, 656–61; learning modes in, 359; planetary consciousness through, 359–60; as rational discourse, 360–61; world meaning constructed in, 358
 Transformative scientists, 519
 Transformative teaching, 293, 802
 Transhistorical category, 915
 Transhistoric learning space, 157–58
 Transmission model, 481
 Treatment approaches, 405
 Triadic reciprocal causation, 51
 Triangulation, 498
 Triarchic Theory of Intelligence, 206–7; important element of, 209–10; intelligence paradigms synthesized in, 207–8
 Trotsky, Leon, 69
 Trust, 745
 Truth, 5
 Tseng Kwong Chi, 843
 TTCT. *See* Torrance Test of Creative Thinking
 Tubman, Harriet, 842
 Tutorship program, 368
 Tversky, A., 44
 Ullman, Lisa, 234
 Unconditioned response/reflex, 185–87
 Unconscious desires, 138–39
 Unconscious mind, 623
 Unconscious process, 632
 Underserved families, 701–2
 Understanding: gesture acknowledging, 722; possibilities projected for, 712–13
Understanding Practice (Lave), 148, 152
 United Kingdom, 647
 United Nations Development Project, 644
 United States (US): Army alpha beta tests, 221–22; Constitution’s values, 818; industrialism in, 412; Supreme Court, 221
 Units of analysis, 718
 Universalism, 889
 Universal theory, 85–86
 University system, 106–7
 Urban youth, 577
 US. *See* United States
 User-designers, 730; as learning systems component, 786; multiple perspectives in, 732–33
 Utopian perspective, 528
 Utterances, 724
 Vajrayana Buddhist tradition, 25
 Valera, Francisco, 894
 Validity arguments, 552
 Validity claim, 557
 Valid knowledge, 505–7
 Valls, Rosa, 17, 21
 Valued binarisms, 918–19
 Value-free knowledge, 103–4
 Values, 450–51, 818
 Van Manen, M., 851
 Varela, Francisco, 25, 32, 474, 535, 889, 952
 Variable reinforcement, 873
 Venn, Couze, 620
 Verbal relationships, 809
 Vertical classifications, 820
 Verwoerd, H., 366
 Victim-blaming approaches, 19
 Victimization, 640
 Villaverde, Leila, 9, 45

- Violence, 369–70
 “Visionary postmodernism,” 454
 Visual memory, 60
 “Vital logical movement,” 34
 Vocational education, 543
 von Frisch, Karl, 44
 von Helmholtz, Hermann Ludwig Ferdinand, 807
 Vygotsky, Lev, 12, 25, 27, 28, 149, 362, 429, 430, 527, 656, 782, 938; background of, 240–41; classrooms impacted by, 244; educational psychology influenced by, 245; historical materialism from, 155; as Russian psychologist, 3; sociocultural theory of, 241
- Walden Two* (Skinner), 202
 Waldman, Anne, 319
 Walkerdine, Valerie, 432, 680; background of, 246–47; child development evaluation by, 246; psychological research by, 250
 Walker, Kara, 843
 Walters, Barbara, 402
 Walters, Richard, 50
 Wann, T. W., 43
 Warrior model, 180
 Watson-Glaser Critical Thinking Appraisal, 322
 Watson, John B., 42, 167, 806, 808, 872; behaviorism shift to by, 252–53; educational psychology transfigured by, 252; Little Albert Experiment of, 255; psychology visible/verifiable desired by, 258–59
 Watson, Robert, 43, 44
 WBE. *See* Work-based education
 Weaver, John, 22
 Weber, Ernst, 807
 Weil, Simon, 181
 Wellness, 352; five components of, 342–43; meaningful relationships in, 343
 Wells, Gordon, 527
 Wells, Ida B., 842
 Wenger, Etienne, 23, 542, 729
 Wertheimer, Max, 42
- Western civilizations: culture in, 724; economic systems in, 878; European art in, 842; memories origin in, 584–86; nominalism basis of, 604; universalism in, 889
 Western education: indigenous knowledge in, 658–59; standardized testing in, 654
 Western intellectual supremacy, 20
 Western psychology/education, 86
 Western science: education influenced by, 513–14; system components isolated in, 120
 Western society: educational test measurements in, 814–15; higher status careers in, 541–42; intelligence rethinking needed in, 770; knowledge views in, 26–27
 West Indians, 667–68
 Wetsch, James, 386
 Whalen, Philip, 319
 Whang, Patricia, 4, 6, 12, 33
 What if...assignments, 304, 307
What Is Indigenous Knowledge? (Kincheloe/Semali), 850, 886
 What Works Clearinghouse (WWC), 441
 White community, 215–16
 White intellectual supremacy, 20
 White learners, 366
 Whiteness, 665–66, 674, 675
 White power, 365
 White privilege, 669, 798
 White provincial education department, 368
 White racial power, 670, 671–72
 White superiority, 675
 White supremacy culture, 674; CNE entrenching, 366; community change and, 121–22; learning influenced by, 122
 Whole-school community-based interventions, 371
 Wholesome, 417
Why Are All the Black Kids Sitting Together in the Cafeteria? (Tatum), 211, 214
 Wigman, Mary, 232
- William of Ockham, 604–10
 Williams, William Carlos, 880
The Will to Believe (James), 126, 127, 128
 Wilson, Cassandra, 703
 Wilson, Woodrow, 911
 Winfrey, Oprah, 211, 403
 Winnicott, W.D., 634
 Wisdom, 416
 Witmer, Lightner, 42
 Wittgenstein, Ludwig, 458–59, 460, 602
 Wolf, Michelle, 761–62
 Wolf, Naomi, 92
 Women: connectedness lacking for, 90; Hall’s beliefs regarding, 110–11; intellectual development of, 682–83; paid-labor market mobilization of, 649–50; patriarchal society threatened by, 681; respond to feeling, 91; society acceptance of, 679. *See also* Black women
 Women’s Health conference, 404
Women’s Ways of Knowing (Belenky), 682
 Woodring, Paul, 125
 Woodson, Carter G., 903
 Woodworth, Robert S., 42
 Woolfolk, A.E., 362
 Woolf, Virginia, 318
 Words, 608
 Work-based education (WBE), 544–45
 Working-class activism, 327
 Working-class families, 738
 Working class schools, 739
The Work of Digestive Glands (Pavlov), 184
 Workplaces: learning experience structured in, 543; learning in, 544–45
 Workshop model, 698–99
 The World: human relationships in, 711; meaning in, 358; mechanical systems of, 514; outlook of, 821–22; relationships in, 711
World History: The Struggle for Civilization (Smith/Muzzey/Lloyd), 924

- World Wide Web, 897
Wundt, Wilhelm, 806
WWC. *See* What Works Clearinghouse
- Xinoming Liu, 12
- Yanku, Barry, 844
Yeats, William Butler, 318
Yerkes, Robert, 221
Young Man Luther (Erikson), 80
- Young people: social movements
 driven by, 351–52; trust
 lacking in, 745
- Zeichner, Ken, 488
Zevin, Jack, 927
Zone of proximal development
 (ZPD), 430, 687–88, 884, 896;
 actual learning/potential
 learning and, 528; child
 readiness identified by, 243;
- features required in, 242;
human activity systems and,
376; learners' developmental
needs through, 787; learners'
growth level and, 156;
learning taking place in, 888;
scaffolding learners with, 217;
semiotics and, 787–88; student
learning and, 35, 244–45
ZPD. *See* Zone of proximal
development

About the Contributors

MARY FRANCES AGNELLO teaches at Our Lady of the Lake University working in teacher education, foundations, and educational leadership. Her most recently published work included studies of teacher beliefs about culture and literacy, multicultural issues in higher education, and student critical thinking. Her book, *A Postmodern Literacy Policy Analysis* (2001), addresses literacy policy and the social discourses about literacy surrounding their implementation from 1970 to 1995.

J. E. AKHURST is a senior lecturer at York St. John University in York, United Kingdom. She was formerly a senior lecturer in educational psychology in KwaZulu-Natal, South Africa, and worked extensively with trainee and in-service teachers, school counselors, and school psychologists. Her research interests now focus on the teaching of psychology and student development in higher education, career psychology, and adolescent mental health and well-being.

ROMY M. ALLEN is a well-known educator and advocate of children in North Carolina. She is on the Anti-Bias Task Force of Forsyth County, the NCDCA district coordinator, the preschool liaison for the Children's Theater Board, and a partner in the Forsyth Early Childhood Partnership Education Committee. A Central Region mentor for the Partnership for Inclusion, Allen is a state assessor for the North Carolina Rated License Project at University of North Carolina, Greensboro.

ADRIANA AUBERT is consuler at UNED, the National Distance Education University in Spain. She is member of the Center of Research CREA at the University of Barcelona, where she is responsible for the project of schools' transformation "Learning Communities." She is coauthor of the book *Dialogar y Transformar. Pedagogía crítica del siglo XXI*.

RACHEL BAILEY JONES is currently in the final stages of work toward a doctorate in Educational Leadership and Cultural Foundations at the University of North Carolina, Greensboro. She is an artist and art educator, with special interest in the postmodern creation of art in the

transnational space of the twenty-first century. Her current research is into the visual representation of Muslim women in the post-9/11 United States, and the use of contemporary art as a pedagogical tool for a more multifaceted understanding of difference.

KATHLEEN S. BERRY has written books, many chapters and articles regarding the implications of contemporary theories, such as poststructuralism and postcolonialism, on educational practices. Recently she received the Allan P. Stuart Award for Excellence in Teaching at University of New Brunswick, Canada, where she is a professor of education in critical studies, drama, and literacies.

JEANETTE BOPRY is currently an assistant professor of instructional sciences at the National Institute for Education in Singapore. She edits *Teaching & Learning: The Journal of Natural Inquiry and Reflective Practice*, and is associate editor of *Cybernetics and Human Knowing*.

LUIS BOTELLA is professor of psychotherapy at the Department of Psychology (Ramon Llull University, Barcelona, Spain) where he also directs the master's course in clinical psychology and psychotherapy. He is a member of the Editorial Board of the *Journal of Constructivist Psychology*, the *International Journal of Psychotherapy*, the *European Journal of Psychotherapy, Counselling, and Health* and the *Revista de Psicoterapia*. His publications and research interests include postmodern thought, constructivism and social constructionism, psychotherapy (process and outcome research), psychotherapy integration, Personal Construct Theory, narrative psychology and psychotherapy, cognitive complexity, identity, and Eastern spirituality (Taoism and Zen Buddhism). He coordinates the Psychotherapy Service at his University.

ROCHELLE BROCK is a graduate of UC Berkeley and Pennsylvania State University. She is currently taking a leave from academia to concentrate on writing and research. Completing her doctorate in curriculum and instruction in 1999 Dr. Brock began an academic career as assistant professor in curriculum studies at Purdue University, teaching undergraduate preservice teacher courses in Multicultural Education, and graduate courses, which analyze the complexities in the education of African Americans, Native Americans, and Latinos. Dr. Brock is also an education consultant, most recently working with the Center for the Education of Students Placed at Risk (CRESPAR) as Co-Principal Investigator of the Elementary School Project: Asset-Based Education. She is the author of *Sista Talk: The Personal and the Pedagogical* (2005).

NANCY J. BROOKS is an assistant professor in the Department of Educational Studies at Ball State University, where she teaches graduate and undergraduate courses in curriculum and the foundations of education. Her current teaching and research interests focus on critical hermeneutics and on the relationship between contemporary curriculum theory and classroom practice.

STEPHEN BROOKFIELD began his teaching career in 1970 in England. He has taught in Canada, Australia and the United States, teaching in a variety of college settings. He has written and edited nine books on adult learning, teaching, and critical thinking, three of which have won the World Award for Literature in Adult Education (in 1986, 1989, and 1996). He also won the 1986 Imogene Okes Award for Outstanding Research in Adult Education. He now holds the title of Distinguished Professor at the University of St. Thomas in Minneapolis, Minnesota.

DEBORAH S. BROWN is currently a professor of educational psychology at West Chester University. She has recently coauthored the text *Educational Psychology: A Practitioner-Researcher Model Teaching*. Dr. Brown has authored or coauthored over thirty research articles; her research areas include teacher planning, action research, middle school practice, and teachers' writing of case dilemmas. She has also supervised secondary student teachers and has taught at both the middle and high school levels.

ANNE BROWNSTEIN is a doctoral student in the Urban Education Program at the CUNY Graduate Center in New York.

ERICA BURMAN is professor of psychology and Women's Studies at the Manchester Metropolitan University, where she codirects the Discourse Unit and the Women's Studies Research Centre. She is the author of *Deconstructing Developmental Psychology* (1994), coauthor of *Challenging Women: psychology's exclusions, feminist possibilities* (1995) and *Psychology Discourse Practice: From regulation to resistance* (1996), editor of *Feminists and Psychological Practice* (1990) and *Deconstructing Feminist Psychology* (1998), and coeditor of *Discourse Analytic Research* (1993) *Culture, Power and Difference* (1998).

MONTSERRAT CASTELLÓ is professor of educational psychology at the Department of Psychology at Ramon Llull University, Barcelona, Spain where she also directs the doctoral programs in Psychology and Education. She coordinates at the same University the postgraduate and long-life learning courses in Psychology and Education. She is a member of the editorial board of *Cultura y educacion* and *Infancia y aprendizaje*. She is an active member of the European Research of Learning and Instruction (EARLI) and she belongs to the Specials Interests Groups in writing and higher education. She is member of the EARLI Spanish Committee, the Spanish SIG-Writing and the interuniversity seminar of learning strategies (SINTE).

DANIEL E. CHAPMAN is completing his dissertation under the guidance of Dr. Leila Villaverde at the University of North Carolina at Greensboro. His diverse background includes teaching middle school in urban and rural settings, directing several documentaries and other educational media, working with home school students, and teaching creative writing at a drug rehabilitation facility. His interests include Media Literacy, Media Studies, Critical Theory, and Literacy Education.

BRENDA CHEREDNICHENKO is currently the head of the School of Education at Victoria University, Australia. The School has preservice and postgraduate programs in primary, secondary, and early childhood Education, Training and Youth Studies. Brenda's research interests are in collaborative practitioner research in educational reform, the teaching of thinking and philosophical inquiry, equity, and social justice in learning and teaching, democratic learning and socio-philosophy and education. Her books and articles are widely used.

PETER CHIN is an associate professor in the Faculty of Education at Queen's University in Kingston, Ontario, Canada. His research interests can be found in science education with particular focus on science teaching and learning in school and workplace environments. The inclusion of students with exceptionalities and at-risk students is emphasized.

LISE BIRD CLAIBORNE is the director of postgraduate studies and Senior Lecturer in the School of Education, Victoria University, Wellington, New Zealand. She has researched and taught in the area of critical educational psychology for many years, and is coauthor of the widely used textbook *Human Development in Aotearoa* (2003).

KEVIN CLAPANO received his BS in psychology from the Ateneo de Manila University in 1992 and his MS in experimental psychology with a focus on Health Psychology in 1995 from Saint Joseph's University. He is currently pursuing his doctoral degree in education at Saint Joseph's University with a focus on interdisciplinary educational leadership.

THOMAS R. CONWAY is currently the Social Studies Chairperson and Summer School Coordinator at Philadelphia Electrical and Technology Charter High School. Conway is an adjunct professor of religion at La Salle University and is pursuing his doctoral degree in Educational Leadership at Saint Joseph's University.

ALISON COOK-SATHER, Director of the Bryn Mawr/Haverford Education Program and associate professor of education, teaches core courses for students seeking state certification to teach at the secondary level. Recent publications include "Education as Translation: Students Transforming Notions of Narrative and Self" (*College Composition and Communication*, 55, 1, 91–114, 2003); "Movements of Mind: The Matrix, Metaphors, and Re-Imagining Education" (*Teachers College Record*, 105, 6, 946–977, 2003), and "Authorizing Students' Perspectives: Toward Trust, Dialogue, and Change in Education" (*Educational Researcher*, 31, 4, 3–14, 2002).

RUTHANN CRAWFORD-FISHER is a doctoral student in educational leadership at Saint Joseph's University. She is a consultant for the Pennsylvania Service Learning Alliance and the Pennsylvania Department of Education. Her research interests are in alternative education, service learning, at risk youths, and school to career programs.

BRENT DAVIS is Canada Research Chair in Mathematics Education and the Ecology of Learning at the University of Alberta. He has published three books, the most recent of which is *Inventions of Teaching: A Genealogy* (2004). His refereed articles have appeared in journals that include *Harvard Educational Review*, *Educational Theory*, *Qualitative Studies in Education*, *Journal of Curriculum Studies*, *Teaching Education*, and *American Journal of Psychology*. He is founding coeditor of *Complicity: An International Journal of Complexity and Education*.

STANLEY DOYLE-WOOD is a doctoral candidate in the Department of Sociology and Equity Studies in Education at the Ontario Institute for Studies in Education. Areas of research, writing, and pedagogy involve: Integrated AntiRacism Praxis in Relation to Community, Family and Early Years Development/Experience: Programming Literacy Teaching Techniques for Undergraduate Student Teachers Within an Anti-Oppression Framework.

GEORGE J. SEFA DEI is professor and chair of the Department of Sociology and Equity Studies in Education at the Ontario Institute for Studies in Education. He served as first Director of the Centre for Integrative Anti-Racism Studies at OISE/UT. Publications include: *Anti-Racism Education: Theory and Practice* (1996); *Hardships and Survival in Rural West Africa* (1992); *Reconstructing 'Drop-out': A Critical Ethnography of the Dynamics of Black Students' Disengagement from School*, with Josephine Mazzuca, Elizabeth McIsaac, and Jasmine Zine (1997); *Indigenous Knowledges in Global Contexts: Multiple Readings of our World*, with Budd Hall and Dorothy Goldin Rosenberg (2000); *Schooling in Africa: The Case of Ghana* (2004); *Playing the Race Card: Exposing White Power and Privilege*, coauthored with Leeno Karumanchery and Nisha Karumanchery-Link.

DELIA D. DOUGLAS was born in Britain and raised in Canada. Douglas completed her doctoral work in the Sociology department at the University of California Santa Cruz. At present she lives and writes in Vancouver, British Columbia.

JULIA ELLIS is a professor in elementary education at the University of Alberta. She completed her doctoral and master's programs in educational psychology at the University of British Columbia. Prior to her position at the University of Alberta she held appointments in educational psychology departments at the University of Lethbridge and the University of Toronto. Author of many books and articles, she is currently completing *The Creative Problem Solving Primer*.

CHRIS EMDIN is a doctoral candidate in the Urban Education Program at the CUNY Graduate Center in New York. He is a science teacher in the New York City Schools.

BENJAMIN ENOMA is a doctoral candidate in the Urban Education Program at the CUNY Graduate Center in New York.

ELLEN ESSICK is a faculty member in the Department of Public Health Education at the University of North Carolina, Greensboro where she teaches elementary school, health methods, human sexuality, and emotional health. Her research interests include eating disorder, feminist theory, gender studies, pedagogy and HIV/AIDS.

SCOT D. EVANS holds a master's degree in counseling and is a student in the Doctoral Program in Community Research and Action at Peabody College. His interests are in youth civic engagement and organizational transformation.

TODD FELTMAN is a doctoral student in the Urban Education Program at the CUNY Graduate Center. He is an elementary classroom teacher in the New York City Schools.

TARA FENWICK is associate professor of adult education in the Department of Educational Policy Studies at the University of Alberta. Her research focuses on learning through work, with particular interest in the knowledge, desires, and subjectivities produced in networks of activity in the contested terrains of contemporary organizations. Most recently she published *Learning Through Experience: Troubling Assumptions and Intersecting Questions* (2003).

KERRY FINE is a doctoral student at Teachers College of Columbia University in New York.

LEE GABAY is a doctoral candidate in the Urban Education Program at the CUNY Graduate Center. He is a classroom teacher in the New York City Schools.

MARK J. GARRISON is assistant professor of education at D'Youville College, in Buffalo, New York. His book, *The Political Origins of Failure: Education, Standards and the Assessment of Social Value* is with SUNY Press. He also has forthcoming material on the social context of the use of educational technology.

SUSAN GEROFISKY uses linguistics, genre studies, and arts-based research to look critically at education, particularly mathematics education. Her book, *A Man Left Albuquerque Heading East: Word Problems as Genre in Mathematics Education* is with Peter Lang Publishing. She teaches at an alternative high school, Ideal School, and Simon Fraser University in Vancouver, Canada.

CATHY B. GLENN is a doctoral candidate in the Department of Speech Communication at Southern Illinois University, Carbondale. Her general research focus is philosophy of communication with particular emphases on process thought, personalism, and pragmatism where they intersect critical/culturalist theory and method. She has published work on topics related to critical rhetoric and pedagogy, Whiteheadian process philosophy, temporality and ethics, cultural politics, and communication activism.

NICOLE GREEN is a Doctoral student in the Department of Elementary Education at the University of Alberta, Edmonton, Canada. She has a bachelor of education (Early Childhood) from the Queensland University of Technology, Brisbane, Australia, and a master of education (Early Childhood) from the University of Alberta. She has enjoyed teaching and learning with students in Kindergarten to Grade Six in both regular Elementary Schools and at a School of Distance Education. Her current research focuses on home educating families' experiences of Distance Education in Queensland, Australia.

KECIA HAYES received her PhD from the CUNY Graduate Center where she was a MAGNET Scholar. She coauthored a chapter in *19 Urban Questions: Teaching in the City* by Shirley

Steinberg and Joe Kincheloe (Eds.). Kecia also coedited three texts including: *The Praeger Handbook of Urban Education*, *Metropedagogy: Power, Justice, and the Urban Classroom*, and *City Kids: Understanding, Appreciating, and Teaching Them*. Her research examines how social policies and practices impact the educational experiences of children and families of color in urban communities, with particular focus on disconnected and court-involved youth.

FRANCES HELYAR is completing her doctorate in education at McGill University in Montreal. A former teacher, CBC broadcaster, and voice of New Brunswick Bell, Helyar is interested in education via history, historiography, and archiving.

VALERIE HILL-JACKSON is a clinical assistant professor at Texas A&M University. She has also served as public school educator, not-for-profit consultant, and university program director. Hill-Jackson's research is in the fields of critical race theory, community education, and urban education. In addition, Hill-Jackson is an AERA/Spencer and Geraldine R. Dodge fellow.

RAYMOND A. HORN Jr., is an associate professor of education, Director of the Interdisciplinary Doctor of Education Program for Educational Leaders, and Director of Educational Leadership and Professional Studies at Saint Joseph's University in Philadelphia, Pennsylvania. He is the coeditor of the journal, *The Scholar-Practitioner Quarterly*. His books include: *Teacher Talk: A Post-formal Inquiry into Educational Change*, *Understanding Educational Reform: A Reference Handbook*, and *Standards Primer*; as well as the coauthored book, *American Standards: Quality Education in a Complex World-The Texas Case*. In addition, he has published numerous journal articles involving educational leadership, critical pedagogy, teacher education, systems theory, and scholar-practitioner leadership.

DAVID HUNG is an associate professor at the National Institute of Education, Nanyang Technological University (Singapore). He is also Head of the Learning Sciences and Technologies Academic Group and the associate dean for the learning sciences. His research interests include situated cognition, social constructivism, and issues related to identity and communities of practice.

NANCY L. HUTCHINSON is professor and coordinator of Graduate Studies and Research in the Faculty of Education at Queen's University in Kingston, Ontario, Canada. She conducts research on workplace learning and on a range of issues related to the education and inclusion of individuals with disabilities. She received her doctorate in instructional psychology at Simon Fraser University in 1987.

KAREN E. JENLINK is a professor and dean of the School of Education at Saint Edward's University in Austin, Texas. Dr. Jenlink is author of numerous scholarly publications in teacher education. Her research interests are in teacher preparation in urban settings, teacher leadership and professional identity, and professional development.

PATRICK M. JENLINK is a professor of doctoral studies in the Department of Secondary Education and Educational Leadership and Director of the Educational Research Center at Stephen F. Austin State University. He is also a research fellow of the International Systems Institute in Carmel, California. He has edited books and authored or coauthored numerous chapters. Currently he serves as editor of *Teacher Education and Practice* and coeditor of *Scholar-Practitioner Quarterly*. He is also editing four book projects.

RACHEL BAILEY JONES is currently in the final stages of work toward a doctorate in Educational Leadership and Cultural Foundations at the University of North Carolina, Greensboro. She is an artist and art educator, with special interest in the postmodern creation of art in the

transnational space of the twenty-first century. Her current research is into the visual representation of Muslim women in the post-9/11 United States, and the use of contemporary art as a pedagogical tool for a more multifaceted understanding of difference.

PAM JOYCE received her doctorate from the Urban Education Program at the CUNY Graduate Center. She teaches high school English in Montclair, New Jersey. She is the author of an upcoming book from Peter Lang Publishing.

YATTA KANU is associate professor in the Department of Curriculum, Teaching and Learning, Faculty of Education, University of Manitoba in Winnipeg, Canada. Her areas of research interest are curriculum, culture and student learning, inclusive education, curriculum reform, and international education.

LYNDA KENNEDY is a doctoral student in the Urban Education Program at the CUNY Graduate Center. She has worked extensively in museum education.

JOE L. KINCHELOE is the Canada Research Chair at the McGill University Faculty of Education. He is the author of numerous books and articles about pedagogy, education and social justice, racism, class bias, and sexism, issues of cognition and cultural context, and educational reform. His books include: *Teachers as Researchers*, *Classroom Teaching: An Introduction*, *Getting Beyond the Facts: Teaching Social Studies/Social Sciences in the Twenty-first Century*, *The Sign of the Burger: McDonald's and the Culture of Power*, *City Kids: Understanding Them, Appreciating Them, and Teaching Them*, and *Changing Multiculturalism* (with Shirley Steinberg). His coedited works include *The Urban Education Encyclopedia*, *White Reign: Deploying Whiteness in America* (with Shirley Steinberg et al.) and the Gustavus Myers Human Rights award winner: *Measured Lies: The Bell Curve Examined* (with Shirley Steinberg and Aaron D. Gresson).

KATHRYN KINNUCAN-WELSCH is associate professor and coordinator of graduate programs in the Department of Teacher Education, University of Dayton. She has served as facilitator and researcher of numerous professional development initiatives in Georgia, Michigan, and Ohio. Her research interests include professional development of teachers, literacy, and qualitative research methodology.

THIAM SENG KOH is an associate professor at the National Institute of Education, Nanyang Technological University. He is a faculty member of the Natural Sciences and Science Education Academic Group. His research interests include communities of practice, the use of ICT in science education and policy studies on the integration of ICT into the curriculum.

B. LARA LEE is a doctoral candidate in Educational Leadership and Cultural Foundations at the University of North Carolina, Greensboro. She has taught for seven years as an Adjunct Professor and more recently as a Graduate Teaching Assistant in her doctorate program. Her research interests are in Communication and Cultural Studies. She has lectured and participated in conference organization and workshops nationally and internationally to examine gender-gap issues grounded in communicational, educational and social inequities. Her aspiration, and lifelong mission, is the promotion of social justice and equity through education.

XIAOMING LIU is an assistant professor of Reading at the Pennsylvania State University – Harrisburg. She teaches both undergraduate and graduate literacy courses. Her research interests include authentic/alternative literacy assessment and literacy portfolios in particular; English language learners' language acquisition, literacy development, home-school connections, and identity issues; and content area literacy.

CHEE-KIT LOOI is Head of the Learning Sciences Lab and an associate professor in the National Institute of Education. He has published widely in the field of educational technology. His current research includes technology-enabled mathematics learning, and computer-supported collaborative learning. He obtained his doctorate from the University of Edinburgh.

ERIK L. MALEWSKI is an assistant professor of curriculum studies at Purdue University. He is interested in scholarship on critical theory, postformalism, and cultural studies as they relate to reconceptualizing curriculum and the social contexts of education. In particular, he is focused on understanding educational organizations as curricula, critically informed notions of standards and assessment, and the ways symbolic and material inequities connect to our implicit understandings of teaching and learning and intelligence in public education.

RUTHANN MAYES-ELMA completed her doctorate in education at Miami of Ohio University. She is presently a classroom teacher in Mason, Ohio. Her areas of research include gender studies and urban education. She is the author of the book, *Females and Harry Potter: Not All that Empowering*.

JAMES MOONEY is a doctoral student in educational leadership at Saint Joseph's University. His research interests include early intervention, education of low-socioeconomic students in urban areas, and social justice. Mr. Mooney received his MEd from Lehigh University, as well as a BA in theatre with a minor in writing.

MARLA MORRIS is an assistant professor at Georgia Southern University. She is Editor of *JCT/ The Journal of Curriculum Theorizing*. She is author of *Curriculum and the Holocaust: Competing Sites of Memory and Representation* (2001). Marla has edited several readers including *Difficult Memories: Talk in a (Post) Holocaust Era* (2002), and *How We Work* (1999) with William F. Pinar and Mary Aswell Doll. She has authored numerous articles in curriculum studies. Her main interest is the intersection between psychoanalysis and education.

DONAL E. MULCAHY is a doctoral student in the Urban Education Program at the CUNY Graduate Center in New York City. He is a teacher in the New York City Schools.

HUGH MUNBY accepted a position at Queen's University, Kingston, in 1971 and is currently Professor Emeritus. He has an extensive record of research and publication in science education, curriculum theory, and teacher knowledge. In 1998, his interest in learning from and in experience led to the creation of a research program in cooperative education and workplace learning with Nancy Hutchinson and Peter Chin at Queen's University.

CYNTHIA CHEW NATIONS worked in Texas public schools for thirty years as a teacher, a teacher mentor, an assistant principal, a principal, and as the director of mathematics and science instruction in the Urban Systemic Program. During her career, she has focused on school reform efforts that lead to distributed leadership in learning organizations, improving the quality of classroom instruction, and recognizing the diversity of all learners. She is currently a visiting full-time professor at New Mexico State University.

KATE E. O'HARA is a doctoral student in the Urban Education Program at the CUNY Graduate Center in New York City. She is a teacher in the New York City Schools.

DORIS PAEZ Director of the Metropolitan Studies Institute at the University of South Carolina Upstate, also runs her own psychological consulting business. Paez specializes in the fields of psychology and education for children with special needs, particularly those of Hispanic, African American and Native American descent. As a doctoral level licensed and certified school psychologist, she is widely recognized at the national, state, and local levels

for her work on educational and mental health issues for culturally and linguistically diverse students.

KATHRYN PEGLER is a reading specialist at The Haverford School. She previously taught first grade in the School District of Haverford Township. She is currently enrolled in a doctoral program in Educational Leadership at St. Joseph's University in Philadelphia.

JANE PIIRTO is the author of thirteen books including textbooks, an award-winning novel, poetry chapbooks, and a book in Finnish. She is Trustees' Professor at Ashland University, Ashland, Ohio. She has won Individual Artists Fellowships in both poetry and fiction from the Ohio Arts Council, and consults and speaks nationally and internationally in the area of talent development education and creativity.

RICHARD S. PRAWAT is a professor of educational psychology and teacher education and chair of the Department of Counseling, Educational Psychology, and Special Education at Michigan State University. His current interest is in the teaching and learning of subject matter from a "realist constructivist" perspective.

ISAAC PRILLELTENSKY is professor of human and organizational development at Peabody College of Vanderbilt University. He is the author or coeditor of five books dealing with values, wellness, power, and mental health practice.

MOLLY QUINN is associate professor at Teachers College, where she teaches courses in the foundations of education, children's literature, and the arts. The author of *Going Out, Not Knowing Whither: Education, the Upward Journey, and the Faith of Reason* (2001), much of her work engages spiritual and philosophical criticism toward embracing a vision of education that cultivates beauty, compassion, and social action.

SANDRA RACIONERO teaches sociology of education at the Universitat de Barcelona, and she is a researcher at CREA, where she is member of the coordinating team of the project Learning Communities. Her background is in educational psychology and sociology, and currently her research interests are about dialogic learning, and the creation of meaning in the learning process among at-risk students, as an avenue to overcome schooling failure.

DANIEL RHODES is a PhD student in Cultural Studies at the UNC-Greensboro. His research interests include Ecopsychology, Philosophy and Religion as well as Anarchism. He received his MSW from UNC-Chapel Hill in 1996 and has been working as a psychotherapist for the past ten years.

PATRICIA A. RIGBY earned a doctorate in educational leadership at Saint Joseph's University and is currently an Assistant Principal for Academic Affairs at Archbishop John Carroll High School in Radnor, Pennsylvania. Her research interests include teacher mentoring, spirituality in teacher induction and practice, democratic education, and theology as curriculum text.

DONYELL L. ROSEBORO received her doctorate from the University of North Carolina, Greensboro. She is an assistant professor at the University of Southern Illinois.

SABRINA N. ROSS is a doctoral candidate in Cultural Foundations in the department of Educational Leadership and Cultural Foundations at the University of North Carolina at Greensboro. Her dissertation explores relationships between specific cultural discourses and libratory education. Her research interests include critical pedagogy, African American studies, and social justice projects.

WOLFF-MICHAEL ROTH is Lansdowne professor of applied cognitive science at the University of Victoria. His cross-disciplinary research is concerned with knowing and learning science and mathematics across the life span. He has published over 200 peer-refereed articles and chapters and eleven books on teaching and learning.

DIANA RYAN is currently an assistant professor at Roosevelt University in Chicago, Illinois. She has been an International Systems Institute Research Fellow since 1993, and is a contributing editor to *Teaching & Learning: The Journal of Natural Inquiry and Reflective Practice*.

DANA SALTER is a doctoral student at McGill University in the Department of Integrated Studies in Education. Her research involves youth and gaming.

ADRIENNE SANSOM has just completed her doctorate in Education and Cultural Foundations at the University of North Carolina at Greensboro, where her focus has been on examining dance education as an approach to critical pedagogy. She is a senior lecturer in dance and drama education with the School for Visual and Creative Arts in Education, Faculty of Education, at The University of Auckland, Te Kura Akoranga o Tamaki Makaurau, in Aotearoa, New Zealand.

RUPAM SARAN recently received her doctorate from the Urban Education Program at the CUNY Graduate Center. Her area of research centers around South Asians and education in the United States.

ANGELINA VOLPE SCHALK has her master's in elementary and special education. Angel is completing her doctoral studies in educational leadership at Saint Joseph's University, and one area of research is role of teacher play in creating educational equity and opportunity for students. She currently teaches at an inclusive elementary school in Glenside, Pennsylvania.

WARREN SCHEIDEMAN is an assistant professor in the School of New Learning at DePaul University in Chicago. He is the Summit Director and teaches literacy courses.

LOIS SHAWVER is a clinical psychologist with a philosophy background who publishes on postmodernism as it relates to therapy. She is a contributing editor for the *American Journal of Psychoanalysis* and for the *New Therapist*, an external faculty member for the Virtual Faculty in New Zealand and with VIISA in Germany. She is, however, most known for her hosting of a popular online community for therapists who are interested in postmodernism and for associated online publications.

DOUGLAS J. SIMPSON is a professor and holder of the Helen DeVitt Jones Chair in Teacher Education, Texas Tech University. His academic background includes school psychology, educational theory, and curriculum philosophy. He is the author or coauthor of *John Dewey Primer* (Lang), *John Dewey and the Art of Teaching* (Sage), and *Educational Reform: A Deweyan Perspective* (Garland).

MARTA SOLER is Ramon y Cajal Researcher at the University of Barcelona, and member of the Center of Research CREA at the same university. She has a doctorate of education at Harvard, with a dissertation on dialogic reading. Among her highlighted publications is her book with John Searle *Lenguaje y ciencias sociales* and her chapter to the book *The Dialogic Self* by M.C. Bertau.

SHARON G. SOLLOWAY is an associate professor in the Department of Early Childhood and Elementary Education at Bloomsburg University, where she teaches graduate and undergraduate courses in literacy, early childhood education, and elementary curriculum. Her current research interests focus on the efficacy of mindfulness for classroom practice and social justice in the classroom.

MICHELLE STACK is an assistant professor in educational studies at UBC. Her University of Toronto/OISE doctoral research focused on the role of the media in constructing Peggy Claude-Pierre, the founder of the Montreux Center for the Treatment of Eating Disorders in British Columbia, Canada, as a miracle-worker for children and youth with anorexia nervosa.

IAN STEINBERG is completing his doctorate in communication at the School of Journalism, Columbia University. Steinberg's research interests include the political economy of information and knowledge production. Specifically, he is interested in the roles knowledge and information play in creating, maintaining, and challenging systems of social stratification. His current research is focused on the library as a place and agent of social change. He is the managing editor of *SOULS: A Critical Journal of Black Politics, Culture, and Society*.

SHIRLEY R. STEINBERG is an associate professor at the McGill University Faculty of Education. She is the author and editor of numerous books and articles and coedits several book series. The founding editor of *Taboo: The Journal of Culture and Education*, Steinberg has recently finished editing *Teen Life in Europe*, and with Priya Parmar and Birgit Richard *The Encyclopedia of Contemporary Youth Culture*. She is the editor of *Multi/Intercultural Conversations: A Reader*. With Joe Kincheloe she has edited *Kinderculture: The Corporate Construction of Childhood* and *The Miseducation of the West: How Schools and the Media Distort Our Understanding of the Islamic World*. She is coauthor of *Changing Multiculturalism: New Times, New Curriculum, and Contextualizing Teaching* (with Joe Kincheloe). Her areas of expertise and research are in critical media literacy, social drama, and youth studies.

DENNIS SUMARA is professor and head of the Department of Curriculum Studies at the University of British Columbia. Prior to his appointment at UBC in 2006, he held positions at the University of Alberta, York University, and Simon Fraser University. During the 1980s he was a classroom teacher in rural southern Alberta, specializing in middle school language arts instruction. His book, *Why Reading Literature in School Still Matters: Imagination, Interpretation, Insight* (2002) was a recipient of the National Reading Council's 2003 Ed Fry Book Award. His refereed articles have appeared in journals that include *Harvard Educational Review*, *Educational Theory*, *Qualitative Studies in Education*, *Journal of Curriculum Studies*, *Teaching Education*, and *Journal of Literacy Research*.

RICH TAPPER is an educational psychologist and learning specialist with nearly 20 years of experience as a professional teacher and seminar leader. He has worked in a variety of urban and suburban public and private schools and universities. His current research involves the application of dialogue and mindfulness to contemporary education and educational psychology.

EDWARD TAYLOR is an associate professor in adult education at Penn State Capitol College in Harrisburg, Pennsylvania. He has conducted research and written extensively on transformative learning theory. He is the author of *Transformative Learning: A Critical Review* (1998). In addition, Ed has published in *Adult Education Quarterly*, *The Canadian Journal of the Study of Adult Education*, *International Journal of Life long Education*, and *Studies in the Education of Adults*.

P. L. THOMAS is an assistant professor at Furman University in Education. The author of numerous books and articles, his area of research centers around the teaching of writing. His latest book, coauthored with Joe Kincheloe, *Reading, Writing, and Thinking: The Postformal Basics* is published with SENSE Publishers.

ELIZABETH J. TISDELL is associate professor of adult education at Penn State, Harrisburg. She received her doctorate in adult education from the University of Georgia in 1992. She is

the author of *Exploring Spirituality and Culture in Adult and Higher Ed, Creating Inclusive Adult Learning Environments: Insights from Multicultural Education and Feminist Pedagogy*” and numerous book chapters and journal articles dealing with diversity and equity issues, the interconnection of spirituality and culture and their role in transformative education, and feminist pedagogy in adult and higher education.

KENNETH TOBIN is presidential professor of urban education at the Graduate Center of City University of New York. Prior to commencing a career as a teacher educator, Ken taught high school science and mathematics in Australia and was involved in curriculum design. His research interests are focused on the teaching and learning of science in urban schools, which involve mainly African American students living in conditions of poverty. A parallel program of research focuses on coteaching as a way of learning to teach in urban high schools. Recently Ken edited a *Handbook about Teaching and Learning Science*, coedited *Doing Educational Research* with Joe Kincheloe, and coedited *Improving Urban Science Education* with Rowhea Elmesky and Gale Seiler.

ERIC D. TORRES is a Peruvian Educator and Lawyer, with a specialization in Political Science. He currently teaches Spanish Language and Literature at Pinecrest High School, Southern Pines, North Carolina; and is a Franklin/Houston Scholar and PhD Candidate in the Educational Leadership and Cultural Foundations Program at the University of North Carolina at Greensboro. He is doing research on how national security policies affect education.

JOELLE TUTELA is a doctoral student at the CUNY Graduate Center in the Urban Education Program. She is a high school social studies teacher in Montclair, New Jersey.

ROSA VALLS is professor in the Department of Theory and History of Education in the Faculty of Pedagogy at the University of Barcelona. She is also a researcher of CREA (Centre of Research in Theories and Practices that Overcome Social Inequalities). Her main area of research is: social pedagogy, learning communities, and critical theory. She has recently coauthored *Comunidades de Aprendizaje. Transformar la educación [Learning Communities. Transforming education]* (2002), published with the editorial Graó.

LEILA E. VILLAVARDE is an associate professor in cultural foundations in the department of educational leadership and cultural foundations, the university of North Carolina at Greensboro. She is the coeditor of *Dismantling White Privilege; and Rethinking Intelligence and Rethinking Intelligence*. She also lectures on feminist theory, curriculum studies, critical pedagogy, and aesthetics.

DANNY WALSH is a doctoral student at the CUNY Graduate Center in the Urban Education Program. He is a teacher in the New York City Schools.

JOHN WEAVER is associate professor of curriculum studies at Georgia Southern University. He is the author of numerous books and articles on popular culture, critical curriculum, and youth culture. He is the author of *The Popular Culture Primer*.

ED WELCHEL is an associate professor of education at Wofford College in Spartanburg, South Carolina. He taught social studies, particularly Advanced Placement United States History, for twenty-three years in the public schools of South Carolina. In addition to his duties at Wofford College, Dr. Welchel serves as a social studies consultant to several secondary schools in the Spartanburg area. He is currently working on a book concerning the work of Howard Zinn for Paul Thomas’s series, *Confronting the Text, Confronting the World: Bringing Writers into the Classroom*, to be published by Peter Lang Publishing.

PATRICIA A. WHANG, associate professor of psychological foundations at California State University Monterey Bay, critical educator, and dharma student is committed to awakening, becoming, and the asking of hard questions. May her children continue to inspire the will and reason for her commitments.

