

The central claim of *Measuring the mind* is that, contrary to popular opinion, the group of psychologists, notably Cyril Burt, who dominated educational policy-making between the wars were educational progressives and political radicals. They argued that education should reflect the requirements of children rather than the convenience of adults, and regarded intelligence testing as an instrument of child-centred education. These psychologists owed their political inspiration to the meritocratic ideal and lost popularity with the waning of this ideal after the war. Three main themes dominate the discussion: the emergence of educational psychology as a distinct discipline; the role of experts in formulating educational policy; and the rise and fall of the measurement of merit.

This study focuses on an area of current educational and political interest, given the revival of Cyril Burt's reputation and the re-introduction of streaming and selection; it will be of interest to historians of education, psychology and the history of British culture and society in the modern period.

Measuring the mind

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*Education and psychology in England,
c.1860–c.1990*

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To my mother

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Abbreviations

<i>Amer. J. Psych</i>	<i>American Journal of Psychology</i>
<i>BLPS</i>	<i>British Library of Political and Economic Science</i>
<i>BPS</i>	<i>British Psychological Society</i>
<i>Brit. J. Educ. Psych.</i>	<i>British Journal of Educational Psychology</i>
<i>Brit. J. Psych.</i>	<i>British Journal of Psychology</i>
<i>Brit. J. Educ. Studies</i>	<i>British Journal of Educational Studies</i>
<i>Bull. Br. Psych. Soc.</i>	<i>Bulletin of the British Psychological Society</i>
<i>CBP</i>	<i>Cyril Burt Papers</i>
<i>CSP</i>	<i>Childhood Study Papers</i>
<i>DNB</i>	<i>Dictionary of National Biography</i>
<i>HMI</i>	<i>His/Her Majesty's Inspectors of Schools</i>
<i>IQ</i>	<i>Intelligence Quotient</i>
<i>J. Exp. Educ.</i>	<i>Journal of Experimental Education</i>
<i>LCC</i>	<i>London County Council</i>
<i>LEA</i>	<i>London Education Authority</i>
<i>LIEA</i>	<i>London Institute of Education Archives</i>
<i>MHT</i>	<i>Moray House Tests</i>
<i>MOH</i>	<i>Medical Officers of Health</i>
<i>NIIP</i>	<i>National Institute of Industrial Psychology</i>
<i>NUT</i>	<i>National Union of Teachers</i>
<i>PP</i>	<i>Parliamentary Papers</i>
<i>PRO</i>	<i>Public Records Office</i>
<i>SCRE</i>	<i>Scottish Council for Research in Education</i>
<i>SMO</i>	<i>School Medical Officer</i>

Introduction

In *Some Thoughts Concerning Education*, John Locke made an uncharacteristic but striking observation :

God has stampt certain Characters upon Men's Minds, which, like their shapes, may perhaps be a little mended ; but can hardly be totally alter'd, and transformed into the contrary.

He therefore, that is about Children, should well study their Natures and Aptitudes, and see by often Tryals, what turn they easily take, and what becomes of them ; observe what their Native Stock is, how it may be improved, and what it is fit for ... Everyone's Natural Genius should be carried as far as it could, but to attempt the putting another upon him, will be but Labour in vain.¹

This study deals with a group of late nineteenth and twentieth century psychologists who spent their lives carrying out Locke's injunctions. They agreed that children differed in their innate capacities ; tried to develop a scientific understanding of their 'natures and aptitudes' ; devised 'Tryals' intended to see 'what turn they easily take' ; and insisted that education should be based on each individual's 'Natural Genius'.

The argument focuses on three main themes : the emergence of the profession of educational psychology ; the history of ideas about children's mental development, in particular the development of the subnormal and the gifted ; and the role of psychological experts in formulating educational policy. It tries to relate the history of psychology to the history of the meritocratic ideal – the idea that educational opportunity should be determined by natural ability rather than personal contacts – suggesting that both the rise and the decline of mental measurement were bound up with the political career of this concept. It argues that the years after 1880 saw a revolution in our understanding of child development. In 1880, experts estimated children's intelligences by measuring the size of their skulls and insisted that their mental development recapitulated the development of the race ; by 1950 educational psychologists had organised themselves into a profession and equipped themselves with most of the standard techniques of modern science.

¹ James L. Axtell (ed.), *The Educational Writings of John Locke* (Cambridge, 1968), pp. 159–60.

They developed relatively sophisticated tests for measuring intelligence, and argued about mental abilities at an impressive level of abstraction. They furnished government committees with influential information on the mental and emotional characteristics of schoolchildren, and made important contributions to such diverse areas as educational theory, child development, and statistical method.

Much of the analysis in this book concentrates on eleven key individuals: James Sully (1843–1923), Francis Warner (1847–1926), John Adams (1857–1934), W. H. Winch (1864–1955), P. B. Ballard (1865–1950), Charles Spearman (1863–1945), Thomas Percy Nunn (1870–1944), C. W. Valentine (1879–1964), Godfrey Thomson (1881–1955), Susan Isaacs (1885–1948) and, of course, Cyril Burt (1883–1971). Warner and Sully dominated the Child Study movement; Adams and Nunn introduced psychology into teacher training courses; Winch and Ballard combined their work at the London County Council with their enthusiasm for psychology; and Spearman set up the most influential research school in psychology in the country. It was Valentine, Thomson, Burt, and Isaacs, however, who were the hard-core members of the first generation of professional educational psychologists.² They spent their adult lives working in the subject; set up and presided over its most important institutions; attracted a number of gifted pupils into the profession; wrote a substantial body of textbooks and monographs; and did their best to sell the discipline to the educational and scientific establishments. Two non-psychologists are also given considerable prominence: Sir Francis Galton (1822–1911) and Karl Pearson (1857–1936), on the grounds that they developed a ‘scientific research programme’ which is at the heart of inter-war educational psychology: the analysis and measurement of individual differences. It was on the validity of this idea that the subject hung its claim to be a scientific movement as well as a guide to better teaching and classroom organisation.

These psychologists managed to command a considerable influence over English education between 1880 and 1950. They invented objective intelligence tests – later to be called IQ tests – which most Local Education Authorities eventually used to help allocate secondary-school places. The theory upon which these tests rested – that children differed from each other in their innate abilities; that these innate abilities were open to measurement by objective methods; and that they might be represented by single numbers arranged on a linear scale – was increasingly relied upon by the defenders of selective education in their arguments with their numerous critics. They were deeply involved with the movement for special education for the mentally handicapped, providing individual tests for the classification of the handicapped and helping to develop effective methods for teaching them as much as they could learn. They were also in the forefront of the

² For a lucid contemporary discussion of what psychologists did, and how they differed from psychiatrists and psycho-analysts, see *The Voluntary Mental Health Services. The Report of the Feversham Committee* (1939), pp. 14–15. For definitions of technical terms used in this book, see the glossary.

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progressive education movement – a movement which sought to base education on the needs of the child rather than on the demands of educational tradition, and which campaigned to restrict adult authority and to introduce free-play into the classroom.

Their ideas were important for their intellectual content as well as their practical impact. The psychologists led a revolution in the relations regarded as appropriate between the child and the education offered to him. Education no longer entailed repressing the child's emotions and subjecting him to routine and drill; instead it was a natural process, with teachers doing little more than reinforce a biological development. The psychologists also reconciled two ideas which have been regarded as incompatible in recent educational literature: commitment to child-centred education and interest in the intellectual difference between children. R. H. Tawney summed up the scope and importance of this revolution in educational thinking with his customary eloquence:

Important as have been the changes in educational practice of the last generations, the most significant development has taken place in the sphere, not of action, but of thought. It has been the emergence of an independent body of educational doctrine, with canons of its own, based not on traditional lore or social conventions, but on a study of the manner in which nature deals with the young. The characteristics and needs of different phases of their growth are known today with a precision impossible in the past. Biological and psychological realities are coming slowly to their own. Education is regarded as a process designed, not to enable children to fit into the moulds, or acquire the formulae, thought desirable by adults, but to enable them when they are children to be healthy, and, if possible, happy children, in the faith that it serves their future best, in proportion as it assists them to make the most of the present.³

The troubled development of educational psychology also points to three rather more general themes in recent English history: the academic community's lethargy in the face of innovation and scepticism in response to the promise of a 'science of education'; the English ambivalence about meritocratic selection and social mobility; and the intimate connections between scientific theory – particularly biological theory – and wider issues of public policy and political passions.

The second half of the nineteenth century witnessed one of the most important revolutions in English educational history: the belated introduction of compulsory state education. In the twentieth century this revolution was gradually extended, so that after 1944 every child whose health permitted it remained at school until the age of fifteen. For the first time ever schoolteachers were confronted with the entire range of the school population, drawn from different social backgrounds and endowed with varying abilities. Educational psychologists provided important advice on this unprecedented problem, designing tests to distinguish between ability and training, and helping to deal with the delinquent and the difficult. In

³ R. H. Tawney, *Some Thoughts on the Economics of Public Education* (1931), p. 21.

particular, they provided invaluable help with the mentally subnormal. Teachers rapidly realised that a number of children were failing to profit from their education through no fault of their own: they simply lacked the intellectual ability. Psychologists distinguished between innate and environmentally induced backwardness; designed tests intended to rank children according to his innate ability; and classified the dull into several sub-groups, such as the subnormal and the backward.

The psychologists drew much of their inspiration from the burgeoning biological sciences. Whereas educational thought had once concentrated on the mechanics of teaching, it increasingly dealt with the child's natural development, turning itself from a 'mechanical to a biological art'.⁴ A passion of a few eccentric scientists in the mid nineteenth century, biology established itself as a major force in the twentieth, with its own departments, journals, and professoriates. Many intellectuals were wildly optimistic about the discipline, convinced that it might help to improve the human stock, and even technical debates amongst biologists caught the public eye. Henry Adams felt that 'the fall or rise of half a dozen empires interested a student of history less than the rise of the *Grammar of Science*'⁵ – a technical text by Karl Pearson, a biometrician at the University of London. For biology was rapidly becoming enmeshed with issues of politics and policy: the eugenics movement was only the most colourful of several attempts to translate the laws of natural selection into a social programme. Education is arguably the most interesting example of the influence of biological thought on social policy making.

Finally the book also tries to throw light on the rise of the meritocracy. It deals with the tendency of an advanced society to select able children for élite positions, and increasingly to equate ability with intelligence. The psychologists discussed below were obsessed with intelligence, hoping to construct an educational machine capable of training children according to their innate abilities. They believed firmly in equality of opportunity; everyone was to take an 'objective' test which would reveal their innate abilities. But they wanted opportunity to operate in a hierarchical and open-class society; and they felt that innate differences between children would ensure that more radical egalitarianism was nothing more than a fantasy. The influence of their work, together with the resistance to it and the eventual revolt against it, illuminates the highly ambivalent attitude of English society to the meritocratic ideal.

The historiography of this subject, although small until recently, has now entered a phase of rapid expansion. In general, it has been the work of historians of four very different kinds: professional psychologists; politically motivated polemicists; historians of science and medicine; and historians of education. Like the subjects of his work, the historian of educational psychology is caught between the often hostile worlds of psychology, medicine, education and politics.

⁴ Graham Wallas, *Men and Ideas* (1940), p. 134.

⁵ Ernest Samuels (ed.), *The Education of Henry Adams* (1918; 1973 ed.), p. 450.

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Psychologists have written a good deal on the history of their discipline, most notably short biographical and autobiographical sketches, profiles of institutions, and recollections of their relations with other subjects. In particular, the first generation of professional psychologists – the group at the heart of this book – devoted a good deal of time to historical reflection. Although their work forms an invaluable body of evidence, it suffers from a number of familiar problems, sacrificing analysis to celebration, and telling us little about the social context of scientific arguments; its approach is thoroughly ‘Whiggish’.⁶

Leslie Hearnshaw’s biography of Burt is undoubtedly the most interesting product of this historiographical tradition. The book started out as a formal act of piety to one of psychology’s founders: Hearnshaw delivered a funeral oration on Burt’s achievement⁷ and Burt’s sister Marion commissioned him to write an official biography. But newspaper charges about Burt’s professional dishonesty, which began to come out while Hearnshaw was at work, transformed his task, and forced him to produce a much more critical piece of historical research: too critical, perhaps.⁸ *Measuring the Mind* includes a considerable body of material on Burt; yet it differs from Hearnshaw’s work in several important ways. It deals with the public aspect of Burt’s life, and says almost nothing about his private life or mental state. It sets his work firmly in the context of the intellectual tradition he belonged to – the psychology of individual differences – and is as concerned to illuminate this tradition as to examine his personal contributions to it. Above all, it deals with many issues about which Hearnshaw said little or nothing, notably the eugenics movement and the meritocratic tradition.

Predictably enough, most of the literature on educational psychology suffers from an undisguised bias against the subject. Few scientists have aroused as much hostility as have the psychometrists. Their work has played a central part in two of the most acrimonious debates in recent intellectual history: the debate about sociobiology⁹ and the controversy over race and IQ.¹⁰ An astonishing number of

⁶ For biographical and autobiographical sketches, see C. Murchison (ed.), *A History of Psychology in Autobiography, Occupational Psychology*, esp. 22–3 (1948–9), and *Brit. J. Psych.* and *Brit. J. Educ. Psych.* for the year of death. For accounts of University Departments, see *Bull. Br. Psych. Soc.* (Nos. 9 and 10 deal with Oxford, No. 26 deals with Manchester, and No. 27 with University College, London). For histories of psychology written by psychologists, see J. C. Flugel, *A Hundred Years of Psychology* (2nd edn, 1951), and L. S. Hearnshaw, *A Short History of Psychology 1840–1940* (1964).

⁷ L. S. Hearnshaw, ‘Obituary: Sir Cyril Burt’, *Bull. Br. Psych. Soc.* Vol. 25 (1972), p. 86. See also, ‘Cyril Ludowic Burt, 1883–1971’, *Proceedings of the British Academy* Vol. 48 (1972), pp. 475–92.

⁸ L. S. Hearnshaw, *Cyril Burt, Psychologist* (1979). The preface (pp. vii–ix) provides an account of the writing of the biography.

⁹ The contemporary literature on the ‘sociobiology debate’ is extensive. For papers representing various points of view on sociobiology, see A. L. Caplan (ed.), *The Sociobiology Debate* (New York, 1978); T. H. Clutton Brock and P. H. Harvey (eds.), *Readings in Sociobiology* (Cambridge, 1978). For criticisms of sociobiology, see R. C. Lewontin, *The Genetic Basis of Evolutionary Change* (New York, 1974) and R. C. Lewontin, Steven Rose and Leon J. Kamin, *Not in Our Genes* (1984).

¹⁰ For criticisms of intelligence testing, see Brian Simon, *Intelligence Testing and the Comprehensive School* (1953) and *Education, Intelligence and Psychology* (1971); *The Politics of Educational Reform*

academics, including educationalists, biologists, sociologists and other psychologists, writing in a mind-boggling range of publications, have set out to blacken their motives and discredit their influence.

Some of the writings in this tradition are illuminating. In *The Science and Politics of IQ* (1974), Leon J. Kamin produces some spine-chilling quotations from the pioneers of American psychology. In *The Mismeasure of Man* (New York, 1981), Stephen Jay Gould suggests many important connections between craniometry and mental testing and presents some interesting interpretations of Burt's devotion to factor analysis. In *The Psychological Complex. Psychology, Politics and Society in England 1869–1939* (1985), Nikolas Rose provides some intriguing explanations of how 'psycho-eugenicists' like Burt and Spearman came to think as they did, focusing on broad intellectual movements, such as the rise of the idea that the population is a vital national resource, which governments neglect at their peril, and the spread of notions of efficiency and inefficiency. Brian Simon's work rests on formidable knowledge of English educational history. Yet too many of the works in this tradition suffer from the all-too-familiar failings of polemical history. They exaggerate the influence of psychologists on practical policy – policy-makers would have restricted immigration or supported selective education even if psychologists had reached different conclusions¹¹ – and ignore the intricacies of circumstance and context, mistaking consequences for intentions and sacrificing understanding to moral outrage. In other words, they tell us more about the campus politics of the 1960s and 1970s than they do about the history of psychology.

Several historians of biology have helped to reconstruct the intellectual world of psychometry. In particular, a small army of historians has reminded us of the eugenic dimension to the history of everything from family allowances to popular fiction.¹² In the first couple of decades after the Second World War, British

1920–1940 (1974), pp. 225–50; Leon J. Kamin, *The Science and Politics of IQ* (New York, 1974), and Kamin's contribution to *Intelligence: The Battle for the Mind: H. J. Eysenck versus Leon Kamin*, pp. 90–156 and pp. 172–187; N. J. Block and G. Dworkin (eds.), *The IQ Controversy* (New York, 1976); Stephen Jay Gould, *The Mismeasure of Man* (New York, 1981); B. Evans and B. Waites, *IQ and Mental Testing. An Unnatural Science and its Social History* (1981). See also Seymour B. Sarason, *Psychology Misdirected* (New York, 1981); and Samuel Bowles and Herbert Gintis, *Schooling in Capitalist America. Educational Reform and the Contradictions of Economic Life* (New York, 1976), esp. pp. 114–24. For a particularly sophisticated and persuasive statement of this case, see Clarence J. Karier, 'Testing for Order and Control in the Corporate Liberal State', reprinted in Block and Dworkin (eds.), *The IQ Controversy*, pp. 339–73.

¹¹ Franz Samelson, 'On the Science and Politics of the IQ', *Social Research* Vol. 42 (Autumn 1975), pp. 467–88. See also Samelson, 'Putting Psychology on the Map: Ideology and Intelligence Testing', in Allan R. Buss (ed.), *Psychology in Social Context* (New York, 1979). For a revisionist account of American psychology, see Michael M. Sokal (ed.), *Psychological Testing and American Society 1890–1930* (Rutgers, 1987). For a revisionist account of American sociobiology, see Carl N. Degler, *In Search of Human Nature. The Decline and Revival of Darwinism in American Social Thought* (1991).

¹² See, for example, Daniel Pick, *Faces of Degeneration. A European Disorder c.1848–c.1918* (Cambridge, 1989), pp. 155–75. Cf. Jonathan Harwood, 'Genetics, Eugenics and Evolution', *British Journal for the History of Science* Vol. 22, No. 74 (September 1989), p. 261.

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historians all but ignored eugenics – as though it was a German invention attractive only to the most unhinged and unpatriotic Englishmen. The few books on the subject were dutiful studies by aging eugenicists.¹³ But in 1969 Lyndsay Farrall pointed out, in a much-quoted PhD thesis, that eugenics was invented in England and excited the enthusiasm of generations of English intellectuals.¹⁴ Since then the studies have poured from the printing presses.¹⁵ In particular, Bernard Norton and Donald Mackenzie have examined the works of Galton and Pearson, traced the development of British statistics, and emphasised the connections between scientific thought and social interests.¹⁶ More recently, Daniel Kevles has reconstructed the biographies of leading eugenicists, traced the rise of a ‘reform eugenics’ which criticised psychometric orthodoxy, and charted the recent revival of sociobiology.¹⁷

Not surprisingly, a few historians of education have found intelligence tests worthy of detailed examination. In particular, Gillian Sutherland’s *Ability, Merit and Measurement* (1984)¹⁸ examines in meticulous detail a problem which is closely connected – indeed, which often intersects with – the problem explored in this study. Yet, despite superficial resemblances, this study differs in its central preoccupations from Sutherland’s book. Here we are concerned with the development of the profession of educational psychology, with changes in psychologists’ understandings of children’s mental development, and with the ‘political’ commitments of the psychologists. Sutherland’s book, although it contains much invaluable information on both of these themes, is primarily concerned with the applications of the theory of mental measurement to the practice of educational selection.

¹³ C. P. Blacker, *Eugenics: Galton and After* (1952) is the best of the breed.

¹⁴ This dissertation has finally been published. See Lyndsay Farrall, *The Origins and Growth of the English Eugenics Movement 1865–1925* (New York, 1985).

¹⁵ See, for example, G. R. Searle, *Eugenics and Politics in Britain 1900–1914* (Leyden, 1976); *Annals of Science*: Special issue on Eugenics in Britain, esp. Lyndsay Farrall, ‘The History of Eugenics: A Bibliographical Review’, *Annals of Science* Vol. 36 (March 1979), pp. 111–23; Lyndsay Farrall, *The Origins and Growth of the English Eugenics Movement 1865–1925* (Ann Arbor: Univ. Microfilm, 1970); Donald Mackenzie, ‘Eugenics in Britain’, *Social Studies of Science* Vol. 6 (1976), pp. 499–532; Pauline M. H. Mazumdar, *Eugenics, Human Genetics and Human Failings. The Eugenics Society, its Sources and its Critics in Britain* (1992); Elazar Barkan, *The Retreat of Scientific Racism. Changing Concepts of Race in Britain and the United States Between the Wars* (Cambridge, 1992).

¹⁶ See, for example, B. J. Norton, ‘Metaphysics and Population Genetics: Karl Pearson and the Background to Fisher’s Multi-factorial Theory of Inheritance’, *Annals of Science* Vol. 32 (1975), pp. 537–53; ‘Karl Pearson and Statistics: The Social Origins of Scientific Innovation’, *Social Studies of Science* Vol. 8 (1978), pp. 3–34; and ‘Karl Pearson and the Galtonian Tradition: Studies in the Rise of Quantitative Social Biology’, PhD thesis, University of London, 1978. D. Mackenzie, *Statistics in Britain 1865–1930. The Social Construction of Scientific Knowledge* (1981). See also Charles Webster (ed.), *Biology, Medicine and Society* (Cambridge, 1981).

¹⁷ Daniel Kevles, *In the Name of Eugenics. Genetics and the Uses of Human Heredity* (New York, 1985). The essay on sources (pp. 383–405) is an excellent guide to the growing literature. See also Farrall, ‘The History of Eugenics: A Bibliographical Review’, pp. 111–23.

¹⁸ Gillian Sutherland, *Ability, Merit and Measurement: Mental Testing and English Education* (Oxford, 1984).

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The spread of competitive examination and meritocratic appointment has attracted less attention than it deserves. The best general introduction to the subject is Michael Sanderson's *Educational Opportunity and Social Change in England* (1987). John Roach's *Public Examinations in England* discusses the establishment of the competitive principle, the spread of the Oxford and Cambridge local examinations, and the rise of the civil service examinations.¹⁹ It is particularly good on contemporary criticisms of examinations – criticisms which were to be reiterated in rather less eloquent terms by opponents of IQ testing. Keith Hope's unpublished book on *The Political Conception of Merit*²⁰ has been a valuable guide to this subject; in particular, it stresses the close links between Thomas Babington Macaulay, Francis Galton, and the psychometrists. Unexplored until Hope's work, these links help both to explain the origins of a number of ideas at the heart of educational psychology and to clarify the reforming intentions of the psychometrists.

The history of more recent educational history has been a boom business of late, as scholars try to explain the breakdown of the progressive consensus and the rise of the new right. How did the ideals of comprehensive education and child-centred teaching become tarnished? Why did increased investment in education fail to generate economic growth and diminish social inequality? How did the neo-conservatives seize the intellectual initiative from the Butskellite establishment? Such major issues are now being intensively researched and hotly debated. Much of this writing is polemical in tone and neo-Marxist in method: at once elegiac about the comprehensive experiment and critical of subsequent reforms.²¹ Too much of the rest is new-right polemic rather than dispassionate history. But there are still some excellent books being written.²² In *An Educational War on Poverty*, Harold and Pamela Silver have provided an authoritative account, based on exhaustive reading and enlivened by numerous interviews, of an Anglo-American bid to use educational resources to solve social ills.²³ Brian Simon has synthesised a huge range of primary material, though he interprets it from a perspective rather different from my own.²⁴ Writing from a rather different ideological perspective,

¹⁹ John Roach, *Public Examinations in England* (Cambridge, 1971). Roach continues his account in 'Examinations and the Secondary Schools 1900–1945', *History of Education* Vol. 8 (1979), pp. 45–58.

²⁰ Keith Hope, *The Political Conception of Merit* (to be published by Russell Sage). See also *As Others See Us: A Study of Merit, Advantage and Deprivation in Scotland* (Cambridge).

²¹ Clyde Chitty, *Towards a New Education System: The Victory of the Right* (Lewes, 1989); Ken Jones, *Right Turn. The Conservative Revolution in Education* (1989).

²² Unfortunately, Britain is still not as well served as the United States with balanced general accounts of educational reform. See, for example, Thomas Toch, *In the Name of Excellence. The Struggle to Reform the Nation's Schools, Why It's Failing, and What Should Be Done* (Oxford, 1991).

²³ Harold and Pamela Silver, *An Educational War on Poverty. American and British Policy-making 1960–1980* (Cambridge, 1981).

²⁴ Brian Simon, *Education and the Social Order 1940–1990* (1991).

Introduction

Christopher Knight has produced a meticulously researched account of origins of recent Tory educational thinking.²⁵

The discussion here is confined to England and Wales for three main reasons. It is concerned with the relationship between psychological theory and educational practice – with the ways in which new ideas were taken up by policy makers and put into practice by local officials. It examines a peculiarly English aversion to the development of a new academic discipline, particularly when that discipline threatened to extend scientific methods to a realm which had previously been reserved for ‘common sense’. Above all, it tries to analyse the highly ambivalent English reaction to the ideal which underpinned the work of these psychologists: ‘the political conception of merit’. England’s failure to commit itself wholeheartedly to industrialism and capitalism is reflected in its fears about ‘social mobility’ and the ‘rise of the meritocracy’. Scotland is omitted because its education system was distinct from England’s, and because it was much more open to both the academic study of educational psychology and the meritocratic ideal; it is consequently a useful comparative study rather than an integral part of the main discussion. But the numerous links between England and Scotland have forced a certain widening of focus. In particular, Godfrey Thomson has been lumped together with the English psychologists (despite the fact that he spent most of his working life in Edinburgh) because he was English in origin, even calling his autobiography ‘The Education of an Englishman’. He profoundly influenced the leading debates within the psychometric movement; and his intelligence tests, the Moray House Tests, were more widely used than any other kinds of tests in inter-war England. Indeed, the international nature of educational psychology is one of its most interesting features. New ideas about children and education, and about the proper relationship between the two, flourished on the continent and in the United States, and were eagerly watched and rapidly absorbed in England. Paradoxically, then, the focus on a single national community illustrates the international nature of this particular scientific movement.

The analysis makes use of four historical methods: an examination of the personal and professional lives of a generation or so of psychologists; an analysis of the institutions of the Child Study movement, the British Psychological Society and other organisations which aided the growth of the discipline; a study of the impact of psychological theory on official policy making; and a reconstruction of the intellectual lives of these psychologists (and, in the process, of their critics). It is thus, at different points, an exercise in prosopography, in institutional history. The prosopographical sections rest on the numerous biographical and autobiographical writings of these psychologists. Particular emphasis is placed on Burt’s work because of the unique quality of his papers as well as his central (and controversial) role in the development of the subject. The institutional histories

²⁵ Christopher Knight, *The Making of Tory Education Policy in Post-War Britain 1950–1986* (Lewes, 1990).

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draw on numerous well-stocked institutional archives, while the remarks on the formation of educational policy rest on the papers on the Board of Education's Consultative Committee. The intellectual history of psychology draws on a wide range of writings published throughout this period.

The narrative sets the development of psychological theory in the context of professional self-interest and social policy making. It explores the links between the pursuit of jobs and the production of ideas and between political interest and scientific arguments. It examines the psychologists' career patterns and immediate professional environments – their reasons for turning to psychology and their relations with other scientific communities – and also emphasises the influence which considerations of political policy and personal status exercised over the discipline's development; in other words, it is a history of ideas in their numerous contexts. Psychologists spent much of their time trying to satisfy an official demand for an objective classification of the child population; and they responded to snubs from members of established scientific communities by emphasising the quantitative aspects of their work.

Measuring the Mind tries to avoid the crude reductionism which sees ideas as the mere epiphenomena of 'social' and 'material' forces. Two standard positions in the historiography of science are considered and rejected. The first of these sees science as an instrument of the social interests of a monolithic group: the capitalist class or, in more sophisticated versions, the professional middle class. The second looks upon ideas as vehicles of self-interested professionals, advanced in so far as they serve their careers and rejected whenever they fail to do so. Such arguments tend to replace the 'logic of scientific discovery' popular in more traditional accounts of scientific innovation with the 'logic of social interests'. Yet, as James D. Watson has emphasised, 'science seldom proceeds in the straightforward manner imagined by outsiders. Instead, its steps forward (and sometimes backward) are often very human events in which personalities and cultural traditions play major roles.'²⁶ In particular, the contingent and the eccentric played an important part in the discipline's development. Indeed, the first generation of professional psychologists often found themselves teaching the subject more by accident than by design. Burt wanted to read medicine, was trapped by the conditions of his scholarship into reading classics, but found that psychology had been incorporated into the classics syllabus. Thomson obtained a PhD in physics in Germany but found that the conditions of his scholarship required him to teach in an English school or training college.

The narrative starts with an account of the Child Study movement – a late Victorian flourishing of interest in the child population which inspired numerous studies of child development and attracted some of the key inter-war psychologists into the subject. The movement was rooted in two distinct intellectual develop-

²⁶ James D. Watson, *The Double Helix: A Personal Account of the Discovery of DNA* (New York, 1980 edn), p. xi.

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ments: concern about the quality of the child population and interest in the details of natural human development. The late Victorian period generated a widespread concern about the future of the British population. The social survey movement produced startling information about the 'condition of England question'; the introduction of compulsory elementary education exposed the full range of handicaps in the child population. The Child Study Association focused instead on children's mental lives; its leading member, James Sully, managed to write several important studies of child development and to link the movement with the growing profession of academic psychology.

Academic psychology was, however, soon to render Child Study redundant. The modern profession of educational psychology drew on three other sources: the problem of the mentally handicapped; the quest for a science of education; and the academic world's indifference to the claims of psychology. The introduction of mass schooling confronted education authorities with numerous difficult and backward children, and they increasingly looked to psychologists for advice and assistance. At the same time, status-hungry teachers were gripped by an enthusiasm for a 'science of education': the experimental pedagogy movement, which flourished among Edwardian educationalists, thus anticipated many of the main features of educational psychology. Finally, the universities' indifference to the new discipline often forced its practitioners to work in applied areas.

Cyril Burt was arguably the most important and undoubtedly the most controversial member of the first generation of professional psychologists. The range of his interests, combined with the quality of his individual contributions, ensured that he exercised a formative influence over the subject's development. His main concern lay with the psychology of individual differences – that is, with analysing and measuring variations in ability in the human population. Invented by Francis Galton, systematised by Karl Pearson, and applied to psychology by Charles Spearman, the science of individual differences found its ideal material in the school population. Burt's appointment in 1913 to the post of official psychologist to the London County Council (the first of its kind anywhere in the world) provided him with a unique opportunity to test his theory on a large group of children. Over the next nineteen years he accomplished an extraordinary amount of work, adapting intelligence tests to English children, examining exceptional children, and providing guidance for the delinquent and instruction for the backward. Yet, as he won promotion within the profession, he increasingly lost contact with individual children and spent his time dealing with mathematical abstractions and genetic theory. Most of his later work was devoted to exploring and defending three key arguments: that intelligence is innate; that a general factor enters into every type of cognitive process; and that ability and social position are closely related. His central position within the profession ensured that these interests were at the very heart of the discipline.

Susan Isaacs was perhaps the next most important English child psychologist.

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She produced important studies of children's intellectual and social development; founded an experimental school – the Malting House School in Cambridge – and established the Department of Child Development at the London Institute of Education; and acted as a tireless propagandist for the nursery school movement. Her intellectual interests provide an interesting contrast with those of Burt. Her main concern lay with children's intellectual and emotional development; and she did more than any other English psychologist to popularise the work of Jean Piaget, Sigmund Freud and Melanie Klein.

As Burt's career demonstrates, the profession was divided into two branches, an academic branch based on the teacher training colleges and universities, and a practical branch based in the school psychological services and child guidance clinics. In practice, there was a considerable degree of overlap between the two. Academics did some work for the LEAs, while applied workers tried to combine research with their more practical duties. Both branches of the profession tended to be starved of resources. The parsimony of the universities forced academics to rely on the support of the medical profession and of voluntary bodies such as the National Institute of Industrial Psychology, the British Psychological Society and the Eugenics Society. Shortage of money and administrative confusion hampered the development of applied psychology; psychologists only slowly found their way into local school services and child guidance clinics.

Psychologists also had to cope with the snobbery and scepticism of more established professions. Many scientists and philosophers dismissed the subject as a sham, while educationalists were often suspicious of 'experts' and reluctant to abandon established techniques. The discipline's marginal position in English professional life had a profound impact on its development: it encouraged psychologists to loosen their contacts with children and to model themselves on pure scientists; and it ensured that the subject's institutional development in England lagged behind that in the United States and Scotland. And yet English psychologists excelled their foreign counterparts in one important area of their work: advising the central administration on the psychological basis of education.

The psychologists drew their political inspiration from the meritocratic ideal: the idea that individuals should be judged by their personal worth rather than their family connections or class backgrounds. The concept was first given social significance by the intellectual aristocracy, a powerful group of families who used it in their prolonged campaign to permeate aristocratic institutions. Francis Galton, who was a central member of this 'aristocracy', helped to transmit this philosophy into the mainstream of modern psychology. Although the meritocratic ideal was anti-egalitarian in its implications, it also clashed sharply with the unmeritocratic structure and anti-meritocratic values which characterised England between the wars; the meritocrats were consequently forced into a somewhat uneasy alliance with the political left. Attracted to the meritocratic ideal by their personal backgrounds and professional experiences, the psychologists owed their positions

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to their success in climbing the scholarship ladder; earned their living by selling their intellectual expertise; and believed in the virtues of hard work and clear thinking. Consequently, they tended to be critical of the injustices of the established order but contemptuous of the claims of the egalitarians. Meritocratic social reform seemed to offer both individual justice and a chance of national efficiency.

The Board of Education's Consultative Committee provided psychologists with an ideal chance to influence the formation of educational policy. The Committee published a remarkable cycle of reports on the central problems of the educational system – the use of intelligence tests in schools, the education of adolescents, primary schoolchildren and infant schoolchildren, the organisation of secondary schools, and the training of the mentally deficient – and in all of them psychologists acted as influential witnesses or eloquent drafters. Psychologists who were associated with the London Institute of Education, the London County Council, and University College, London, enjoyed particular pre-eminence among the Committee's witnesses; and Burt's connections with these three bodies ensured that he had considerable influence on the contents of the reports. And yet the reports were not simply pieces of crude propaganda for the technology of mental measurement, and they included detailed analyses of children's mental and emotional development.

Official educational policy was certainly not 'psychological theory in action' – the Board of Education questioned and modified the work of its Committee, the Local Education Authorities enjoyed considerable autonomy in deciding on policy, and the Norwood Report of 1943 undermined the influence of the psychologists – but psychological argument remained important throughout this period, and long after. The report's wide readership ensured that many teachers looked to psychologists for scientific advice on children's mental and emotional make-up. The 1944 Education Act finally gave legislative substance to some of the psychologists' key beliefs; more importantly still, the pervasive influence of their work helped to shape the interpretation of this rather open-ended legislation.

After the Second World War both mental measurement and the meritocratic ideal became increasingly unpopular. Sociologists argued that mental tests favoured middle-class children; psychologists questioned the idea that intelligence was a unitary and inherited quality; and cultural critics such as Raymond Williams and Michael Young cast doubt on the desirability of meritocratic mobility. Equality of outcome replaced equality of opportunity as the shibboleth of many radical intellectuals. Finally, the Labour leadership put its weight behind the burgeoning comprehensive movement. The destruction of Burt's reputation was thus the climax of a sustained assault on the central tenets of inter-war educational psychology.

And yet, even as this new orthodoxy was implanted in the popular mind and implemented in public policy, a sustained and articulate reaction set in. Egalitarian policies failed to live up to the promises made for them; progressive teaching

alienated numerous parents; and a small but influential group of intellectuals in both Britain and America began to turn with renewed enthusiasm to both merit and measurement. Psychologists, reacting against the environmentalist orthodoxy, began to reconsider the theory behind IQ testing; biologists, sceptical about the unqualified sociological explanations popular in the universities, suggested alternative biological explanations; educators, disgusted with the impact of progressive education on the quality of teaching, called for a return to more traditional 'standards'; revisionist historians, puzzled by problems in the case against Cyril Burt, re-examined the evidence and pronounced him innocent; and neo-conservative intellectuals, distressed by what they took to be a subversion of liberalism from within, emphasised the merits of equality of opportunity over equality of outcome.

The history of educational psychology points to the intimate links between psychological theory and more general issues of policy and politics. The Child Study movement reflected fears about the deterioration of the race and the multiplication of the defective; the study of individual differences was motivated, at least in part, by a passion for eugenic reform. Intelligence tests were used in selecting children for different types of secondary education, while the theory that individuals differ in their innate abilities was one of the most fiercely debated subjects of the post-war period. And psychologists usually relished their involvement in central policy making and local decision taking.

Yet psychology developed in a highly eccentric manner in England; and it served no simple set of interests or imperatives. Educational psychologists tended to be progressive in their approach to education and meritocratic in their attitudes to the social structure. Their work was the final and most elaborate manifestation of the Whig mission to reform selection into established English institutions. But it soon lost some of its more polemical overtones: an overtly political idea, forged in the struggle for power between a landed clique and an intellectual aristocracy, was transformed into a sophisticated scientific theory, tested in the laboratory and taught in the lecture room. It was frequently used to decide on the distribution of welfare to the backward rather than to determine the allocation of élite positions; a technique for capturing power was thus transformed into a means of selecting those least likely to possess power in any industrial community. Although the political reputation of testing has been bound up with the issue of educational selection, psychometrists demonstrated that there are no hard and fast divisions between one group and another, and many of them opposed educational selection.

Despite the sophistication of their arguments, few groups of experts have aroused as much political hostility as these psychologists. Their insistence on the innate inequality of man has prejudiced most modern commentators against them. Educationalists have accused them of preserving a divisive system of selection; left-wing sociologists have suggested that they distorted 'science' in order to justify social inequalities; and a number of psychologists have argued that their obsession

with statistics blinded them to the most interesting aspects of child development. The idea that they were conservative in their politics and traditionalist in their approach to education has become a contemporary orthodoxy.

The quarrels at the heart of this book – is educational selection fair and efficient? are intelligence tests accurate? is individual ability determined more by nature than nurture? – show no signs of losing their ability to divide opinions and excite emotions. On the contrary: they are probably more intellectually engaging and politically significant now than they have been for several decades.

Educational selection is on the rise once again. The 1988 Education Act set in motion a series of changes – a national curriculum monitored by regular examinations; open enrolment and pupil-driven funding; the publication of examination results and the production of league tables comparing the performance of schools – which will inevitably re-introduce selection, albeit a much more complicated and fragmented system of selection than the 11-plus. Schools will increasingly compete for pupils in a bid to boost (or preserve) their income; parents will scan league tables of results and try to get their children into the top-scoring schools. The best schools will try to take the brightest pupils, in order to improve their exam results, and expand their list of clients, still further. The question will not be whether to select, but when and how. No doubt many commentators will once again praise the virtues of IQ tests.

Selection is only the tip of the iceberg. Over the last decade or so, a small but immensely prolific group of dissident academics has succeeded in reviving the hereditarian case, publishing fresh data, winning new converts, reviving old arguments, igniting angry controversies and, in the process, influencing public debate and political opinion.²⁷ The likes of Arthur Jensen and Hans Eysenck have insisted that IQ tests are reasonable measures of intelligence and that intelligence owes more to inheritance than to environment.²⁸ (Their views command a much larger section of the scientific community than journalistic comment has led us to expect.²⁹) The Minnesota Centre for Twin and Adoption Studies, which carried out the largest and most thorough study to date of twins which had been reared apart, has discovered that about 70 per cent of the variance in IQ was associated with genetic variation.³⁰ More strikingly still, the new hereditarians have also revived a number of sociobiological arguments which had been intensely unpopular since the late 1950s. James Q. Wilson and Richard Herrnstein have produced

²⁷ For a sympathetic account of the revival of the IQ debate in the United States see Daniel Seligman, *A Question of Intelligence. The IQ Debate in America* (New York, 1992).

²⁸ The continued importance of both writers can be gauged by reading Sohan Modgil and Celia Modgil (eds.), *Arthur Jensen. Consensus and Controversy* (1987) and Sohan Modgil and Celia Modgil (eds.), *Hans Eysenck. Consensus and Controversy* (1987).

²⁹ Mark Synderman and Stanley Rothman, *The IQ Controversy: The Media and Public Policy* (New Brunswick, New Jersey, 1988).

³⁰ Thomas J. Bouchard *et al.*, 'Sources of Human Psychological Differences: The Minnesota Study of Twins Reared Apart', *Science* Vol. 250 (12 October 1990), pp. 223–8.

biological explanations of crime.³¹ J. Philippe Rushton, an Englishman who teaches at the University of Western Ontario, Canada, has even argued that races differ in numerous heritable capacities, including head size.³² Richard Herrnstein is now collaborating with Charles Murray on a major study of individual differences and public policy in the United States.³³ With two such well-known academics at work on such a controversial subject, the science of individual differences is destined to occupy a huge amount of intellectual energy on both sides of the Atlantic in the next decade or so.

The story is made all the more intriguing by the dispute about one of the leading architects of educational psychology, Sir Cyril Burt.³⁴ On his death Burt was hailed as a great psychologist, a pioneer of his discipline, a polymath of renaissance proportions, a paragon of scientific virtues.³⁵ But within a decade of his death Burt was widely castigated as one of the most notorious forgers in academic history, a con-man who systematically invented research findings in order to justify educational selection and eugenic breeding. *The Sunday Times* went so far as to label the case against Burt 'the most sensational charge of scientific fraud this century'.³⁶ An official biography by Leslie Hearnshaw vindicated his critics and embarrassed his defenders.³⁷ But this was not the end of the story. In the early 1980s Robert Joynton, a psychologist, and Raymond Fletcher, a sociologist, working entirely independently of each other, began to re-examine the evidence. As they worked, they became increasingly sceptical of the evidence for the prosecution. The result was two books, containing more than 750 pages of closely written and carefully reasoned argument, which have done a good deal to restore Burt's reputation.³⁸

The evidence examined in the following pages suggests that Burt's is not the only reputation which needs to be rethought. For the psychologists who dominated educational thinking for much of this century were meritocrats rather than conservatives and progressives rather than traditionalists. They combined a passion

³¹ James Q. Wilson and Richard J. Herrnstein, *Crime and Human Nature* (New York, 1985), p. 24.

³² See, for example, J. Philippe Rushton, 'Race Differences in Behaviour: A Review and Evolutionary Analysis', *Personality and Individual Differences* Vol. 9, No. 6 (1988), pp. 1,009–24.

³³ Michael Prowse, 'Monday Interview: How to be Cruel to be Kind. Michael Prowse Talks to American Social Scientist Charles Murray', *Financial Times*, 2 April 1990, p. 38.

³⁴ The best introduction to the debate is Arthur Jensen, 'IQ and Science: the Mysterious Burt Affair', *The Public Interest* No. 105 (Fall 1991), pp. 96–7.

³⁵ L. S. Hearnshaw, 'Cyril Lodowic Burt 1883–1971', *Proceedings of the British Academy* Vol. 48 (1972), p. 492; Arthur Jensen, 'Sir Cyril Burt (1883–1971)', *Psychometrika* Vol. 37, No. 2 (June 1972), p. 116.

³⁶ O. Gillie, 'Crucial Data was Faked by Eminent Psychologist', *The Sunday Times*, 14 October 1976. See also O. Gillie, 'Sir Cyril Burt and the Great IQ Fraud', *New Statesman*, 24 November 1978, p. 694 (c).

³⁷ Hearnshaw, *Cyril Burt, Psychologist* (1979). See also Hans Eysenck, 'Burt's Warped Personality led Inevitably to Fraud', *The Listener*, 29 April 1982, pp. 2–3.

³⁸ Robert B. Joynton, *The Burt Affair* (1989); Raymond Fletcher, *Science, Ideology and the Media* (1991).

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for measurement with a commitment to child-centred education. Their work was inspired by a desire to open admission to established institutions to able children, regardless of their social origins, and to base education on the natural process of child development. They found their most articulate supporters on the left and their most stubborn opponents on the right. In theory, their arguments were subversive of the social hierarchy; and in practice they provided important opportunities for able working-class children to rise into the élite.

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Looking back on the origins of educational psychology from the vantage point of 1923, P. B. Ballard singled out the Child Study movement for particular attention:

Towards the close of last century a few ardent educationalists, seeing the need for a scientific study of the growing mind, started what was known as the Child Study movement. They made wide and searching inquiries, they bombarded home and school with questionnaires, they collected and collated a multitude of facts only a small portion of which will ever be published. It is rumoured that in the store rooms of Clark University ... there are tons and tons of documents awaiting the directive mind that will reduce them to order, or, as is more likely, the incendiary hand that will reduce them to ashes.¹

The movement spawned several organisations which were exclusively devoted to studying child development – the most notable were the Childhood Society, the Child Study Association, and the Child Study Society – and published a mass of material on children and education at a time when the literature on the subject was limited and opportunities for publication restricted.² It engaged the enthusiastic support of several people who were destined to exercise a commanding influence over the development of psychology, notably Sully, Winch, Ballard, and Burt, and tried to influence policy towards children, particularly towards the feeble-minded, presenting evidence to Royal Commissions, Departmental Committees of the Education Department, the Home Office, and the Local Government Board, sending witnesses to appear before the Departmental Committee on Physical Deterioration, and despatching a deputation to the Prime Minister, Sir Henry

¹ P. B. Ballard, *The New Examiner* (1923), pp. 18–19.

² On the movement, see A. G. Caws, 'Child Study Fifty Years Ago', *Bull. Br. Psych. Soc.* Vol. 1, No. 3 (1949), pp. 104–9; L. S. Hearnshaw, *A Short History of British Psychology 1840–1940* (1964), pp. 268–70; D. E. Bradbury, 'The Contributions of the Child Study Movement to Child Psychology', *Bull. Br. Psych. Soc.* Vol. 34 (1937), pp. 21–38; W. Dennis, 'Historical Beginnings of Child Psychology', *Bull. Br. Psych. Soc.* Vol. 45 (1949), pp. 224–35; K. Stevens, 'Child Study in Great Britain', *Journal of Genetic Psychology* Vol. 13 (1906), pp. 245–9; R. J. W. Selleck, *The New Education. The English Background 1870–1914* (1968), pp. 277–86. The most notable periodicals were *The Paidologist*, the *Proceedings of the Child Study Association* (London), and *Child Study*,

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Campbell-Bannerman. It helped to shape public opinion in general, and the opinion of the medical and teaching professions in particular, through its study groups, discussion meetings, public lectures, popular publications and frequent letters to the national press. In particular, it popularised Stanley Hall's work, turning him into the most widely known foreign psychologist in late-Victorian and Edwardian England.

Child study owed its inspiration to several disparate social and intellectual developments: a startled recognition that mental and physical handicaps were widespread among children; a widespread anxiety among politicians and social commentators about the degeneration of the British population; a mounting concern among teachers to base education on the needs of children rather than on the demands of academic tradition; a conviction among biologists and natural historians that there was a close affinity between the development of the child and the development of the race; a spontaneous interest among significant sections of the educated public in Stanley Hall's genetic psychology; and, more generally, to a mounting popular interest in the peculiar mental qualities and emotional needs which distinguished children from adults: in short, to a heady combination of utilitarian calculation and romantic sentiment.³

The spectre of racial deterioration

The Child Study movement grew out of mounting public concern about the health and efficiency of the British population. From the 1860s onwards, middle-class reformers became increasingly worried about the tension between the growing prosperity of an imperial nation, on the one hand, and the persistent poverty, ignorance and vice of the urban proletariat, on the other.⁴ In particular, the 1880s witnessed the 'rediscovery of the condition of England question' – an outbreak of soul-searching and doom-mongering within the political nation. Investigators set about uncovering 'the other England' by means of social inquiries, statistical surveys and parliamentary commissions. A series of monumental social surveys and parliamentary reports – the *Report of the Royal Commission on the Housing of the Working Classes* (1884–5), the *Report of the House of Lords' Select Committee on 'Sweating'* (1890), Booth's *London Life and Labour* (1891), and the series of inquiries into 'Dangerous Trades' launched by the Board of Trade in the early 1890s – succeeded in placing 'the condition of England question' at the heart of the political debate.

³ On the last theme, see Ivy Pinchbeck and Margaret Hewitt, *Children in English Society* (1973), II; James Walvin, *A Social History of Childhood, 1800–1914* (Harmondsworth, 1982); Thea Vigne, *Edwardian Childhoods* (1977); S. J. D. Green, 'The Religion of the Child in Edwardian Methodism: Institutional Reform and Pedagogical Reappraisal in the West-Riding of Yorkshire', *Journal of British Studies* Vol. 30, No. 4 (Oct 1991), pp. 377–98.

⁴ Daniel Pick, *Faces of Degeneration. A European Disorder c.1848–c.1918* (Cambridge, 1989), pp. 189, 200.

This debate was increasingly conducted in the language of social darwinism.⁵ The doctrine of the survival of the fittest, which Victor Berard felt had 'entered into the very bones of the nation',⁶ reinforced widespread fear about the deterioration of the British race. Some demographers argued that the overall decline in fertility after 1870 would leave Britain short of its most valuable resource – people.⁷ To many editorial writers this spelt nothing less than 'race suicide'.⁸ Other demographers focused on quality rather than quantity, arguing that the inverse relationship between the birth rate and social standing would lead to a progressive decline in the quality of the population.⁹

The English were not unique in these morbid preoccupations. In America and continental Europe, the intelligentsia was equally petrified by the prospect of racial degeneration; indeed, 'degeneration' was arguably the most potent concept in the medical and biological sciences of the period.¹⁰ To us, the nineteenth century may look like an age of improvement and progress; to many contemporaries, however, it was an age of atavism and degeneration.¹¹ Industrial capitalism, social mobility, giant cities, swelling crowds, all these, it seemed, were debasing the human stock, imposing intolerable strains on the industrious, ruining the rich through a surfeit of civilisation, and encouraging the vicious to breed to excess.¹² In France, the low birth rate led to fears of racial extinction, and the popularity of Lamarckianism provoked worries that poor social conditions were bringing biological ruin.¹³ In Italy, Cesare Lombroso won a huge audience for his writings, with their hair-raising warnings about the return of the primitive, and their painstaking portraits of some of the most worrying of these returnees, 'natural criminals'.¹⁴ In Germany, fear of racial deterioration shaped a gamut of academic disciplines, from medicine to anthropology, while the quest for racial purity inspired social policies galore, from school medical inspection to mass sterilisation.¹⁵ In the United States, eugenics proved so popular that thirteen states had legalised sterilisation for

⁵ 'Social darwinism' is notoriously difficult to define. See R. J. Halliday, 'Social Darwinism – a Definition', *Victorian Studies* Vol. 14 (1971), pp. 388–405; J. A. Rogers, 'Darwinism and Social Darwinism', *Journal of the History of Ideas* Vol. 33 (1972), pp. 265–80; J. C. Greene, 'Darwin as a Social Evolutionist', *ibid.* (1977), pp. 1–27.

⁶ Victor Berard (1906), quoted in Bernard Semmel, *Imperialism and Social Reform. English Social-Imperial Thought 1895–1914* (1960), p. 29. See also Pick, *Faces of Degeneration*, p. 178.

⁷ Richard A. Soloway, *Demography and Degeneration. Eugenics and the Declining Birthrate in Twentieth-Century Britain* (Chapel Hill, 1990), pp. 3–10. See also Soloway, *Birth Control and the Population Question in England, 1877–1930* (Chapel Hill, 1982), pp. 3–24.

⁸ Soloway, *Demography and Degeneration*, p. 5.

⁹ Soloway, *Demography and Degeneration*, pp. 10–20. See also Soloway, *Birth Control and the Population Question*, pp. 25–48. ¹⁰ Pick, *Faces of Degeneration*, p. 20. ¹¹ *Ibid.*, p. 2.

¹² *Ibid.*, pp. 20, 158.

¹³ *Ibid.*, pp. 37–108; William H. Schneider, *Quality and Quantity. The Quest for Biological Regeneration in Twentieth-Century France* (Cambridge, 1990), especially pp. 1–54.

¹⁴ Pick, *Faces of Degeneration*, pp. 109–52. Pick rightly warns against treating Lombroso, a sometime member of the Socialist Party, as one of the prime exhibits in an historical freak show. *Ibid.*, p. 111.

¹⁵ See Paul Weindling, *Health, Race and German Politics Between National Unification and Nazism, 1870–1945* (Cambridge, 1989).

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criminals and mental defectives by 1915, and thirty states by 1930.¹⁶ Throughout the advanced world respectable intellectuals insisted that the only way to prevent evolution from going into reverse was to separate the degenerate from the rest of society, through segregation, or to prevent them from contributing to future generations, through sterilisation.

Anyone who wanted evidence to confirm the deterioration thesis was spoilt for choice. The work of social investigators such as Rowntree and Booth confirmed the suspicion that the poor were prolific breeders. American family studies, such as that of Martin Kallikak, who 'married a worthy Quakeress' but 'dallied with a feeble-minded tavern girl', seemed to provide international support for the thesis that poverty, insanity and crime were caused by hereditary degeneration.¹⁷ Belief in racial deterioration was such a commonplace that Lady Bell recalled that she came across it daily.¹⁸ Arthur Newsholme found it hard to battle against: 'the statement that our national physique is degenerating has been so frequently made and so vigorously repeated that if one doubts this fundamental point it is against the weight of public statements made in nearly every journal with confidence and assurance'.¹⁹

The rise of a quartet of great powers – Russia, America, Germany and Japan – deepened domestic anxieties. These anxieties came to a head in the aftermath of the Boer War.²⁰ The news that nearly half a million British and colonial soldiers, supported by military funds of some £200 million, had failed to defeat an enemy whose total population – women, children and old men included – amounted to scarcely one-fifth of that number, precipitated a mood of pessimism and introspection.²¹ The nation suffered a spasm of shame:

shame for the lack of capacity of its governors, shame for the pompous inefficiency of every branch of our public administration, shame for the slackness of our merchants and traders that transfers our commercial supremacy to the United States, shame for the supineness which looks on unmoved at the continued degradation of our race by drunkenness and gambling, slum life, and all the horrors of the sweated trades.²²

Politicians of diverse political persuasions called for a wholesale reform of British society. If Britain was to survive in the more competitive international environment,

¹⁶ Philip R. Reilly, *The Surgical Solution. A History of Involuntary Sterilisation in the United States* (Baltimore, 1991), pp. 41–55.

¹⁷ Henry Herbert Goddard, *The Kallikak Family. A Study in the Heredity of Feeble-Mindedness* (New York, 1927), esp. pp. 12 and 107.

¹⁸ Lady Bell, *At the Works. A Study of a Manufacturing Town* (Middlesborough, 1907), p. 12.

¹⁹ A. Newsholme, 'Alleged Physical Degeneration in Towns', *Public Health* Vol. 17 (1905), p. 292.

²⁰ G. R. Searle, *The Quest for National Efficiency. A Study in British Politics and British Political Thought 1899–1914* (Oxford, 1971).

²¹ *Ibid.*, p. 38. Soloway, *Demography and Degeneration*, pp. 41–3.

²² Sidney Webb, 'Lord Rosebury's Escape from Houndsditch', in E. J. T. Brennan (ed.), *Education for National Efficiency. The Contribution of Sidney and Beatrice Webb* (1975), pp. 71–2. See also S. Webb, 'Twentieth Century Politics', in Sidney Webb and the Fabian Society, *The Basis and Policy of Socialism* (1908), p. 83.

it would have to reform its institutions, rethink its politics and reinvigorate its people.

The public became fixated with the physical unfitnes of the masses. How could Britain recruit an efficient army from among its stunted, anaemic, demoralised slum-dwellers? In Manchester as many as 8,000 out of 11,000 volunteers for military service had been turned away as unfit. The *Report of the Inter-Departmental Committee on Physical Deterioration* (1904), which argued that the health of army recruits did not reflect the health of the population as a whole, and that standards were probably slowly improving, failed to allay widespread anxieties about racial deterioration.²³ Rudyard Kipling expressed the mood of public panic in verse:

Nations have passed away and left no traces
And history gives the naked cause of it –
one single, simple reason in all cases;
They fell because their peoples were not fit.

These anxieties were reinforced by Seebohn Rowntree's discovery that poverty was concentrated among families with young children,²⁴ and by innumerable reports that Germany was almost free from the undersized, ill-developed, illness-ridden people who thronged in every large British town. Innumerable commentators argued that the population was deteriorating at an alarming rate, and urged that public intervention was necessary to improve the quality of the stock. Sidney Webb predicted that the main theme of twentieth-century politics would be the health of the race.²⁵

This naturally helped to focus public attention on the condition of the child population. In the wake of the Boer War, Earl Grey wrote to *The Times*, expressing his doubts about the ability of a slum-reared race to survive, and calling for an 'anthropometric' study of school children to determine the quality of the 'human reservoirs' needed to defend and replenish the Empire.²⁶ The *British Medical Journal* called for a detailed study of the child population, in order to monitor 'the alleged physical deterioration of army recruits' and find a remedy.²⁷ *The Child*, a

²³ Report of the Inter-Departmental Committee on Physical Deterioration, Cmnd. 2175, in *PP* 1904. See also Bentley B. Gilbert, 'Health and Politics: The British Physical Deterioration Report of 1904', *Bulletin of the History of Medicine* Vol. 39 (1965), pp. 143–53; and Soloway, *Demography and Degeneration*, pp. 43–7. Though the Committee was right to argue that there had been an improvement, the raw statistics did, in fact, suggest deterioration. See Roderick Floud, Kenneth Wachter and Annabel Gregory, *Height, Health and History. Nutritional Status in the United Kingdom, 1750–1980* (Cambridge, 1990), p. 307.

²⁴ B. Seebohn Rowntree, *Poverty: A Study of Town Life* (1901), pp. 443–4. See also Bentley B. Gilbert, *The Evolution of National Insurance in Great Britain. The Origins of the Welfare State* (1966), pp. 59–101.

²⁵ S. Webb, 'Lord Rosebery's Escape from Houndsditch', in Brennan (ed.), *Education for National Efficiency*, p. 79; S. Webb and the Fabian Society, *The Basis and Policy of Socialism*, p. 92.

²⁶ Quoted in Soloway, *Demography and Degeneration*, p. 41.

²⁷ *British Medical Journal* (1904), p. 1205.

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medico-educational journal founded in 1910 by T. N. Kelynack, was inspired by the observation that: 'the race marches forward on the feet of little children. The child of to-day will be the citizen of to-morrow. Future national good is best insured by safeguarding the developing life of children of the present.'²⁸ *The Child's* companion publication, *The Child Welfare Annual*, emphasised that intensified imperial rivalries had demonstrated beyond doubt 'that at all costs we must protect and preserve the children of the nation':

The child of today holds the key to the kingdom of the morrow; the child that now is will be the citizen of the coming years and must take up and bear the duties of statesmanship, defence from foes, the conduct of labour, the direction of progress, and the maintenance of a high level of thought and conduct, and all other necessities for the perpetuation of an imperial race.²⁹

The introduction of compulsory elementary education in 1870 – long after it had been established in Scotland and much of the rest of Western Europe³⁰ – also focused public attention on the condition of the child population. For the first time, teachers and inspectors were confronted with the full range of children's abilities and handicaps. According to R. H. Tawney, this dispelled the 'romantic illusion that individuals do not differ in natural capacity' and forced teachers to recognise that different children had different needs.³¹ The demand for a census of the school population became a commonplace. 'We have large bodies of statistics bearing upon disease, its causation and distribution, and upon pauperism, crime, non-employment and children', complained *The Lancet*, 'but there is no body of facts founded upon extended observation of school children, showing their condition, and its bearing upon the adult population of the next decade.'³² The system of payment by results, under which the government grant for schools depended on the performance of each child in the annual examination in the three Rs conducted by one of His Majesty's Inspectors, only served to dramatise the problem of the differences in ability between children: children who persistently failed the examination for their 'Standard' earned their school a much reduced grant.³³ Many teachers looked to the Child Study movement for scientific evidence against this unpopular system. Ballard, for example, ascribed his passionate interest in child psychology to his experience of teaching a class of seventy-five boys in the late 1870s:

²⁸ *The Child: A Monthly Journal Devoted to Child Welfare* Vol. 1, No. 1 (October 1910), p. 1.

²⁹ *The Child Welfare Annual*, p. vii.

³⁰ Cf. Andy Green, *Education and State Formation. The Rise of Education Systems in England, France and the USA* (1990), esp. pp. 208–307.

³¹ British Library of Political and Economic Science (henceforward BLPS), R. H. Tawney Papers 17/6, The Finance and Economics of Public Education (notes for lectures given in Cambridge, February–May 1935), pp. 2, 5.

³² *The Lancet* (1890), p. 743.

³³ Gillian Sutherland, *Ability, Merit and Measurement. Mental Testing and English Education 1880–1940* (Oxford, 1984), p. 6; Sutherland, *Policy Making in Elementary Education 1870–1895* (1973), chs. 7, 8 and 9.

Measuring the mind

Schooling in those days was a grim business. The annual examination was the big controlling factor which kept the children's bodies within the confines of books and lessons. There was no medical inspection, no handicraft, no domestic science, no organised game, no educational visit, no school journey, no segregation of the mentally and physically unfit – nothing but a dismal grind for the great annual event. Here were children who were dirty and needed washing, sickly and needed sunshine and the open-air, inarticulate and needed human speech, unmannerly and needed human graces, unhappy and needed the joy of childhood.³⁴

Arcadia revisited

The argument that education should be based on the needs of the developing child, revealed in scientific inquiries, rather than on the demands of academic tradition, embodied in school syllabuses, was already well established by the end of the nineteenth century, the constant refrain of all the progressive educational theorists of the period.

Pestalozzi (1746–1827)³⁵ claimed that his educational thought was mainly concerned with ‘nothing other than the problem of how to conform to the order of nature in the cultivation of man's capacities and powers’.³⁶ Froebel (1782–1852)³⁷ tried to devise a coherent system of child-centred education, hoping to improve and supplement the training given by the mother and the nurse.³⁸ Despite his rather mystical and obscure intellectual style, he managed to command a considerable following in England. In 1854 a display of Froebelian apparatus and a lecture by Frau Ronge at an educational exhibition in London attracted public interest in his work. The Reverend M. Mitchell, a government inspector, took up the theme immediately, contrasting the Froebelian ideal with contemporary infant education: ‘it treats the child as a child’, he enthused, ‘encourages it to think for itself; teaches it by childish toys and methods gradually to develop in action or hieroglyphic writing its own ideas, to state its own story, and to listen to that of others ... The grand feature of the system is “occupation”’. The child is taught little; it simply produces for itself’.³⁹ Charles Dickens gave wider publicity to the system in an article in *Household Words* in 1855, and by 1870 the kindergarten movement was developing rapidly, with training colleges for instructing teachers and governesses in Froebelian methods being set up in several towns, notably Bradford,

³⁴ Ballard, *Teachers' World*, 21 July 1926.

³⁵ On Pestalozzi, see Kate Silber, *Pestalozzi: The Man and his Work* (1960). For a selection of his writings, see Pestalozzi's *Educational Writings*, ed. J. A. Green (1912). For a concise summary of his main arguments see Selleck, *The New Education*, p. 188.

³⁶ J. Pestalozzi, ‘The Swansong’, in *Educational Writings*, ed. Green, p. 267.

³⁷ On Froebel, see *Autobiography of Friedrich Froebel*, translated by E. Michaelis and H. K. Moore (1886) and Evelyn Laurence (ed.), *Friedrich Froebel and English Education* (1952). For a selection of his work, see Irene M. Lilley, *Friedrich Froebel, A Selection from his Writings* (Cambridge, 1967).

³⁸ Froebel, *The Education of Man* (1907), p. 68, for example.

³⁹ Minutes of Committee of Council of Education, 1854–5, p. 473. Quoted in *Board of Education: Report of the Consultative Committee on Infant and Nursery Schools* (1933), p. 24.

Birmingham and Manchester. The Froebel Society was founded in 1874 and began its examinations in 1876. It established a model kindergarten and training department in connection with Stockwell Training College in 1874 and an independent training college in Saffron Walden in 1884, and exercised an increasing influence over local school boards.⁴⁰

Margaret McMillan (1860–1931) argued that children develop in a succession of pre-determined stages.⁴¹ Her educational theory was a mish-mash of physiological determinism (borrowed largely from Edouard Seguin) and optimistic socialism: she insisted that the right material conditions in school – good ventilation, regular medical inspections, access to the natural environment, abundant exercise, and nourishing food – could transform working-class children into instruments of social regeneration.⁴² Maria Montessori (1870–1952)⁴³ based her educational theory firmly on biological principles, emphasising the child's claim to free personal development within a controlled environment, and hoping that children would learn by exploring their surroundings rather than by listening to their teachers. She provided educational apparatus for training the senses and developing elementary ideas of number and form, and supported a scientific approach to the care of children's minds and bodies. John Dewey (1859–1952) likewise took the individual child's development as the starting point of his educational philosophy.⁴⁴ Believing that children learnt best from experience, he argued that teachers should encourage them to observe the world around them and provide them with instructive educational 'experiences', such as school projects and handwork lessons.

The recapitulation theory also attracted numerous biologists and natural historians to the study of child development. The theory, briefly summarised, suggested that the development of the individual reproduces, in a rapid and abbreviated form, the evolution of the race: the child inherits the abilities, memories, and habits of his ancestors and exhibits them in his growth in much the same order as they were first acquired. The theory drew on two intellectual sources, one sociological and the other biological.⁴⁵

The sociological theory insisted on a parallel between the psychology of the child and the psychology of primitive man. The idea that human history is reproduced in the individual life cycle was a commonplace of Christian thought. From St

⁴⁰ *Report of the Consultative Committee on Infant and Nursery Schools*, p. 25.

⁴¹ Carolyn Steedman, *Childhood, Culture and Class in Britain. Margaret McMillan, 1860–1931* (1990), p. 97. ⁴² Steedman, *Childhood, Culture and Class*, esp. pp. 73, 96, 111–12, 193–7.

⁴³ On Montessori, see E. M. Standing, *Maria Montessori: Her Life and Work* (1957). For an introduction to her work, see M. Montessori, *The Montessori Method*, translated and edited by Barbara B. Carter (1936).

⁴⁴ On Dewey, see W. W. Brickman and S. Lehrer (eds.), *John Dewey: Master Educator* (New York: Society for the Advancement of Education, 1959), and the biography edited by his daughter prefixed to Paul Arthur Schlipp (ed.), *The Philosophy of John Dewey* (Northwestern University, 1939). For an introduction to his educational theory, see *Democracy and Education* (New York, 1916).

⁴⁵ For a detailed discussion of the history and scientific status of the theory, see Stephen Jay Gould, *Ontogeny and Phylogeny* (Cambridge, Mass., 1977).

Augustine onwards mediaeval writers had interpreted human history through the metaphor of ages, with each age corresponding to one of the days of creation and also to a period of human life. In general, they thought in terms of six ages, the first corresponding to infancy, the second to boyhood, the third to youth, the fourth to maturity, the fifth to middle age, and the sixth to senility.⁴⁶ Auguste Comte was responsible for adding a psychological component to this theological model, insisting that the life cycle reproduces in miniature the psychological life of the race, beginning with the theological stage, passing into a metaphysical stage, and maturing into a positivistic stage, and emphasising the similarities between the thought of the child and the thought of the savage. Both conceived of the universe in animistic terms and both responded to frustration by resorting to magical and divine intervention rather than to the mechanical laws of science.⁴⁷

The biological theory maintained that ontogeny recapitulates phylogeny – that the embryological development of the members of any species repeats the evolution of the genus to which the species belongs, with the human embryo passing through all the stages from fertilised egg to primate. Pioneered by von Baer in the eighteenth century, this idea ‘provided an argument second to none in the arsenal of evolutionists during the second half of the nineteenth century’.⁴⁸ Darwin used it as partial evidence for his theory of evolution;⁴⁹ and many of his followers applied it to areas which had little to do with biology. ‘Here was a method’, Conklin noted, ‘which promised to reveal more important secrets of the past than would the unearthing of all the buried monuments of antiquity – in fact nothing less than a complete genealogical tree of all the diversified forms of life which inhabit the earth, and promised to reveal not only the animal ancestry of man and the line of his descent but also the method of origin of his mental, social and ethical faculties.’⁵⁰ It was axiomatic among almost all the early students of child development and it seemed to rest on a wide range of empirical evidence, from the ‘survival movements’ instinctive to infants such as grasping and clinging, to the innumerable similarities between the children of ‘higher’ races and adult savages.

Charles Darwin’s *Biographical Sketch of an Infant* helped to confer scientific respectability on child study.⁵¹ Darwin first had the idea for such a sketch in 1838,⁵² and when his first child, William Erasmus, was born in 1840 he took the

⁴⁶ George Boas, *The Cult of Childhood* (1966), pp. 60–1.

⁴⁷ *Ibid.*, pp. 64–5. For a discussion of the influence of this theory on Freud’s work, see pp. 66–9.

⁴⁸ Gould, *Ontogeny and Phylogeny* (1977), p. 13.

⁴⁹ For the influence of von Baer on Darwin, see Jane Oppenheimer, ‘An Embryological Enigma in the Origin of Species’, in Bentley Glass, Ossei Temkin, and William Strauss Jr. (eds.), *Forerunners of Darwin, 1745–1859* (Baltimore, 1959).

⁵⁰ E. G. Conklin, ‘Embryology and Evolution’, in F. Mason (ed.), *Creation by Evolution* (New York, 1928), p. 70. Quoted in Gould, *Ontogeny and Phylogeny*, p. 116.

⁵¹ Charles Darwin, ‘A Biographical Sketch of an Infant’, *Mind* Vol. 7 (July 1877), pp. 285–94. Selleck’s assertion that Darwin wrote a book on the subject (*The New Education*, p. 277) is misleading: he wrote a private diary on which he based an article.

⁵² Howard E. Gruber, *Darwin on Man: A Psychological Study of Scientific Creativity* (1974), p. 328.

opportunity to observe his behaviour and to experiment on his reactions, noting down his conclusions in a detailed diary. His study traced the development of intentional action, emotional expression, and mental association in the first two and a half years of life, and concluded that all psychological functions had physiological origins. He compared the young Darwin with the young of other species, commending his outstanding capacity to learn from experience.⁵³ He also emphasised the similarity between his child's emotional life and the emotional life of primitive man, suggesting that 'the vague but very real fears of children, which are quite independent of experience, are the inherited effects of real dangers and abject superstitions during ancient savage times'. On the other hand, he was sceptical of the hypothesis that the child's perception of the world is essentially animistic: observing that his son was in the habit of beating toys which he did not want, he speculated that 'the beating was an instinctive sign of anger, like the snapping of the jaws of a young crocodile just out of the egg, and not that he imagined he could hurt the plaything'.⁵⁴

Anxious to claim an aristocratic paternity for their discipline, contemporary child psychologists have tended to overestimate Darwin's role: though significant, his essay was neither pioneering nor isolated. The first systematic studies of child development were produced in Europe at the end of the eighteenth century. In 1787 Dietrich Tiedermann published his observations on the developing mental faculties of children, while in 1798 Itard began his study of the 'Wild Boy of Aveyron'. Darwin published his biographical sketch thirty-seven years after collecting the material for it in response to Taine's 1877 article on 'the acquisition of language by children'.⁵⁵ The Taine-Darwin debate encouraged the editor of *Mind* to call for further contributions on children's mental development, and during the next few years articles appeared by Pollock, Sully, and Champweys,⁵⁶ dealing mainly with language learning and animism and drawing attention to 'this interesting subject, on which observations, so constantly at hand, ought to be more often carefully made'.⁵⁷

The period between 1880 and 1900 saw an explosion of studies of the child's mental development in both Europe and America, notably Preyer's *Die Seele des Kindes* (1882), Perez's *The First Three Years of Childhood* (1885), Shinn's notes on the *Development of a Child* (1893, 1899), Sully's *Studies of Childhood* (1895), and Baldwin's *Mental Development in the Child and the Race* (1894), to name only the most famous. 'It is interesting that the literature is now turning so much to the psychology of children,' Freud wrote to Wilhelm Fliess in 1897. 'Today I received another book on the subject, by James Mark Baldwin. So one always remains a

⁵³ Darwin, 'A Biographical Sketch', pp. 290-1.

⁵⁴ *Ibid.*, p. 288.

⁵⁵ M. Taine, 'The Acquisition of Language by Children', *Mind* Vol. 2 (1877), pp. 252-9.

⁵⁶ F. Pollock, 'An Infant's Progress in Language', *Mind* Vol. 3 (1878), pp. 392-9; James Sully, 'Mental Development in Children', *Mind* Vol. 5 (1880), pp. 385-6; F. H. Champweys, 'Notes on an Infant', *Mind* Vol. 6 (1881), pp. 104-7.

⁵⁷ Champweys, 'Notes on an Infant' p. 104.

child of his age, even in what one deems one's very own.'⁵⁸ But none of these numerous child psychologists managed to exercise a contemporary influence comparable with that of Granville Stanley Hall (1844–1924).⁵⁹

Like many other pioneers of psychology, Hall came to the subject by accident. His early intellectual interests were in theology and philosophy: after graduating from Williams College in 1867, he studied in Germany for two years and then graduated from Union Theological Seminary in 1871. Losing his religious vocation, he became an academic migrant, and held chairs successively in English literature, modern languages, and philosophy. From 1876 to 1878 he did doctoral work in psychology under William James at Harvard and then he left for Germany to pursue his interests, studying in Berlin, Bonn, Heidelberg and Leipzig and sitting at the feet of both Wundt and Helmholtz. From 1881 to 1888 he held a chair in psychology at the Johns Hopkins University and in 1891 he became both president and professor of psychology at the newly established Clarke University at Worcester, Massachusetts. His role in the professional development of American psychology was a crucial one: he was the first American to gain a doctorate in psychology and the first American to study under Wundt, the founder of the first (or, according to William James, the second) laboratory of experimental psychology in America (1883), the first professor of psychology in America (1884), the founder editor of the *American Journal of Psychology* (1887) and of the *Pedagogical Seminary* (1891), and the founding president of the American Psychological Association (1892). He also arranged for both Freud and Jung to visit the United States and played a leading part in popularising their teachings. His initial interest in educational reform was aroused by his financial need to win popular support for his new university and unconventional discipline, and he was grateful for material as well as intellectual reasons that the circulation of the first issue of the *Pedagogical Seminary* was 'unexpectedly large'. His work thus fused the professionalisation of psychology and the study of child development into a single coherent movement.

Hall's involvement in the movement resulted from his two burning convictions: that education should be based on the needs of the child, and that human affairs should be investigated scientifically. His method of child study was based on personal observation and mass questionnaires. He formulated a body of questions on an aspect of child behaviour which happened to catch his attention, circulated them to hundreds or even thousands of teachers and parents who had indicated their willingness to help, and then analysed and tabulated the results he received. He thus managed to amass a daunting volume of material on American children – on their sense of humour, their appetites, their collections, their reactions to light

⁵⁸ Freud to Fleiss, 5 November, 1897, in Jeffrey Moussaieff Masson (ed.), *The Complete Letters of Sigmund Freud to Wilhelm Fliess 1887–1904* (1985), p. 277.

⁵⁹ On Hall, see D. Ross, *G. Stanley Hall: The Psychologist as Prophet* (Chicago, 1972); Merle Curti, *The Social Ideas of American Educators* (Totowa, New Jersey, 1959 edn), pp. 396–428; G. Stanley Hall, *Life and Confessions of a Psychologist* (1925); L. N. Wilson, *G. Stanley Hall: A Sketch* (1914).

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and darkness, their fears, dreams, feelings of anger, envy and jealousy, their dolls and toys, and their moral and religious experiences.

In interpreting all this evidence he relied on the recapitulation theory.⁶⁰ Fond of describing his work as an 'archaeology' or 'embryology' of the human soul,⁶¹ he argued that children passed through several distinct stages of mental and emotional development; that each stage corresponded to an era of human evolution; and that education should be based on the characteristics peculiar to each stage. In infancy (0–2) the child inhabited the mental world of its pre-human ancestors; in childhood (2–8) it enjoyed free activity and was best left to its own devices; in youth (8–12) it acquired considerable energy and endurance and began to build up an independent life outside the family. Throughout this period 'the child is older than the adult in the sense that its traits existed earlier in the world than those that characterise the mature man or woman'.⁶² In its play it repeated the development of the human race, passing from a hunting to a building period. 'Field, forest, hill, shore, the water, flowers, animals', rather than the schoolroom, were 'the true homes of childhood in this wild, undomesticated stage from which modern conditions have kidnapped and transported him'.⁶³ In adolescence, the subject of Hall's monumental two-volume study, the child underwent nothing less than a new birth.⁶⁴ Education, he concluded, should be determined by the phase of human history through which the child was passing and could do little more than 'shorten the stages of which the child repeats the history of the race'.⁶⁵ (Paradoxically, Hall's own behaviour seemed to reverse the natural sequence: a disciplined student in his youth, he took up dancing in late middle age, and, towards the end of his life, loved to strip and roll about in the Ashfield hills.)⁶⁶

Hall's intellectual certainty and organisational ability turned him into the unchallenged leader of the movement. His influence rapidly spread from the United States to Europe, with the foundation of societies in England in 1894, Poland in 1897, Germany in 1899, and France in 1901. His approach to psychology was widely publicised in a plethora of periodicals: the *Pedagogical Seminary* (1891) and the *Child Study Monthly* (1895) in America; the *Paedologist* (1899) in England; *Die Kinderfehler* (1896) and *Die Kinderseele* (1900) in Germany; and the *Bulletin de la société libre pour l'étude psychologique de l'enfant* (1901) in France. When the first International Congress for Child Study was held in October 1906, it attracted almost 700 participants.⁶⁷

⁶⁰ Cf. Gould, *Ontogeny and Phylogeny*, pp. 139–44, 147–8, 154–5.

⁶¹ Hall, *Aspects of Child Life and Education* (Boston, 1907), p. ix.

⁶² *Ibid.*, p. ix.

⁶³ Hall, *Youth: Its Education, Regimen and Hygiene* (New York, 1925), p. 4.

⁶⁴ Hall, *Adolescence: Its Psychology and its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion, and Education* (1908), p. xiii. The bibliography of this book contains nearly 2,000 items.

⁶⁵ Hall, *Educational Problems*, p. viii.

⁶⁶ Curti, *Social Ideas of American Educators*, p. 403.

⁶⁷ See Marc Depaepe, 'Social and Personal Factors in the Inception of Experimental Research in Education (1890–1914): An Exploratory Study', *History of Education* Vol. 16, No. 4 (1987), pp. 275–98.

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He attracted numerous able academics into Child Study, notably John Dewey, J. McKeen Cattell, L. M. Terman, Arnold Gesell, H. H. Goddard, Florence Mateer, Phylis Blanchard, E. D. Starbuck, and W. H. Burnham. He founded the National Association for the Study of Children in 1893 and encouraged the work of numerous local study organisations in the United States. He delivered about 2500 extra-curricular lectures in forty states; and wrote over 400 articles for popular and educational magazines. He drew enthusiastic support from state and local teachers' associations and from upper-middle-class women of an active but conservative disposition. He also exercised a striking influence over social reformers, particularly those who worried that the premature employment of adolescents – 'boy labour' in the language of the period – was encouraging moral degeneration.⁶⁸

From ideas to organisations: the Childhood Society

The Childhood Society was inspired by anxieties about the quality of the British population rather than by an interest in Hall's genetic psychology. Founded in 1896, and dedicated to 'the scientific study of the mental and physical conditions of children',⁶⁹ it survived as a distinct organisation until 1907, when it amalgamated with the Child Study Association to form the Child Study Society. The Society traced its origins back to the Annual Meeting of the British Medical Association in Glasgow in 1888, which established a committee to 'investigate the state of development and brain power of school children', and to publicise its results.⁷⁰ Francis Warner played the leading part in this research, dictating its methods and carrying out much of the empirical work, and he was supported by a team of twenty-three volunteers from the Medical Association. This work was given additional support and wider publicity by the Charity Organisation Society, which felt that it was in line with its own commitment to 'the application of the scientific methods to each separate case of a damaged body or a lost soul'.⁷¹

Supported by funds from both the British Association and the British Medical Association, the Society set up a committee to inspect selected schools in order to establish what proportion of their pupils suffered from physical, mental and moral defects. Again Francis Warner was chosen to organise the investigation. The Society presented its Report to the Seventh International Congress of Hygiene and Demography, held in London in August 1891, and its revelations about the

⁶⁸ Harry Hendrick, *Images of Youth. Age, Class and the Male Youth Problem 1880–1920* (Oxford, 1990), pp. 102–3, 106–9, 111–18.

⁶⁹ University of Liverpool, British Psychological Society Archives, *Childhood Study Papers* (henceforward cited as *CSP*), Child Society Minutes: December 1896–June 1906, Statement of Aims.

⁷⁰ *CSP*, Childhood Society Minutes: Committee on Mental and Physical Measurement of Children, p. 1.

⁷¹ Beatrice Webb, *My Apprenticeship*, pp. 196–7. These investigations were published in the Charity Organisation Series, *The Feeble-Minded Child and Adult* (1893).

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inadequate physical and mental health of significant sections of the child population provoked a major scandal.⁷² The Congress decided to establish a Committee on the Mental and Physical Condition of Children, composed of experts in child observation, educational methods, and statistical techniques, and chose Warner as the English representative. The Congress's enthusiasm for child study also resulted in the formation of an English committee on the mental and physical condition of children, supported by funds from the British Medical Association and the British Association for the Advancement of Science. Warner carried out the bulk of the Committee's research work.⁷³ For a while the Committee met to discuss the possibility of forming a 'Society for the Promotion of Hygiene in School Life', but decided to call themselves the Childhood Society instead.⁷⁴

The Society's main motive for studying children was worry about the unfit: worry that they were multiplying, worry that they were not getting an education appropriate to their abilities, and worry that they might impose an intolerable burden on the state. The Society did not share the pessimism about these unfortunate people popular in eugenic circles, arguing that an improved environment might alleviate their condition, and agitating for special schools staffed by carefully picked and highly trained teachers.⁷⁵ Such optimism heightened their concern for children. Sir Douglas Galton, in a fund-raising letter, argued that 'we would appeal to all who, while desiring progressive education, also desire that the training of children should be conducive to the development of both sound bodies and brains, and that the weaker social members should receive equal advantages with those who are naturally stronger.'⁷⁶ They were convinced that the state had a practical interest in improving facilities for the unfit. As White Wallis put it, 'the interests of the State are more concerned in preventing a percentage of the children under its care from finding their way into the pauper and criminal classes – on account of the education afforded to them not being suited to develop their feeble mental condition ... than in providing brilliant careers for the children of higher gifts who pass through the schools!'⁷⁷ The Society naturally concentrated on abnormal children, particularly those afflicted with mental and physical defects.

Francis Warner (1847–1926) was clearly the key figure in the Childhood Society. The Society was founded to support and publicise his scientific work; and he remained its most active and influential member. He qualified in medicine from King's College, London, in 1873 and went on to pursue a conventionally successful medical career.⁷⁸ Yet in devoting himself to the scientific study of both the mental

⁷² CSP, Childhood Society Minutes: Committee on Mental and Physical Measurement of Children, pp. 3–4.

⁷³ *Ibid.*, p. 40.

⁷⁴ CSP, Childhood Society Minutes: August 1896–February 1899, p. 1.

⁷⁵ *Ibid.*, pp. 4–5.

⁷⁶ *The Times*, 14 March 1894, p. 3, col. c. See also his letter in *The Times*, March 1, 1897, p. 10, col. 1.

⁷⁷ CSP, Childhood Society Minutes: August 1896–1899, newspaper cutting from the *Daily Chronicle* 24 April 1877, stuck in opposite p. 29.

⁷⁸ *Who Was Who*, 1916–1928, p. 1094, col. 1. *Munks' Roll: Lives of the Fellows of the Royal College of Physicians of London 1826–1925*, Vol. 4 (1956), IV, pp. 297–8.

and physical conditions of the child population, he opened up a field which was 'in many respects entirely new'.⁷⁹ He turned to child study for a combination of practical and scientific reasons. In his view, the introduction of compulsory elementary education and increased care for the mentally and physically defective broadened the government's concern with children, making it necessary to conduct a census of their mental and physical conditions.⁸⁰ He felt that a scientific approach to studying and managing children held the key to national efficiency. He warned that the state was already burdened by the mentally defective, who helped to cause such widespread social evils as pauperism, starvation, and vagrancy, and located the roots of these problems in childhood:⁸¹ 'every weakly or troublesome child who now escapes from public education', he suggested, 'is a failure of the system, and every such child is likely to be a public harm'.⁸² He also felt that a scientific understanding of children's mental processes was a prerequisite for effective education. The popular notion that the adult can teach, train and understand children without understanding their natural development, he argued, was incompatible with the scientific movement which so distinguished the nineteenth century.⁸³

Warner's general approach to child study was physiological rather than psychological. Like Henry Maudsley, he believed that 'the character of every mind is written in the features, gestures, gait and carriage of the body, and will be read there, when, if ever, the extremely fine and difficult language is fully and accurately learnt'.⁸⁴ Denouncing psychology as 'metaphysical', he argued that child study should be based on the same methods as the hard sciences: careful observation, painstaking description and logical inference. He felt that, in attempting to study complex mental states directly, psychologists were abandoning scientific method and rushing off in pursuit of an illusion: only by carefully observing simple physical facts would child study attain the status of a science.⁸⁵ 'It will at once be obvious', he reasoned, 'that the facts we are to observe must be physical facts. We cannot directly observe the action of the child's mind with our eyes and ears; but we can

⁷⁹ *Report on the Scientific Study of the Mental and Physical Conditions of Childhood, with particular reference to children of defective constitution; and with recommendations as to education and training (based on the examination of 50,000 children seen in 1888-91, and of another 50,000 seen in 1892-4 and prepared by the members of the Committee on the Mental and Physical Conditions of Children)* (1895), p. v.

⁸⁰ *Ibid.*, p. 50; cf. summary of Warner's paper read to the psychology section of the BMA in the *BMJ* (1889), p. 659, c. 2, and the sympathetic review of Warner's *The Children: How to Study Them* in *ibid.*, p. 619, col. 2.

⁸¹ *Report*, pp. 52-3.

⁸² Warner, *A Course of Lectures on the Growth and Means of Training the Mental Faculty* (Cambridge, 1890), p. 108.

⁸³ Warner, *The Study of Children and their School Training* (1897), p. 55; cf. p. 3 and *The Children: How to Study Them: A Course of Lectures Given to the Froebel Society* (2nd edn, 1896), pp. 2, 11.

⁸⁴ Quoted in Pick, *Faces of Degeneration*, p. 206 n 109.

⁸⁵ Warner, *The Study of Children and their School Training*, pp. vi-vii, 74-5; *The Nervous System of the Child: Its Growth and Health in Education* (New York, 1900), p. v.

observe the child's body, its make, its movements and the signs of its nutrition.⁸⁶ Physical observation provided vital information about 'the modes of brain action, corresponding to mental states'.⁸⁷

His argument clearly owed something to his professional interests: his expertise lay in observing and caring for the body and he was concerned to defend his subject from the encroachment of the psychologists. But Warner also drew on the support of an established intellectual orthodoxy. By the early nineteenth century a physiological interpretation of mental states had won widespread acceptance. The work of Fritsch, Horsley, Ferrier and others on the localisation of sensory and motor functions in the brain seemed to confirm the view that psychological facts can be directly explained by physiological facts. Maudsley's dictum that 'all mental disorders are brain disorders' put the point neatly. Phrenologists claimed to be able to 'read' the character from the shape of the head. Craniometrists claimed to have demonstrated that there was a direct relationship between the size of the brain and the quantity of intelligence which it contained. They set about discovering the mentally defective by measuring their skulls and feeling for their anatomical 'stigmata', and suggested that backwardness might be cured by craniectomy – cutting the bones of the skull to make room for the brain to grow. Minor behavioural disorders were commonly explained in terms of organic malfunctions, such as 'latent' epilepsy or chorea. Phrenology continued to exercise a considerable influence in the second half of the nineteenth century, surviving both as a practical body of common sense 'scientific' knowledge and as a rich source for ideas in psychology and psychiatry. It seemed to promise the sciences of the mind a secure place within the well-established empire of medical science. Indeed, such crude physiological arguments remained influential even in the late nineteenth century and the early twentieth. As late as 1912, Hart felt that it was necessary to announce the death of the physiological approach to mental disorder.⁸⁸ Although by the 1920s Bernard Hollander was probably the only reputable English physician who subscribed wholeheartedly to phrenology, Ballard still took the subject seriously enough to debate with the British Phrenological Society on the relative merits of phrenology and mental tests. Far from being an isolated eccentric then, Warner was the spokesman for an established and respected scientific tradition.

His team of investigators was instructed to inspect each child in a well-lighted room, examining its body and movements for tell-tale signs of its brain power.⁸⁹ 'Three different classes of signs indicate the condition of the child', he asserted, 'the form and proportions of the body and its parts; the postures or attitudes; and the movement of the parts'.⁹⁰ The investigation of individual children could be accomplished rapidly and efficiently, since 'the trained observer can read off the

⁸⁶ Warner, *The Children: How to Study Them*, p. 4.

⁸⁷ Warner, *The Study of Children and their School Training*, p. 147.

⁸⁸ B. Hart, *The Psychology of Insanity* (1912), p. 9.

⁸⁹ Warner, *Report*, pp. 100–11.

⁹⁰ Warner, *The Children: How to Study Them* (1887 edn), p. 29.

physiognomy of the individual features and their parts, the facial conditions and eye movements, the balance of the head and body, etc., as quickly as a printed line'.⁹¹ He laid particular emphasis on measuring the head with a tape measure and checking it for cranial abnormalities: 'the size and probable volume of the brain is a point of first-class importance and the size of the cranium is in children a fair indication of the size of the brain'.⁹² He encouraged his investigators to supplement such physical analysis with an interview to reveal the quality of the child's speech and the development of his social and moral sensibilities.⁹³

Warner recorded his results in a *Report on the Scientific Study of the Mental and Physical Conditions of Childhood*, which combined the evidence of a survey of 50,000 children carried out in 1888–91 and of another 50,000 children seen in 1892–94, and which constituted one of the most extensive surveys of the child population available anywhere in Europe. His main interest lay in the defective or, as he put it, 'the worst made children',⁹⁴ and at each stage of his investigation he asked them to stand aside to be examined more closely. He distinguished between four main groups among the defective: the physically handicapped, the nervous, the malnourished, and the dull.⁹⁵ Like many doctors of his generation, he espoused a particular interest in the nervous child. He was constantly on the look out for nervous disorders and signs of overstrain in school work. The most common symptoms of nervousness were headaches, sleeplessness, teeth-grinding, and a disposition which was apt 'to be irritable and passionate and too emotional'. Nervous children were almost always female.

Both Warner's methods and conclusions now strike us as a little odd. His work represented the last full-scale exercise in craniometry in England; by the 1910s child study had been placed on a rather different basis. Yet his recommendations were well in line with later sentiment. He wanted to see a much-expanded state sector, staffed by a professional and scientific élite dedicated to improving the physical and mental conditions of the population. He wrote approvingly that 'the great object sought by state medicine in its various divisions is to acquire such knowledge, based upon scientific inquiry, as may serve to render the population healthy, long-lived and prosperous while universal education is provided that all may receive a mental development, fitting each as a citizen to provide for himself, and take his place among his fellows'.⁹⁶ He supported scientific child study as a means of increasing educational efficiency, stressing the wide range of differences between children and arguing for special treatment for the handicapped and backward.

Warner did not possess a monopoly of scientific expertise within the Society. George Shuttleworth (1842–1923), who vied with Warner in the regularity of his

⁹¹ Warner, *Report*, p. 11.

⁹² *Ibid.*, p. 20.

⁹³ Warner, *The Nervous System of the Child* (New York, 1900), p. 103.

⁹⁴ *Ibid.*, p. 14.

⁹⁵ Warner, *The Study of Children and their School Training*, p. 158.

⁹⁶ Warner, *Report*, p. 51.

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attendance at Council meetings,⁹⁷ and spent most of his professional life dealing with the handicapped,⁹⁸ was at once more sophisticated and more flexible in his approach to mental deficiency. Granted, as a doctor by training, he was much too inclined to adopt a physiological approach to children. (Indeed, he even lent his support to craniectomy. 'There is no doubt that beneficial results have been frequently obtained by cranial operations in cases of mental deficiency associated with traumatism, epilepsy, and paralysis', he argued, adding that 'nowadays the mortality of craniectomy is but small'.⁹⁹) But in most ways his work was highly innovative. He was sceptical of the value, as guides to backwardness, of both physical 'stigmata' and teachers' assessments. He also recognised the existence of a group of children whose defects were not so severe as to require residential care, making many suggestions about their treatment.¹⁰⁰ Although he appreciated Warner's 'indefatigable energy' and was willing even in 1921 to present a favourable summary of his researches,¹⁰¹ he criticised his work's scientific value, pointing out in the second edition of *Mentally Deficient Children* that only 18,127 of the 100,000 children examined between 1888 and 1894 had been seen individually.¹⁰²

His most positive contribution was to treating and training the subnormal. He dedicated his textbook on *Mentally Deficient Children* to the memory of 'the truly illustrious' Edouard Seguin, and set about popularising Seguin's techniques for training the severely defective to cope tolerably with their everyday affairs. He agreed with Seguin that 'the physiological education of the sense must precede the psychological education of the mind' and designed a scheme of sensory training, games, and handwork for the feeble-minded. His work conveys an optimism about the subnormal which was lost by some of his more strictly hereditarian successors. He felt that the backward could be trained to deal with the pressures of everyday life; favoured recruiting skilled teachers into schools for the subnormal – 'in order to penetrate the dark recesses of the feeble minded, singularly lucid teaching is requisite, and a philosophical power of simplification of instruction, and of adaptation of methods to the individual peculiarities of pupils';¹⁰³ and denied that better treatment for the feeble-minded would only encourage them to reproduce their kind. 'The effect of judicious training seems to be to impress upon the improved imbecile that he is not quite like other men, and must not undertake the responsibilities of married life.'¹⁰⁴ Agitation for special teaching and consideration

⁹⁷ CSP, Childhood Society Minutes: August 1896–February 1899.

⁹⁸ *Who Was Who, 1916–1928*, p. 958. Both Shuttleworth and Warner would repay detailed biographical study.

⁹⁹ G. E. Shuttleworth, *Mentally Deficient Children: Their Treatment and Training* (1895), pp. 70–1.

¹⁰⁰ CSP, Childhood Society Minutes: August 1896–February 1899.

¹⁰¹ Shuttleworth, 'Exceptional School-Children', in A. P. Laurie (ed.), *The Teachers Encyclopaedia* (1911), V, pp. 216–17.

¹⁰² Shuttleworth, *Mentally Deficient Children* (2nd edn, 1900), pp. 13–14.

¹⁰³ Shuttleworth, *Mentally Deficient Children* (1895 edn), p. 118. ¹⁰⁴ *Ibid.*, p. 111.

for the subnormal was not a simple product of eugenic theory, but sprang in part from a more optimistic and generous philosophy.

From ideas to organisations: the Child Study Association

Inspired by Stanley Hall's genetic psychology, the British Child Study Association was interested not in the condition of the entire child population but in the natural development of individual children. James Sully summed up its distinctive approach when, in 1900, he denounced the enthusiasm for collecting statistical material about large numbers of children and urged the association to 'attack the real question of getting into touch with the child by concentrating a certain amount of study upon the individual'.¹⁰⁵ Its principal aim was to 'interest parents, teachers, and others in the systematic observation of children and young people with a view to gaining greater insight into child-nature and securing more sympathetic and scientific methods of training the young',¹⁰⁶ and it believed firmly that 'it is only by a more precise knowledge of the natural process of unfolding of the human mind, and of the way in which this is modified by the environment, that further advance can be made in elucidating the principles of a natural and sound education'.¹⁰⁷

The Association originated in an educational congress held in connection with the World's Fair in Chicago in 1893 and attended by several British delegates. Stanley Hall presided over the Child Study section of the Congress and aroused the enthusiastic interest of three British teachers, Miss Clapperton, Miss Crees and Miss Louch. Imbued with Hall's methods and objectives, they returned to Britain and, with the help of several doctors and educationalists, founded the British Child Study Association in Edinburgh at the University Extension Summer Meeting of 1894. Soon afterwards, branches were established in Cheltenham and London. In 1898 the branches were formally affiliated into an Association controlled by a Central Council composed of delegates from each constituent branch.¹⁰⁸ It quickly gained institutional momentum, and branches were formed at Derby, Liverpool, Newcastle, Manchester, Birmingham, Dundee, Halifax, Tunbridge Wells and Hartlepool. Annual Conferences, attended by delegates from the constituent societies, were held at different regional centres in turn. The success of local societies was often volatile and unpredictable. In 1899, for example, a 'new, vigorous' branch started up in Liverpool, but the Newcastle and Derby branches closed down.¹⁰⁹ The membership fluctuated considerably, though the tendency

¹⁰⁵ *CSP, Childhood Society Minutes, Manchester Guardian* for 7 May 1900, report on Sully's lecture stuck on p. 27 of minutes. ¹⁰⁶ *CSP, 'Rules of the British Child Study Association'.*

¹⁰⁷ *CSP, Childhood Society Minutes: Second General Meeting, 7 April 1899.*

¹⁰⁸ Foster Watson, *The Encyclopaedia and Dictionary of Education* (1922), 'Child Study' (written by Kate Stephens), p. 309, col. 1.

¹⁰⁹ *CSP, Childhood Society Minutes: Report of the Hon. Gen. Sec. for 4 May 1900* (stuck in between pp. 28 and 29 in book).

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was upwards. In 1899, it had 619 members; in 1900, 538, in 1904, 860, in 1905, 832, in 1906, 969, and in 1907, 877.¹¹⁰ Although it was dogged by financial problems, it managed to publish a magazine, first called *The Paidologist* and then *Child Study*, and to support a library of child study literature.

The creative life of the Association took place in the local branches rather than in the Annual Council Meetings. Though the movement started out in Edinburgh, its centre of gravity shifted inexorably towards the metropolis. The London branch included among its members a number of prominent and influential educationalists such as Miss Buss and Miss Beale (Headmistress of the Ladies' College, Cheltenham), P. B. Ballard, W. H. Winch, John Adams, James Kerr, and C. W. Kimmins, the Chief Inspector of London Schools.¹¹¹ Outside London, probably the most active branch was in Liverpool, where its work was given powerful support by Charles Sherrington, the physiologist, and J. G. Legge, the Director of Education. Some of Cyril Burt's early researches as Lecturer in psychology in Sherrington's department from 1907 to 1913 were supported and published by the Association.¹¹²

The Association drew its membership from three main groups: experts in scientific child study, such as doctors, psychologists, and biologists; educationalists of one stripe or another; and parents, in particular mothers. Its structure was hierarchical, with the scientists advancing research and the parents and teachers applying their results and providing them with raw material. The Association looked to the experts 'more particularly to the psychologists', 'for direction in our work'. Teachers formed the bulk of the rank-and-file members in most branches. A number of parents were drawn to the Association in the hope 'of learning something from the wider experience and more systematic study' of scientific experts. In return, the experts looked to parents to 'help us by the observation of periods and aspects of Child Life to which others have no access'. Ideally, then, the Association advanced on three fronts at once: the scientists dictated methods and synthesised results; the teachers applied their findings to day-to-day education; and the parents turned up facts by observation and experiment.¹¹³

James Sully (1843–1923) was the most influential figure in the Association, shaping its ideas and often presiding over its day-to-day business. His distinctive approach to children ensured that the Association was something more than just a branch of the American child study movement, while his position in the academic world provided an invaluable link between a movement of interested amateurs and the emerging profession of psychology. Sully was an established member of the English intellectual aristocracy. His father was a wealthy businessman; his friends included many of the leading intellectuals of the time; and his early years were

¹¹⁰ CSP, Childhood Society Minutes: *passim*.

¹¹¹ CSP, List of Members.

¹¹² University of Liverpool, *Cyril Burt Papers*, History of Child Guidance by Burt and Gertrude Keir, p. 8.

¹¹³ CSP, Childhood Society Minutes: pamphlet set in book at p. 22.

spent in writing for the reviews and moving in literary circles.¹¹⁴ It was only his father's bankruptcy in 1879 which forced him to turn himself into a professional academic.¹¹⁵ He started his career by lecturing on the theory of education at the College of Preceptors and ended up as Grote Professor of Mind and Logic at University College, London. His main professional interest was in psychology, and he wrote several respected books on the subject. He felt that, since 'psychological investigation proceeds by a resolution of the complex phenomena of mind into simple ingredients or constituent factors',¹¹⁶ it should take the simple mind of the child rather than the complex mind of the adult as its natural starting point.

The same kind of curiosity which prompts the geologist to get back to the first stages in the building up of the planet, or the biologist to search out the pristine forms of life, is beginning to urge the student of man to discover by a careful study of infancy the way in which human life begins to take its characteristic forms.¹¹⁷

Sully insisted that child study was a reputable branch of biology.¹¹⁸ He argued that the mind of the individual child should be studied not in isolation but as part of an integrated organism in constant and dynamic interaction with its environment. He thus distinguished the normal child, who had managed to adjust himself to his environment, from the abnormal child, who had failed to adjust himself, and insisted that child study should be followed by child management, with experts concentrating on treating the maladjusted.

His policy for the Child Study Association was unashamedly élitist. He advocated a two-tier structure, with psychologists planning research and synthesising results, and parents and teachers doing the routine work. The progress of child study, he argued, depended on forming a professional cadre of child psychologists.¹¹⁹ An instinctive sympathy with the mental life of the child was a necessary but not a sufficient condition for membership of this group.¹²⁰ Sympathy needed to be supplemented by psychological training, which he defined as:

that special knowledge which comes from studying the principles of the science, its peculiar problems, and the methods appropriate to these, together with the special skill which is attained by a methodical, practical application of this knowledge in the actual observation and interpretation of manifestations of mind.¹²¹

Women, he felt, were unlikely to enter this scientific élite. Their 'baby-worship' and their 'sentimental adoration of infant ways' meant that they were incapable of the 'perfectly cool and impartial process of scientific observation'; they were likely to be opposed to 'this encroaching of experiment into the hallowed retreat of the

¹¹⁴ On Sully, see *My Life and Friends* (1918); Hearnshaw, *A Short History of British Psychology*, pp. 132–36; *Who Was Who, 1916–1928*, p. 1014, col. 1.

¹¹⁵ Sully, *My Life and Friends*, p. 182.

¹¹⁶ Sully, *Outline of Psychology* (1895), pp. 7–8. Cf. *The Human Mind: A Textbook of Psychology* (1892), I, p. vi. ¹¹⁷ Sully, *Studies of Childhood* (1896 edn), p. 4. ¹¹⁸ *Ibid.*, pp. 4–5.

¹¹⁹ Sully, *Studies of Childhood*, p. 16. ¹²⁰ *Ibid.*, p. 14. ¹²¹ *Ibid.*, p. 16. Cf. pp. 22–3.

nursery'.¹²² The realm of higher theory was reserved for 'the coarser fibred man'. But women still had an important, though subordinate, part to play in child study. 'It is for the mother, or some other woman with a pass-key to the nursery, with her frequent and prolonged opportunities of observation, to attempt a careful and methodical register of mental progress.'¹²³ Sully hoped that women would take an active interest in the developing science of child psychology so that 'before long we shall have a band of mothers and aunts busily engaged in noting and recording the movements of children's minds'.¹²⁴

Sully used his position in the Association to popularise what he took to be a scientific approach to child study. He argued that psychologists needed to recognise the wide range of differences between children, treating each case as unique, but added that they should also recognise the general structure of mind which lay beneath these differences. He drew attention to three distinct types of deviation from the norm: intellectual dullness, emotional instability, and moral waywardness, and suggested that these needed to be measured and analysed. Analysis needed to be followed by synthesis, with the psychologist focusing on the unity of the child's mind in its relations with its social environment, and supplemented by guidance, so that the child could be taught to cope with its daily problems.

He was clearly concerned to use the Child Study movement as a building block for the profession of child psychology, hoping that it would both 'educate the relevant public' and provide a mass of raw material which could be analysed by trained scientists. He argued that child psychology should be recognised as a branch of scientific research and academic teaching, presided over by a body of qualified experts, consulted by parents and teachers, and concerned with a recognisable body of problems. He drew up a clear scheme for the theoretical and practical aspects of the subject.

Sully's own writings on children were based on a wide range of sources – notably questionnaires, children's drawings, literary recollections of childhood, and a diary of child development – as well as on extensive personal observation. He paid particular attention to children's early language and to their games and fantasies. By observing these, he hoped to uncover their idiosyncratic interpretation of the world. His main argument rested on the recapitulation theory, stressing the connection between 'the unfolding of an infant's mind' and 'something which has gone before ... the mental history of the race'.¹²⁵ In particular, he was impressed by the similarities between the child's conception of the world and that of primitive man. He emphasised the anthropomorphic element in children's thoughts, pointing out that 'the child sees what we regard as lifeless and soul-less as alive and conscious'.¹²⁶ The wind, toys, and dolls all seem to the child to have a life of their own.¹²⁷ 'For the child, as for primitive man', he argued, 'reality is a projection of fancy as well as an assurance of sense'.¹²⁸ Children live in a world in which

¹²² *Ibid.*, p. 17.

¹²⁶ *Ibid.*, p. 30.

¹²³ *Ibid.*, p. 18.

¹²⁷ *Ibid.*, pp. 25–64, *passim*.

¹²⁴ *Ibid.*, p. 23.

¹²⁵ *Ibid.*, p. 8.

¹²⁸ *Ibid.*, p. 61.

imagination and fantasy merge, populated with inanimate objects made animate and fictitious characters made flesh.

From ideas to organisations: the Child Study Society

The Childhood Society and the Child Study Association differed both in aims and composition. The Childhood Society was concerned with the quality of the school population and consisted mainly of scientific experts, in particular doctors; the Child Study Association was interested in children's mental development and drew its members liberally from both amateurs and professionals. In their early years, there was a certain amount of friction between the two.¹²⁹ Sully seldom lost an opportunity after that to pour scorn on the methods and aims of Warner's surveys.¹³⁰ Yet the organisations clashed over detail rather than substance: they occupied different positions within a common intellectual spectrum. A number of leading individuals belonged to both groups, and soon the two organisations began to do a certain amount of work together.¹³¹ In June 1907, the Childhood Society finally amalgamated with the London Branch of the British Child Study Association, to form the Child Study Society (London), a constituent branch of the Child Study Association.¹³² This union was to some extent determined by practical issues: it saved money, reduced institutional complexity, and advanced certain common objectives. But it also seems to have taken the form of a takeover rather than a merger: the Child Study Association absorbed the Childhood Society and turned it into one of its constituent branches. The Childhood Society had concentrated on advancing and publicising Warner's researches; once those researches had lost their momentum, the Society no longer had much of a *raison d'être*.

In institutional terms, the new organisation was only a qualified success. Amalgamation brought immediate benefits – increased membership, pooled resources and a renewed vigour – but stagnation rapidly set in, with several local branches contracting or dying out. After an initial expansion, the overall membership fluctuated and then went into decline: in 1908 the Association had 1,439 members, in 1914 only 1,100. The Child Study Society (London) increasingly dominated the Association, recruiting the most influential members, organising the

¹²⁹ CSP, Childhood Society Minutes: August 1896–February 1899. Letter from Sully read out at the Council Meeting on 27 November 1896, p. 12.

¹³⁰ CSP, Childhood Society Minutes: Meeting of the British Child Study Association in Manchester, 7 May 1900, stuck in on p. 27.

¹³¹ CSP, Childhood Society Minutes: 1896–1906. Meeting of joint representatives of the Childhood Society and the British Child Study Association, 11 November 1904.

¹³² CSP, The Child Study Society, London. Council Minutes, 8 June 1907 to 14 March 1914. Meeting of Councils of the Childhood Society and the London Child Study Association, 18 June 1907, p. 1. The suggestion that the amalgamated society should be called the Institute of Child Science was considered but rejected. See also Basis of a Constitution for the Amalgamation of the Childhood Society and the London Branch of the British Child Study Association (drawn up by joint committee, 8 October 1906) and The Child Study Society, London, By-Laws.

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movement's administrative affairs, and arranging its scientific investigations. Its membership continued to increase, numbering 303 in 1908 and 608 in 1922. The London Society congratulated itself on both the quality of its meetings and the enthusiasm of its members.¹³³ But as the fortunes of the London branch waxed, so those of the rest of the Association waned. On 31 December 1923, the Child Study Association was dissolved and its finances divided between the London and Manchester Societies.¹³⁴

The Child Study Society (London) preserved the Association's tradition of fusing scientific experts and interested amateurs together into a common movement. Its members included most of the leading psychologists and educationalists of the period, notably John Adams, Cyril Burt, James Kerr, and C. W. Kimmins (all of whom served as Vice Presidents), P. B. Ballard, Margaret Macmillan, and Sir James Crichton-Browne. Though failing to produce pioneers as distinctive as Sully or Warner,¹³⁵ it financed a series of relatively popular lectures intended to communicate recent advances in child psychology to a lay audience, and made a series of, admittedly rather half-hearted, attempts to send memoranda from the Society to the Board of Education supporting a more child-centred approach to education. Perhaps its most valuable contribution to child study was to publish until 1920 a regular journal, *Child Study*, and thereafter an annual *Journal of Proceedings* throughout the 1920s. P. B. Ballard, a highly active member of the Society, recalled the atmosphere of the time:

It was then in its palmy days, with a large membership, a public lecture every fortnight, a widely-read journal, and a fair number of reading circles, all flourishing under the fostering care of Sir John Cockburn and Dr. C. W. Kimmins. Its success was partly due to the fact that there was little or no rivalry. It afforded a platform upon which free-lance thinkers of all kinds could frankly express their views on education – provided they could present reasonably good credentials. Its main aim, however, as its title implied, was to encourage scientific study of the child mind. The lecturers to whom the Council of the Society gave preference were those who from observation, from research, or from experiment could tell the members something new about the young people whom they, as parents and teachers, were trying to bring up in the way they should go. Here was a new note. Here was some hope of building up education as a science and not as a mere body of undemonstrated doctrine.¹³⁶

The Society increasingly drew its rank-and-file membership from the teaching profession.¹³⁷ In 1928 the Committee of the Society admitted that, of the numerous groups to which it hoped to appeal – medical men, administrators, parents,

¹³³ *The Child Study Society (London), Journal of Proceedings* Vol. 2 (1922–3), p. 38.

¹³⁴ CSP, Child Study Association Minutes: January 1920–November 1923.

¹³⁵ CSP, Child Study Society Minutes, p. 129.

¹³⁶ Ballard, *Thomas George Tibbey: A Lecture in his Memory* (1936), p. 10.

¹³⁷ *The Times Educational Supplement*, 18 October 1917, p. 397, col. d. T. G. Tibbey wrote in to emphasise that 'the catholicity of the membership is a distinguished feature of all the Child Study Societies' (*ibid.*, 25 October 1917, p. 413, col. d.), but as the next quotation demonstrates, this constituted propaganda rather than accurate reporting.

guardians and social workers – only teachers had ‘in reasonable numbers’ availed themselves ‘of the educational benefits of the Society’.¹³⁸ By the 1920s it had almost begun to function as an informal contact point between three distinct professional groups – school teachers, educational administrators, and educational psychologists – with the teachers forming the bulk of the audience and educational psychologists providing the main intellectual inspiration. It is perhaps worth pausing and examining the career and work of one of these teachers, Thomas George Tibbey, partly because he played a leading role in the movement and partly because he exemplifies the interests of the school teachers who formed the bulk of the members.

Tibbey was born in 1870, the year in which Forster’s Educational Bill was passed, and spent his life within the teaching profession in London, serving as an assistant master for twenty-one years and as headmaster for another twenty-one. Convinced that education was an instrument of social amelioration, he proselytised for educational experiment and educational research.¹³⁹ He spent his working life campaigning against an established educational system in which ‘there were no *Suggestions for Teachers*, no intelligence tests, no visits to theatres, no nature-study rambles, no school journeys, no organised games, no practical workrooms, no open-air schools’ and in which ‘the discipline was the discipline of the barracks, and the curriculum the relic of a creed outworn’.¹⁴⁰ He threw himself into the Society’s work; provided what help he could for psychologists such as Burt and Winch who were conducting ‘long and intricate experiments in London schools’; and, in numerous meetings of the teaching profession and in his weekly column in *The Times Educational Supplement* ‘preached to his colleagues the value of demonstrable knowledge and the need for educational experiment’.¹⁴¹

Yet even Tibbey’s enthusiasm failed to salvage the Society. From the mid-twenties onwards it became increasingly shaky as an institution and moribund as an intellectual movement. The Council’s meetings were taken up with moratoriums on child study.¹⁴² About 10 per cent of its members joined for a year only and failed to be drawn into the movement.¹⁴³ It suffered from mounting financial troubles, as members’ subscriptions – its main source of income – were slow in coming and often failed to arrive at all. In 1924, for example, 222 of the 520 registered members failed to pay their subscriptions.¹⁴⁴ By 1926 the Committee was forced to admit that

¹³⁸ CSP, Child Study Society, London: Minutes June 1922–Oct. 1928. Circular letter from London, 26 January 1928, stuck into the minute book on pp. 169–70.

¹³⁹ Ballard, *Thomas George Tibbey* (1936), *passim*. ¹⁴⁰ *Ibid.*, p. 9.

¹⁴¹ *Ibid.*, p. 13. Ballard calculates that he wrote about one million words in his anonymous weekly column for *The Times Educational Supplement*.

¹⁴² CSP, Child Study Society, London: Minutes July 1924–May 1934, Meeting of the Council, Tuesday, 8 March 1932, p. 192.

¹⁴³ CSP, Child Study Society, London: Minutes June 1922–Oct. 1928, Meeting of the Council, Thursday, 21 June 1923, p. 34.

¹⁴⁴ CSP, Child Study Society, London: Minutes July 1924–May 1934, Meeting of the Finance Committee, Monday, 25 September 1924, p. 4.

it was 'not adequately carrying out its aims of the scientific study of the mental and physical condition of children'.¹⁴⁵ It ceased to attract many lay people to its meetings. Those who wanted to learn about children's mental development had rival sources of information in the form of the wireless and local educational authority lectures.¹⁴⁶ Some of its problems were caused by simple inefficiency. When the Board of Education's Consultative Committee asked it to send a memorandum on the course of study suitable for children in elementary schools it formed a committee under a Dr Glaister but failed to do anything in time.¹⁴⁷ In November 1935 an advisory committee met to decide whether the Society should continue to exist,¹⁴⁸ and in January 1946, after a rather prolonged decline, it finally wound up its affairs, transferring all its papers and resources to the British Psychological Society.¹⁴⁹

The decline and fall of the Child Study movement

The movement's problems were far from unique, since many voluntary societies hit the buffers between the wars. More women were going out to work, servants were becoming scarce, religious bodies – the classic progenitors of voluntarism – were giving way to state action, leisure was becoming more commercialised, and professionalism was gaining the upper hand everywhere. Many natural history societies shared the same fate as the Child Study Society, with drastic falls in membership and frequent bankruptcies. The Ray Society, which had over 600 subscribers in the 1850s, dwindled to 262 by 1915. The post-war inflation combined with the rising real costs of the relevant raw materials forced subscription rates up and brought the end of numerous learned journals. Between 1919 and 1920, wholesale prices increased by 50 per cent, printing costs rocketed, and the Penny Post was done away with.¹⁵⁰ An obituary for a one-time stalwart of the Botanical Club points to a number of problems which the Child Study Society shared with other amateur bodies:

the competing attractions of football, cinemas, golf, revues and dances appear to be too powerful rivals, and one has to acknowledge that the interest in our and other branches of natural science seems to lack the presence of devotees such as the last half of the nineteenth century afforded excellent examples in all grades of life.¹⁵¹

¹⁴⁵ *Ibid.*, Minutes of the Meeting of the Advisory sub-committee, 10 May 1926, p. 33.

¹⁴⁶ *Ibid.*, Minutes July 1924–May 1934, Meeting of the special sub-committee appointed to inquire into the real or apparent falling off in membership and attendance at lectures, p. 38.

¹⁴⁷ *Ibid.*, Minutes July 1924–May 1934, Meeting of Council held on 21 January 1932, p. 190.

¹⁴⁸ CSP, Child Study Society, London: Minutes of Council and Committee Meetings 1934, Meeting of the Advisory Committee, Monday 11 November 1935, p. 32.

¹⁴⁹ CSP, Meeting of Council, Thursday, 3 January 1946, p. 91. On the transfer of resources to the BPS, see A. G. Caws, 'Child Study Fifty Years Ago', *Bull. Br. Psych. Soc.* Vol. 1, No. 3 (January 1949), pp. 104–9.

¹⁵⁰ David Elliston Allen, *The Naturalist in Britain. A Social History* (1976), pp. 244–5.

¹⁵¹ Quoted in *ibid.*, p. 245.

Yet child study failed to preserve the link between amateurs and professionals which continued to characterise British natural history until well after the Second World War.¹⁵² If it was weakened by a fall in membership, it was destroyed by an irreconcilable antagonism between its amateur and professional wings. The movement had deliberately rejected the exclusiveness associated with the learned professions, encouraging co-operation between experts and amateurs – in particular between psychologists and parents – in the common study of child development. Its tone was evangelistic rather than learned, emphasising the communication of simple precepts to a large audience rather than accumulating esoteric knowledge for a few experts. But its characteristic methods and beliefs were rapidly discredited by the emergence of a professional community devoted to studying child psychology. The movement failed to adapt to advances in scientific theory, continuing to emphasise the physiological rather than the psychological approach to child study, treating the child's body and movements as a unique guide to the condition of its mind, and clinging to the outworn theories of recapitulation and the inheritance of acquired characteristics. Psychologists who had profited in their early careers from the support and publicity which so broadly based an amateur movement could supply, soon began to abandon it. They felt that their scientific expertise and professional interests were compromised by co-operation with an organisation of amateurs, and found that they could rely on more effective agencies to communicate their insights to public and politicians, notably the radio and the Consultative Committee of the Board of Education. In Edwardian England, amateurs and professionals had united to study children and to disseminate their discoveries; between the wars this link was broken, and parents and teachers increasingly became a passive audience for licensed professionals.

The earliest criticisms of the Child Study movement came from American psychologists. Hugo Munsterberg, J. Mark Baldwin and William James all denounced its scientific pretensions and educational teachings, suggesting that its methods were incompatible with psychological science and its dogmas irrelevant to education practice. Munsterberg argued that 'most of the so-called child psychology is partly history, partly economics and ethics, partly physiology, partly nothing at all, but decidedly not psychology';¹⁵³ Baldwin ridiculed Hall's results;¹⁵⁴ William James agreed that, if treated statistically, the work of the movement 'would seem on the whole to have but trifling value'¹⁵⁵ and urged teachers passively to accept the insights of the professional psychologists rather than actively support a misguided movement of amateurs.¹⁵⁶ Both he and

¹⁵² *Ibid.*, pp. 252–71.

¹⁵³ H. Munsterberg, 'Psychology and Education', *Educational Review* Vol. 16 (1898), p. 114.

¹⁵⁴ J. M. Baldwin, 'Child Study', *Psychological Review* Vol. 5 (1888), pp. 218–20.

¹⁵⁵ William James, *Talks to Teachers on Psychology* (1955 edn), p. 12.

¹⁵⁶ *Ibid.*, p. 13. But James did concede that child study had done a valuable service in emphasising the limited abilities of children at different stages of development (*ibid.*, p. 148).

Munsterberg emphasised that the teacher's attitude to the child, which was concrete and ethical, was positively opposed to the psychological attitude, which was abstract and analytical: the two professions had distinct aims and methods and should be pursued by qualified experts.¹⁵⁷

Such criticisms of the aims and methods of the movement coincided with a demolition of Hall's guiding scientific theory – the recapitulation theory – in the technical literature.¹⁵⁸ The rise of experimental biology made the theory unfashionable: experimentalists wanted to know how organs worked and what functions they served rather than to speculate on their historical origins.¹⁵⁹ By 1914 MacBride was lamenting that 'in these days this law is regarded with disfavour by many zoologists, so that to rank oneself as a supporter of it is to be regarded as out of date. The newest theory is, however, not necessarily the truest.'¹⁶⁰ The establishment of Mendelian genetics finally rendered the theory untenable, converting previous exceptions into new expectations.¹⁶¹ 'This idea of germinal variation', T. H. Morgan observed, 'carried with it the death of the older conception of evolution by superposition'¹⁶² – that is, by recapitulation.

These arguments were soon taken up by psychologists in England. They increasingly came to look upon psychology as the preserve of experts who were committed to it by their choice of vocation and guided by their understanding of sophisticated scientific method. W. H. Winch suspected that the 'extravagance and inutilities' of child study provoked a popular prejudice against educational research.¹⁶³ Ballard pointed out that 'when ... the researchers had got hold of the essential facts they did not know what to do with them. Nothing happened. No problem was solved, no light emerged to guide the teacher in his daily task.'¹⁶⁴ Burt dismissed the approach of many members of the movement as 'anecdotal and semi-sentimental'.¹⁶⁵ James Kerr, the chief medical officer in the London Educational Department and an active member of the Child Study Society, confessed to Karl Pearson that he thought Warner's work 'very superficial and of little value *per se*' and pointed out that he failed to note the ages of 'normal' children and based his estimates on appearances only.¹⁶⁶ The *Report of the Consultative Committee on the Primary School* pointed out that Hall's recapitulation theory ('which, to judge from

¹⁵⁷ *Ibid.*, p. 13.

¹⁵⁸ See, for instance, J. Arthur Thomson, *The Science of Life* (1910), pp. 133–7; Waldo Shumway, 'The Recapitulation Theory', *Quarterly Review of Biology* (New York, 1903).

¹⁵⁹ Gould, *Ontogeny and Phylogeny*, p. 168.

¹⁶⁰ E. W. MacBride, *Text-Book of Embryology* (1914), p. 49. Quoted in *ibid.*, p. 186.

¹⁶¹ Gould, *Ontogeny and Phylogeny*, p. 168.

¹⁶² T. H. Morgan, *A Critique of the Theory of Evolution* (Princeton, 1916), p. 18. Quoted in Gould, *ibid.*, p. 204.

¹⁶³ W. H. Winch in H. B. Chapman, *Organised Research in Education* (1927). Cf. W. H. Winch, *Problems in Education* (1900), p. 25. ¹⁶⁴ Ballard, *The New Examiner* (1923), p. 19.

¹⁶⁵ Burt, 'Psychology and the Science of Education: Selected Writings of E. L. Thorndike', *History of Education Quarterly* Vol. 111, No. 3 (September 1963), p. 170.

¹⁶⁶ University College, London, Karl Pearson Papers, James Kerr to Pearson, 30 May 1910, pp. 1–2.

our evidence, is widely held by many teachers') was incompatible with the findings of contemporary psychology – a science based not on 'plausible generalisations' but on 'the direct application of mental tests or of controlled statistical observation'.¹⁶⁷ For both intellectual and institutional reasons, the future of Child Study lay with the professional psychologists.

These judgements were certainly too harsh. The Child Study movement had some illustrious allies in its support for the recapitulation theory, with both Jean Piaget and Sigmund Freud finding it a source of inspiration. Piaget trained as a paleontologist while the theory was still in vogue, and his writings are littered with observations on the parallels between the thought of children and savages. He hoped that his work on children's mental development would provide solutions to a more general historical question: how did men learn to reason? 'We are not very well informed in the psychology of primitive man', he lamented, 'but there are children all around us, and it is in studying children that we have the best chance of studying the development of logical knowledge, mathematical knowledge, physical knowledge, and so forth.'¹⁶⁸ Freud was an even more devout recapitulationist. Convinced that 'each individual somehow recapitulates in an abbreviated form the entire development of the human race',¹⁶⁹ he concluded that infants must enjoy the same vigorous and perverse sexual appetites as savages.¹⁷⁰ He speculated that children repeat in their fantasy lives the actual experiences of their prehistoric ancestors:

It seems to me quite possible that all the things that are told to us today in analysis as phantasy – the seduction of children, the inflaming of sexual excitement by observing sexual intercourse, the threat of castration (or actual castration itself) – were once real occurrences in the primaeval times of the human family, and that children in their phantasies are simply filling in the gaps in individual truth with prehistoric truth.¹⁷¹

Like Piaget, he claimed that psychology could offer important insights into primitive life. 'Dreams and neuroses seem to have preserved more mental antiquities than we could have imagined possible', he argued, 'so that psychoanalysis may claim a high place among the sciences which are concerned with the reconstruction of the earliest and most obscure periods of the beginnings of the

¹⁶⁷ Board of Education. *Report of the Consultative Committee on the Primary School* (HMSO, 1931), p. 34.

¹⁶⁸ J. Piaget, 'Genetic Epistemology', *Columbia Forum* Vol. 12 (1969), p. 4. Cf. Gould, *Ontogeny and Phylogeny*, pp. 144–7.

¹⁶⁹ Sigmund Freud, *Introductory Lectures on Psychoanalysis*, p. 235.

¹⁷⁰ Frank J. Sulloway, *Freud, Biologist of the Mind. Beyond the Psychoanalytic Legend* (1979, 1980 edn), pp. 259–60; Gould, *Ontogeny and Phylogeny*, pp. 156–61.

¹⁷¹ Freud, *Introductory Lectures on Psychoanalysis*, p. 418. Freud was, however, critical of Jung's crude application of the recapitulation theory. See 'From the History of an Infantile Neurosis' (1918), pp. 290, 314–15.

human race.¹⁷² One of the main tenets of psycho-analytical theory had its origins in the law of recapitulation.

Child study made significant intellectual and institutional contributions to the growth of scientific psychology. It helped to spread the techniques of natural history to the study of children, persuading its audience to regard children as natural creatures, to be studied by the same methods as animals: observation, classification, and experiment. It popularised the idea that the child's conception of the world differs radically from the adult's, that there are certain marked stages in normal mental development, and that there are significant similarities between the mental worlds of the child and the primitive. If later psychologists abandoned the recapitulation theory, at least they continued to insist that children understand the world in distinctly animistic terms.

The movement also attracted several able individuals into educational psychology and helped to support their early academic work. Through its meetings, discussion circles, and public lectures, it managed to create an audience for the emerging academic discipline. Numerous teachers and parents acquired their habit of looking to psychologists for advice on child-rearing from their participation in the Child Study movement. It helped to establish links between scientific research and educational practice which were to characterise English educational psychology until well after the Second World War. James Sully symbolises the link between amateur child study and professional psychology: his *Studies of Childhood* was one of the most widely quoted handbooks on psychology until the 1910s; his syllabus for the Bachelor's degree in psychology in London University was unchanged until the 1920s; and his lectures on child study set the pattern for courses given for the London Postgraduate Diploma in Psychology.

Above all, the movement provided plenty of ammunition for educational reformers. It encouraged demands for a higher school leaving age. Social reformers habitually quoted Stanley Hall in support of their case for compulsory part-time schooling for all adolescents. Michael Sadler, for example, pointed out that adolescence is a psychologically traumatic time: the more teenagers can be removed from the corrupting influence of the workplace and brought under the salutary supervision of the school, the better for the long-term health of the nation.¹⁷³ The recapitulation theory furnished a persuasive, if implausible, justification for child-centred teaching. 'Since it is the order of nature that the new organism should pass through certain developmental stages', Guillet argued, 'it behooves us to study nature's plan and seek rather to aid than to thwart it. For nature must be right; there is no higher criterion.'¹⁷⁴ John Dewey, a critic of the recapitulation theory, admitted that it had done something to encourage progressive education: 'It must first be heartily acknowledged that it makes practically the first attempt to treat the

¹⁷² Freud, *The Interpretation of Dreams*, p. 588.

¹⁷³ Harry Hendrick, *Images of Youth*, pp. 111–18. See also, M. E. Sadler, *Continuation Schools in England and Elsewhere* (1907).

¹⁷⁴ Quoted in Gould, *Ontogeny and Phylogeny*, p. 155.

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curriculum, especially in its sequence, upon other than conventional, or formal and logical grounds. Educational theory is indebted to the doctrine for the first systematic attempts to base a course of study upon the actual unfolding of the psychology of child nature.¹⁷⁵

¹⁷⁵ J. Dewey, 'Culture Epoch Theory', in P. Monroe (ed.), *A Cyclopedia of Education* (New York, 1911), II, pp. 240–2.

The invention of educational psychology

The decline of child study coincided with the rapid transformation of psychology from a branch of philosophy into an independent science. In 1897 two psychology laboratories were established – one in Cambridge, one in University College, London – and in October 1901, the British Psychological Society was founded. In January 1904 James Ward and W. H. R. Rivers edited the first number of the *British Journal of Psychology*. They encouraged psychologists to abandon transcendental issues and speculative methods for empirical problems and scientific techniques, hoping to establish the new discipline in the scientific community. ‘In becoming a distinct science’, they argued, ‘it has thus increased the intimacy and variety of its connections with other sciences manifold.’¹ By 1914 there were eleven posts in psychology in various English and Scottish universities, as well as Cyril Burt’s half-time job as official psychologist to the LCC. The technical literature on the discipline grew rapidly. In 1921 a separate *British Journal of Medical Psychology* was established; and in 1930 the BPS took over the *Forum of Education* and renamed it the *British Journal of Educational Psychology*.

Educational psychology was a prominent specialism within the expanding profession. The psychology of individual differences and the technology of mental measurement found their ideal subjects in the school population. School teachers learned a smattering of psychology in their teacher training courses. The LCC tried to solve some of the problems of classifying school children by employing an official psychologist. The school medical services increasingly turned to psychological theory for help in dealing with the mentally subnormal. ‘Of all fields of application,’ R. B. Cattell reflected in 1934, ‘that concerned with education and child management has been the recipient of the greatest bounty from the psychologists. And that is only scientific justice, for it was under the wing of the educationalist that psychology was fostered in its earliest years.’²

The origins of the new discipline of educational psychology lay in three main areas: the growing problem presented by classifying and training the mentally

¹ James Ward and W. H. R. Rivers, ‘Editorial’, *Brit. J. Psych.* Vol. 1 Part 1 (January 1904), p. 1.

² Raymond B. Cattell, *Your Mind and Mine* (1934), p. 292.

handicapped; the enthusiasm of a number of influential educationalists for reconstructing teaching on a scientific basis; and the opposition of a conservative academic establishment to the science of psychology.

The problem of the mentally handicapped

The problems posed by the treatment of mentally handicapped children helped to spur the development of the subject.³ Voluntary efforts to provide care for the mentally defective were common from the 1840s onwards. In 1896 a National Association for Promoting the Welfare of the Feeble-Minded was formed, followed in 1902 by a Lancashire and Cheshire Society for the Permanent Care of the Feeble-Minded, and both societies helped to set up several small voluntary homes for mental defectives.⁴ The introduction of compulsory elementary education in 1870 forced teachers to come to terms for the first time with the full range of mental abilities among children. The presence of mentally handicapped children in already over-large classes seriously hindered teaching. By the 1890s subnormal children had become the subject of widespread concern, and a number of local authorities experimented with special schools for their care. The need for a body of scientific experts capable of distinguishing between the normal and the subnormal and skilled in the techniques of training the backward had already become acute.⁵

The nineteenth-century asylum movement threw up a group of medically trained, professionally self-conscious, and legally recognised experts – ‘mad doctors’ to their detractors and ‘alienists’ to themselves – who specialised in diagnosing, certifying, and treating the mentally abnormal.⁶ The wide range of conditions suffered by asylum inmates forced them to refine their art, and inquire more carefully into the nature, causes and variety of mental abnormality. In particular, they began to distinguish between ‘dementia’, or the disturbance of mental functions, and ‘amentia’, or the absence of mental functions.⁷ The rapid expansion of medical psychology in the second half of the century, stimulated in part by demand and in part by David Ferrier’s successful demonstration of the cerebral localisation of function, helped to generate a body of expertise on the subnormal as opposed to the insane.⁸ In 1877, W. W. Ireland published *On Idiocy and Imbecility*,

³ Gillian Sutherland, *Ability, Merit and Measurement* (Oxford, 1984), p. 14.

⁴ *Special Educational Needs. Report of the Committee of Enquiry into the Education of Handicapped Children and Young People*, Cmnd 7212 (HMSO, 1978), (henceforth cited as Warnock Report), p. 9; L. S. Hearnshaw, *A Short History of British Psychology 1840–1940* (1964), p. 151.

⁵ Sutherland, *Ability, Merit and Measurement*, pp. 5–6.

⁶ Andrew Scull (ed.), *Madhouses, Mad-Doctors and Madmen. The Social History of Psychiatry in the Victorian Era* (1981), p. 6. For a thorough analysis of the intellectual and professional development of medical psychology, see Michael Clark, ‘The Data of Alienism: Evolutionary Neurology, Physiological Psychology and the Reconstruction of British Psychiatric Theory, c.1850–c.1900’, DPhil thesis, Oxford University, 1984.

⁷ Sutherland, *Ability, Merit and Measurement*, p. 14.

⁸ See Robert M. Young, *Mind, Brain and Adaptation in the Nineteenth Century* (Oxford, 1970).

which is widely regarded as the first systematic textbook on mental deficiency. Both Warner and Shuttleworth were preoccupied with classifying and training the subnormal. A. F. Tredgold's *Mental Deficiency* (1908), which argued that the subnormal should be classified, institutionalised and provided with specialised training, rapidly became the classic textbook on the subject, running through five editions between 1908 and 1929. These medical arguments did not have an immediate impact on public policy. The Lunacy Act of 1890, which represented the triumph of legal scepticism over medical pretensions to expert knowledge about the workings of the mind, continued the established practice of defining a 'lunatic' as an 'idiot or person of unsound mind'.⁹ Yet by 1900 influential educationalists and doctors insisted that the subnormal should be distinguished from the abnormal and that a body of scientific experts was needed to deal with the peculiar problems which they posed.

In the late Victorian and Edwardian period official concern with the mentally subnormal intensified. In late 1896 the Education Department set up a Committee on Defective and Epileptic Children, instructing it, in particular, to decide on the best means of discriminating between educable and non-educable defectives and between children who could attend an ordinary elementary school and those who should be sent to a special school.¹⁰ The Committee, which reported in 1898, argued that all local authorities should provide special schools or classes for mentally defective children aged seven or upwards but warned that the selection of such children should be rigorous, involving at least four people: a medical officer, an HMI, the child's current and prospective teachers, and his parents. Partly under the influence of Warner and Shuttleworth, it suggested that a medical officer appointed by the school board should be the key figure in deciding whether a particular child should be educated in an ordinary school, in a special school, or not at all. It laid down detailed guidelines for teaching the subnormal: that classes should not be larger than twenty or, in the case of senior classes, thirty, that all head-teachers should be qualified, and that the lessons should be short, the instruction varied, and the emphasis placed on manual training and vocational subjects.¹¹ The resulting legislation, the Elementary Education (Defective and Epileptic Children) Act of 1899, which empowered rather than obliged school boards to provide for the education of these children, turned the medical report into a medical certificate, thus helping to establish a prolonged medical monopoly of the selection of subnormal children.¹²

Britain's defeat in the Boer War, widespread fears about the deterioration of the

⁹ Kathleen Jones, *Mental Health and Social Policy 1845-1959* (1960), p. 43. For a detailed discussion of the lunacy act, see pp. 29-40 and Clive Unsworth, *The Politics of Mental Health Legislation* (Oxford, 1987), pp. 80-111. ¹⁰ Sutherland, *Ability, Merit and Measurement*, pp. 19-20.

¹¹ *Report of the Departmental Committee on Defective and Epileptic Children*, PP 1898, 26. For discussion of this report, see Warnock Report, p. 13; Sutherland, *Ability, Measurement and Merit*, pp. 19-23; J. S. Hurt, *Outside the Mainstream. A History of Special Education* (1988), pp. 129-34.

¹² 62 & 63 Vict., c. 32 (1899 *Elementary Education (Defective and Epileptic Children) Act*).

race, and the popularity of social darwinism, all helped to attract yet more attention to the feeble-minded. In autumn 1904 a royal commission – the Radnor Commission – was established to inquire into the care and control of the feeble-minded, both juvenile and adult. It reported in 1908, arguing, on the basis of a survey of the nature and incidence of feeble-mindedness, that mental defect is largely inherited (twenty-five of the thirty-five expert witnesses consulted by the Commission attached ‘supreme importance’ to inheritance); that defectives should be certified and given custodial care; and that new central and local authorities should be established to deal with the problem. The responsibility for training mentally defective children, it maintained, should lie with the local mental deficiency committee rather than with the local educational authority.¹³

Legislation followed, if a little tardily. The 1913 Mental Deficiency Act broke with the 1890 Lunacy Act, and foreshadowed all future legislation in this area, by distinguishing between different types of mental disorder, firstly accepting the difference between ‘amentia’ and ‘dementia’ and secondly dividing the deficient into sub-categories – idiots, imbeciles, the feeble-minded and moral defectives, to list only a few of the numerous groups.¹⁴ The Mental Deficiency Act displayed none of the scepticism about the expertise of alienists, none of the concern for the liberty of the citizen, which so distinguished the 1890 Lunacy Act, cheerfully accepting the right of doctors to segregate and institutionalise the mentally deficient and extending the powers of the state to groups, like the ‘feeble-minded’, who had never before been subjected to special legislation.¹⁵ The Act provided for the identification and, where necessary, the custodial care of adult defectives and set up a new authority, the Board of Control. The problem with earlier measures, the argument went, was that they had only treated the symptoms of mental deficiency, like crime, drunkenness, vagrancy and sexual promiscuity. The aim of the Act was to treat mental deficiency itself, removing the deficient from prisons and mental asylums, and transferring them to special institutions, designed to cater for their specific problems and turn them, as far as possible, into useful citizens.¹⁶

The act made the identification of child defectives the responsibility of the LEA, only placing the ‘ineducable’ under the jurisdiction of the local control authority. The Elementary Education (Defective and Epileptic Children) Act of 1914 forced all local educational authorities to create special schools. After a tussle with the Board of Control, the Board of Education won responsibility for subnormal children. To help them assess the abilities of all seven-year-olds – one

¹³ PP 1908, 29, Cmnd 4204, *Report of the Royal Commission on the Care and Control of the Feeble-Minded*. For a discussion of this report, see Warnock Report, pp. 14–15; Sutherland, *Ability, Merit and Measurement*, pp. 39–40; Jones, *Mental Health and Social Policy*, pp. 52–60; Hurt, *Outside the Mainstream*, pp. 135–40.

¹⁴ Unsworth, *The Politics of Mental Health Legislation*, p. 51. See also Mathew P. Thomson, ‘The Problem of Mental Deficiency in England and Wales c. 1913–1946’, DPhil thesis, Oxford University, 1993, pp. 13–23.

¹⁵ Unsworth, *Politics of Mental Health Legislation*, pp. 152–3.

¹⁶ *Ibid.*, p. 155.

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of their new duties – Local Education Authorities employed a network of doctors as school medical inspectors. Dr George Newman, who had been appointed Chief Medical Officer to the Board of Education in September 1907, was henceforth to play a key role in developing education for backward children.¹⁷ The number of children dealt with under this legislation expanded steadily between the wars. In 1913 there were 177 special schools catering for some 12,500 mentally defective children; by 1939 the number had risen to about 17,000.¹⁸

Partly as a result of this legislation, the medical profession came to play an ambivalent role in the development of educational psychology. To some extent it obstructed its growth, since doctors won a monopoly over classifying the subnormal and certifying the defective, an area in which psychologists claimed a unique expertise. It was only in 1975 that psychologists at last managed to win their prolonged battle with doctors for control over allocating children to special schools.¹⁹ Yet the medical profession also helped to popularise and lend prestige to one of the main techniques of the psychologists: the mental test. Confronted with the difficult problem of identifying and classifying the backward, the school medical service soon turned to psychological tests for help.

The quest for a science of education

Mainstream educationalists were also quick to spot the potential of the new discipline. Indeed, the experimental pedagogy movement, which started out among teachers and teacher trainers, anticipated many of the most important features of educational psychology. The movement spread rapidly throughout Europe and the United States, selling itself as a sophisticated version of child study and drawing on a rich tradition of amateur investigations into mental development and pedagogic technique.²⁰ In 1875, for example, W. H. Lake, the head of Oxford House in Chelsea, had founded the Education Society, dedicated to ‘developing a science of education based on the nature of the children to be educated’.²¹ Inspired by Francis Galton, he designed a primitive kind of school record-card, covering the physical, mental, and moral characteristics of his pupils, and intended to ‘diagnose the whole life of a child and exhibit the results in a simple diagram that could be taken in at a glance of the eye’.²² Sophie Bryant, Headmistress of the Campden

¹⁷ Sutherland, *Ability, Merit and Measurement*, pp. 40–52.

¹⁸ Warnock Report, p. 15.

¹⁹ *Department of Education and Science, The Discovery of Children Requiring Special Education and the Assessment of their Needs, Circular 2/75* (HMSO, 1975).

²⁰ Marc Depaepe, ‘Social and Personal Factors in the Inception of Experimental Research in Education’, esp. p. 279.

²¹ Earl Barnes, ‘A Forgotten Student of Child Study’, *The Paidologist* Vol. 3, No. 3 (November 1901), p. 120.

²² *Ibid.*, p. 123. For reproductions of the questionnaire and the diagram ‘showing condition of Pupil at a glance’, see pp. 121–2.

High School for Girls, 'at the suggestion of Mr. Francis Galton... made some attempts to devise means for testing the mental characteristics of children' as a preliminary exercise to a systematic scheme of child guidance.²³

As child study broke down in the first decade of the century, so experimental pedagogy made the running in educational research.²⁴ In America, Stanley Hall argued that educational investigation should be laboratory based; in Germany, Ernst Neumann started the *Zeitschrift für experimentelle Padagogik* in 1905; in France, Alfred Binet conducted pioneering researches under the auspices of the Société libre pour l'étude psychologique de l'enfant; and in England, W. H. Winch conducted a series of investigations in London schools intended to bring psychological inquiry and educational practice into harmony.²⁵ In 1911 the first issue of *The Journal of Experimental Pedagogy* (the direct ancestor of the *British Journal of Educational Psychology*) appeared, under the editorship of J. A. Green, Professor of Education at Sheffield University.²⁶ A bibliography of experimental pedagogy published in Paris in the same year contained no fewer than 4,027 items.²⁷

Psychology was rapidly incorporated into teacher training courses. Handbooks intended to instruct prospective teachers in the subject piled up; claims that education must be based on psychological science multiplied; and by 1914 the majority of teacher training colleges provided some instruction in psychology. Many prospective teachers had read a little of Adams, Sully and Rusk; some had heard of Montessori, Froebel and Binet. Between the Wars the focus of educational theory moved decisively from philosophy to psychology. 'Psychology has come to permeate the atmosphere of a training college', argued Lloyd Evans in 1935, 'it is true now to say that without psychology there would be no reason for our existence.'²⁸ Many must have ignored their tutors; but others listened and put what they learned into practice. 'The completion of the course was much more of a beginning than an ending', a student wrote to Susan Isaacs, 'for the resumption of teaching was equivalent now to embarking on an unending voyage of discovery into the world of childhood.'²⁹

The role of education was not limited to providing material support. For a burgeoning science, an audience is essential, and school teachers turned out to be

²³ S. Bryant, 'Experiments in Testing the Character of School Children', *Journal of the Anthropological Institute of Great Britain and Ireland* (Feb. 1886), p. 338.

²⁴ Ballard, *The New Examiner*, pp. 19–20.

²⁵ Depaepe, 'Social and Personal Factors', esp. pp. 276–7. On Winch, see Stephen A. Sharp and A. P. Bray, 'W. H. Winch: Founder of the Experimental Approach in Education', *Brit. J. Educ. Studies* Vol. 38 (1980), pp. 34–45.

²⁶ The journal contained articles by a number of distinguished psychologists, such as Burt, Spearman, Ballard, Winch, William Brown, Drever and Rusk.

²⁷ Depaepe, 'Social and Personal Factors', p. 276.

²⁸ A. Lloyd-Evans, 'The Place of Psychology in the Training of Teachers', *Brit. J. Educ. Psych.* Vol. 5, Part 3 (November 1935), p. 236.

²⁹ University of London Institute of Education: *Studies and Impressions 1902–1952* (1952), p. 78.

a remarkably responsive audience. Burt thanked practising teachers for helping him with his work with backward children: 'isolated teachers have already elaborated valuable schemes of work and practical devices for teaching, and have collected records and data of the utmost utility. Such results might well be collated and extended systematically. The experience of each would then be at the command of all.'³⁰ When Maria Montessori visited England for the first time in 1919, H. A. L. Fisher, President of the Board of Education, took the chair in a banquet held in her honour at the Savoy Hotel, and 1,000 people enquired after places on a teacher's training course which she was running.³¹

The progressive school movement helped to test psychological theory in practice.³² Psychology naturally held a considerable attraction for the movement. Both psychologists and progressives started from the same assumption: that the mind to be educated, not the tradition to be transmitted, is the proper starting point of all instruction. Progressive educationalists found their intuitive insights reinforced by psychological theory. Psychologists agreed with them in arguing that the child is self-educating; it is by reinforcing his innate tendency to explore and explain the world, not by hammering in uncongenial facts, that education will be successful.³³ Freud reinforced their prejudices against authoritarianism and sexual repression; and his disciple – later to be cast out – Carl Jung, furnished 'the central theory of the New Education'.³⁴

This is not to say that the progressive school movement was simply psychology in action. Many progressives rejected the subject, finding religious or political rationales for their educational experiments. The Russells' school at Beacon Hill was consciously built to a political rather than a psychological blueprint. Its aims were democratic and anti-militaristic, rather than therapeutic.³⁵ Nevertheless, psychological theories influenced the practice of several educational institutions and the theories of several educational innovators. A. S. Neill, the founder of Summerhill, owed his inspiration to psychologists rather than to educationalists, regarding his school as a therapeutic community, concerned more with curing souls than with transmitting tradition. His devotion to psychology was so complete that he even called the school magazine 'id'.³⁶

The enthusiasm which many teachers felt for psychology resulted from their confidence in scientific method. Sceptical about traditional educational practice,

³⁰ GLC Record Office, C. Burt, LCC Development Memorandum No. 1: Backward Children. *Report on Provision for Backward Children* (1918).

³¹ R. J. W. Selleck, *English Primary Education and the Progressives 1914–1939* (1972), p. 28.

³² See R. Skidelsky, *English Progressive Schools* (Harmondsworth, 1969); W. A. C. Stewart, *The Educational Innovators* Vol. 2; *Progressive Schools 1881–1967* (1968); Selleck, *English Primary Education and the Progressives 1914–1939*; W. Boyd and W. Rowdon, *The Story of the New Education* (1965).

³³ Skidelsky, *English Progressive Schools*, pp. 23–4.

³⁴ *Ibid.*, p. 144.

³⁵ Stewart, *The Educational Innovators*, II, p. 153; Dora Russell criticised the Malting House School in Cambridge for being more of a study of children than a school.

³⁶ Skidelsky, *English Progressive Schools*, p. 43. The best introduction to Neill's thought is A. S. Neill, *Summerhill. A Radical Approach to Education* (1962).

they looked to science to expose the workings of children's minds and so speed up the business of teaching. They agreed that 'both teachers and administrators are guided more by unintelligent tradition, unsystematised experience or uncoordinated theories than by insight illuminated by scientific knowledge',³⁷ and they felt themselves 'drawn inevitably to the subtle, indirect and laborious devices of science'.³⁸ They rushed to produce scientific journals of education, most of them abortive. As well as a theory of mental development, psychology also offered a method for measuring individual abilities. 'One of the marked tendencies of modern times', noted one advocate of educational psychology, 'is that of a more minute measurement and evaluation of products, objects and phenomena.'³⁹ If education was to escape from hopeless anachronism, it needed to turn to modern systems of measurement.

Above all, science endeared itself to teachers largely because it appealed to their perennial anxieties about status. Teachers had found it difficult to establish their authority over the education process. 'Every member of an educational committee, every man in the street, knows, or thinks he knows, what is good for the children.'⁴⁰ Psychology presented itself as a means to 'lift the practice of teaching from empiricism and lay it on a broad scientific foundation' and to help the teacher 'to establish the claim that his profession is a learned one'.⁴¹

The academic opposition to psychology

A third reason for the rapid development of educational psychology was negative: academia failed to put its weight behind experimental psychology, doing little to turn an intellectual movement into an established profession. Universities supported a number of isolated pioneers who attracted able undergraduates into the new discipline, but failed to provide many of these new recruits with a secure or attractive career in the academic world. Seduced into the subject by charismatic patrons, yet frustrated by the indifference of the academic hierarchy, these recruits tended to make their careers in applied psychology; and the most promising area of applied psychology was education. The development of English psychology before the Second World War was consequently highly eccentric: impoverished as a branch of pure research but innovative as an applied discipline.

³⁷ H. Bombas-Smith, 'The Standpoint of Educational Psychology', *Journal of Experimental Pedagogy* Vol. 15, No. 2 (5 June 1919), p. 57.

³⁸ C. Spearman, *Journal of Experimental Pedagogy* Vol. 1, No. 1 (1 March 1911), p. 3.

³⁹ P. Sandiford, 'Measurement in Education', *Journal of Experimental Pedagogy* Vol. 1, No. 1 (1 March 1911), p. 31.

⁴⁰ J. A. Green, 'Teachers, Doctors and Madame Montessori', *Journal of Experimental Pedagogy* Vol. 2, No. 1 (5 March, 1913), p. 45.

⁴¹ R. Blair, preface, in C. Burt, *The Distribution and Relations of Educational Abilities*, pp. vii-viii. See also Depaepe, 'Social and Personal Factors', pp. 284-91. Cf. Lawrence A. Cremin, *The Transformation of the American School. Progressivism in American Education, 1876-1957* (New York, 1961).

Oxford treated the new subject with a mixture of inertia and resistance.⁴² Mental philosophy found a patron relatively rapidly when Dr Henry Wilde, a successful manufacturer of 'electro-magnetic machines', endowed a Wilde Readership in Mental Philosophy.⁴³ G. F. Stout, the first Reader, tried to popularise the subject, and helped to place psychology among the list of *Literae Humaniores* special subjects. But Oxford's idiosyncratic, not to say anachronistic, conception of mental philosophy came into sharp conflict with the demands of scientific psychology. William McDougall, Stout's successor and Oxford's first strictly scientific psychologist, measured out his time in the university in terms of frustration and disappointment. His interest in experimental method got him into trouble with Wilde himself: the terms of the Readership ruled out an experimental approach and Wilde tried to dislodge McDougall for performing experiments *outside* his working hours.⁴⁴ McDougall's interest in abnormal mental phenomena – particularly in hypnosis and the paranormal – put him beyond the pale of civilised society.⁴⁵ He found no place in the academic division of labour. Scientists treated him as a philosopher, philosophers treated him as a scientist, and both regarded him as misguided. He was, as he remarked, neither fish, flesh, nor fowl. For many years he was not a member of any college, and his only institutional support came when Francis Gotch, Professor of Physiology, gave over first one room, and later several, in the physiology laboratory.⁴⁶

His pupils encountered similar opposition, with few contemporaries taking their interest seriously. 'At Oxford science and philosophy alike remained skeptical of any attempt to solve the problems of the mind by an experimental approach.'⁴⁷ Burt's College tutor advised him that he would 'probably do better to spend any spare time on the river'.⁴⁸ J. C. Flugel excited the ridicule of his contemporaries: 'For a Balliol man to desert Plato for Darwin and Spencer, attend lectures on physiology by Gotch and embark on psychological experiments in the Museum laboratory was something of a scandal. To study hypnotism was to incur a charge of dabbling in the black arts.'⁴⁹

As a result, Oxford proved to be an academic dead end. McDougall attracted a brilliant group of pupils – William Brown, Cyril Burt, J. C. Flugel and May Smith – but Oxford did nothing to keep them on. Brown became Assistant Master at St Paul's School in 1905 and lecturer in psychology in King's College, London, in

⁴² On psychology in Oxford, see R. C. Oldfield, *Psychology in Oxford 1898–1948*; W. McDougall's autobiographical sketch in Murchison (ed.), *Psychology in Autobiography* (1930), I; Major Greenwood and May Smith on McDougall in *Royal Society Obituary* Vol. 3, No. 8 (1940), pp. 39–62; G. Humphrey, 'Five Years in the Oxford Chair', *Brit. J. Psych.* (1953), pp. 381–3, and *Inaugural Lecture on Psychology Today* (Oxford, 1949).

⁴³ Oldfield, *Psychology in Oxford*, pp. 3–4.

⁴⁴ *Ibid.*, p. 7.

⁴⁵ University of Liverpool, *Cyril Burt Papers*, D. 191/2. C. Burt, 'Reminiscences of William McDougall'.

⁴⁶ Oldfield, *Psychology in Oxford*, p. 7.

⁴⁷ C. Burt, 'William McDougall: an Appreciation', *Brit. J. Psych.* Vol. 60, Part 1 (February 1938), p. 3.

⁴⁸ *Ibid.*, p. 3.

⁴⁹ University of Liverpool, *Cyril Burt Papers*, D. 191/42. Typescript obituary of Flugel.

1908; Burt became a lecturer in psychology and assistant to Spearman at University College, London, in the same year; and May Smith stayed on as a lecturer in psychology and senior tutor at Cherwell Hall Teacher Training College – in Oxford but not part of the university.⁵⁰ The opportunity to found a pioneering department was thrown away. In 1919 MacDougall left too, taking up a chair at Harvard. ‘As regards psychology itself’, he wrote acidly in 1926, ‘I obstinately continue to be optimistic ... I carry this optimism very far. I anticipate that at no distant date, perhaps before the end of the century, even the University of Oxford may begin giving it a recognised place among her studies.’⁵¹ In fact, it was not until 1936, as a result of a gift of £10,000 from Mrs Hugh Watts, that an Institute of Experimental Psychology was set up;⁵² and it was not until 1947 that the university allowed psychology to be included among its undergraduate courses – and even then only if it was studied in conjunction with physiology and philosophy.⁵³

In Cambridge the response was similar.⁵⁴ Psychology’s relative success there was the result of personal rather than structural factors. Interest in the subject started early. In 1875, James Ward was awarded a prize fellowship at Trinity College for his dissertation on *The Relation of Physiology and Psychology*. In 1891 he managed to persuade the university to make a grant of £50 to buy apparatus for psychology.⁵⁵ Yet from the first personal enthusiasm was frustrated by institutional opposition. The Cambridge Senate rejected the scheme for a laboratory of psychophysics on the grounds that it would ‘insult religion by putting the human soul in a pair of scales’.⁵⁶ When W. H. R. Rivers was appointed lecturer in experimental psychology in 1897, he was made to feel unwanted. ‘How many times have I heard Rivers’, recalled F. C. Bartlett, ‘spectacles waving in the air, his face lit by his transforming smile, tell how, in Senatorial discussion, an ancient orator described him as a “Ridiculous Superfluity”’.⁵⁷

Although psychology was eventually given a laboratory, it remained a poor relation. In 1897 a laboratory was set up in one room in the physiology department. In 1903 it was moved to a cottage in Mill Lane – a cottage which was ‘damp, dark

⁵⁰ Oldfield, *Psychology in Oxford*, pp. 9, 12–13.

⁵¹ Preface, *Outline of Abnormal Psychology* (1926). See also Beatrice Webb to R. B. Haldane, 14 August 1928: ‘Oxford apparently detests psychology’, in Norman Mackenzie (ed.), *The Letters of Sidney and Beatrice Webb Volume 3. Pilgrimage 1912–1947* (Cambridge, 1978), p. 301.

⁵² *Ibid.*, p. 16.

⁵³ Humphrey, ‘Five Years’, pp. 381–3. Some report of the discussions in Congregation relating to the establishment of the Chair and the Honour School can be found in the *Oxford Magazine* for the academic year 1946–7.

⁵⁴ On psychology in Cambridge, see F. C. Bartlett, ‘Cambridge, England’, *Amer. J. Psych.* Vol. 50 (1937), pp. 97–110; Hearnshaw, *Short History*, pp. 171–4; F. C. Bartlett, ‘Charles Samuel Myers’, *Obituary Notices of the Fellows of the Royal Society* Vol. 5, No. 16 (May 1948), pp. 769–79; C. S. Myers in C. Murchison (ed.), *History of Psychology in Autobiography*, Vol. 3; C. S. Myers, ‘The Influence of the late W. H. Rivers on the Development of Psychology in Great Britain’, *British Association of Reporting* (1922).

⁵⁵ Bartlett, ‘Cambridge, England’, pp. 97–9.

⁵⁶ Quoted in *ibid.*, p. 98.

⁵⁷ *Ibid.*, p. 102.

and ill-ventilated'⁵⁸ and which had to make room for fourteen undergraduate students, two advanced students and three research graduates, despite the fact that 'the building is quite incapable of satisfactorily accommodating even half this number of students'.⁵⁹ The subject took off as a result of the personal initiative of C. S. Myers, who did more than anyone else to expand the new laboratory. He 'found time to agitate, organise, plan ceaselessly and in the face of frequent disappointments for an adequate base in Cambridge for the subject that was nearest to his heart'.⁶⁰ He raised most of the money for the project himself, with much of it coming from his relations and his own pocket.⁶¹ He helped to shape the subject in Cambridge through organising the department and stimulating his pupils. Yet even his enthusiasm was worn down by academic inertia. In 1922 he gave up the academic world in order to found the National Institute of Industrial Psychology in London.⁶² 'On demobilisation', he recalled, 'I returned to Cambridge, fired with the desire to apply psychology to medicine, industry and education and becoming increasingly disgusted, after my very practical experience during the War, with the old academic atmosphere of conservatism and opposition to psychology'.⁶³ Psychology survived his departure; it had built up a momentum of its own.⁶⁴ But hitherto the University had turned itself into a weight against which pioneers had to push rather than an agent of intellectual innovation.

The civic universities sentenced psychology to similar neglect. Either through lack of funds or institutional inertia, they failed to provide it with much patronage. In Liverpool the fate of the discipline was bound up with the enthusiasm of one or two individuals, notably Charles Sherrington, a physiologist.⁶⁵ Persuaded that physiology needed a psychological dimension, he set about providing it with a recognised place in his department. A number of young psychologists, notably Cyril Burt, helped to institutionalise the discipline. The range of their responsibilities testifies to the academic neglect they had to endure. Burt had to lecture on physiology in addition to the entire range of psychology: his course included the experimental psychology of the sense organs, hypnosis, Freudian psycho-analysis, sexual differences, inheritance and intelligence. He had to teach sixty education students, fifty medical students, twelve social scientists, a handful of philosophers and six or more pure psychologists. Yet he was confined to a small room in the

⁵⁸ C. S. Myers in Murchison (ed.), *History of Psychology*, III, p. 220-1.

⁵⁹ Bartlett, 'Cambridge, England', p. 104.

⁶⁰ Bartlett, 'Obituary: C. S. Myers', *Nature* Vol. 158, No. 4019 (November 1946), p. 657, col. 2.

⁶¹ Bartlett, 'Cambridge, England', p. 107. Myers confirms rumours that he was the donor of an anonymous gift in 'C. S. Myers' in Murchison (ed.), *History of Psychology*, III, p. 221.

⁶² Bartlett, 'Cambridge, England', p. 108.

⁶³ C. S. Myers in Murchison, (ed.), *History of Psychology*, p. 224-5.

⁶⁴ Bartlett, 'Cambridge, England', pp. 108-10.

⁶⁵ On psychology in Liverpool, see: Hearnshaw, 'Sherrington, Burt and the Beginnings of Psychology in Liverpool', *Bull. Br. Psych. Soc.* Vol. 27 (1974), pp. 9-14; Cyril Burt, *Psychologist*, pp. 25-31; Lord Cohen of Birkenhead, *Sherrington, Physiologist, Philosopher and Poet* (Liverpool, 1958).

physiology laboratory and received only £20 a year for equipment.⁶⁶ The subject failed to build up an independent impetus. Sherrington's departure for Oxford, Burt's appointment to the LCC (both in 1913), and the ravages of the First World War meant the death of psychology in Liverpool. It was not resurrected for another quarter of a century.⁶⁷

In Reading the department of psychology was the work of one man, A. W. Wolters.⁶⁸ From 1910 onwards he started teaching the subject there, illustrating the experimental approach to the subject with home made apparatus and packets of postcards. He managed to persuade the University to provide him with premises – 'a very foul attic' was how he described it – and even with money: £25 for initial expenses and £10 a year. He was responsible for founding an independent department in 1921, for providing an honours degree in 1926, and for constructing a purpose-built psychology laboratory in 1942 – the first of its kind outside Cambridge.

Elsewhere (outside University College, London) psychology failed to take off; it lacked the inspiration of a pioneer. It tended to be taught in philosophical terms to teachers or metaphysicians. In Bristol, for example, where Lloyd Morgan held a chair in psychology and ethics, the subject was imprisoned in its nineteenth century framework: an experimental approach was out of the question.

Founders of educational psychology

The institutional foundations of modern psychology were laid by just nine people: John Adams, P. B. Ballard, Cyril Burt, Susan Isaacs, Thomas Percy Nunn, Charles Spearman, Godfrey Thomson, C. W. Valentine, and W. H. Winch. Taken together, they set up and presided over university teaching and research departments; introduced the subject to teacher training colleges and local education authorities; offered advice and evidence to the Board of Education; produced a body of popular and technical literature; established a specialised section of the British Psychological Society; and published a professional journal, the *British Journal of Educational Psychology*. They were clearly divided into two generational groups: the pioneers, who were born between 1857 and 1870 (Adams, Ballard, Nunn, Spearman and Winch), and the first generation of professional educational psychologists, who were born between 1879 and 1885 (Burt, Isaacs, Thomson and Valentine).

The pioneers pursued their careers in three distinct areas: university psychology departments, teacher training colleges, and the educational department of the

⁶⁶ Hearnshaw, 'Sherrington, Burt and the Beginnings of Psychology in Liverpool', p. 12. 'Cyril Burt: an Obituary', p. 480.

⁶⁷ Hearnshaw, 'Sherrington, Burt and the Beginnings of Psychology in Liverpool', pp. 13–14.

⁶⁸ Hearnshaw, *Short History*, pp. 180–1.

London County Council. Spearman played a central role in the development of English academic psychology,⁶⁹ helping to transform the subject from the mere 'hope of a science' into a discipline based on rigorously scientific principles and methods.⁷⁰ He made major contributions to the theory of mental measurement;⁷¹ and he presided over the most influential psychology department in the country, attracting to his laboratory a long succession of distinguished research students.

Born into an affluent and well-connected London family, he spent his schooldays at Leamington College in 'an excessive but secret devotion to philosophy'.⁷² Flummoxed by intellectual problems and 'following the illustrious example of René Descartes', he left school for the army; joining the Royal Fusiliers and seeing active service in Burma (1883–4), in the South African war and in the Great War. His career had all the makings of success, but he continued to be plagued by philosophical problems and 'became convinced that if ever a genuine advance was to be made in philosophy, it would come mainly by way of psychology'.⁷³ Whereas philosophy had been compatible with an alternative career, psychology demanded exclusive commitment: 'Up to that time, I had managed to carry round a small assortment of philosophical and psychological books from one military station to another. But no way occurred to me of carrying about even the most modest experimental laboratory.'⁷⁴ He consequently resigned his commission and spent the years between 1897 and 1907 (with breaks for military service) studying the new experimental methods in Germany, taking his PhD with Wundt in Leipzig and working with Kulpe at Wurzburg and Muller at Gottingen. In 1907, at the age of forty-four, he took up his first professional post as a psychologist as Reader in Experimental Psychology at University College, London. Thereafter, he settled down to his profession, climbing the university hierarchy and confining his publications exclusively to psychology. In 1911 he was promoted to the Grote Chair of Mind and Logic and in 1928 the formal title of his Chair was changed to Professor of Psychology – an alteration which he thought marked a rise in the 'scientific status of psychology at universities'.⁷⁵

His main intellectual contributions to the discipline lay in two areas, which began to flow together as his work proceeded. The first consisted of a search for general laws of psychology, comparable with those which had been formulated for the physical sciences. The second was concerned with the nature and interrelations of human abilities. In particular, he made revolutionary contributions towards

⁶⁹ On Spearman, see: C. Spearman in Murchison (ed.), *History of Psychology in Autobiography* (1930), I, pp. 299–335; G. Thomson in *Obituary Notices of Fellows of the Royal Society* Vol. 5, No. 14 (November 1945), pp. 373–8; J. C. Flugel in *Brit. J. Psych.* Vol. 37, Part 1 (September 1946), pp. 1–6; *DNB 1941–1950*, pp. 811–12; *Who Was Who, 1941–1950*, p. 1084; Hearnshaw, *Short History*, pp. 196–201. The Spearman Papers are kept in the Archives of the British Psychological Society in the University of Liverpool, Steel Cabinet 1.

⁷⁰ Flugel, *Brit. J. Psych.*, p. 6.

⁷¹ For a brief summary of Spearman's contributions to psychological theory, see *ibid.*, pp. 5–6.

⁷² Murchison (ed.), *History of Psychology*, I, p. 299.

⁷³ *Ibid.*, p. 300.

⁷⁴ *Ibid.*, p. 301.

⁷⁵ *Ibid.*, p. 306.

Measuring the mind

applying mathematical measures of correlation to materials obtained from tests.⁷⁶ He exercised a close control over his pupils at University College, ensuring that his work would have a major impact on the developing psychology of individual differences.

Like a great military leader, he was able both to think out and co-ordinate the details of a vast and complicated campaign and to enlist the willing and enthusiastic co-operation of his subordinates in the execution of these details. In this respect he was the ideal director of a new department for the study of the still young science of experimental psychology at a time when both the department and the science had to justify themselves to those who were responsible for academic policy in this country.⁷⁷

If the establishment of psychology in the universities was the work of upper-middle-class enthusiasts such as Charles Spearman, the introduction of the subject into the teacher training colleges and the local education authorities was largely the achievement of upwardly mobile professionals, who sought in it a solution to the practical problems which they encountered in their everyday vocations. Approaching the discipline from different social angles and different intellectual perspectives, these two groups managed to create a hybrid subject which aspired both to theoretical sophistication and practical utility.

John Adams and (Thomas) Percy Nunn were responsible for establishing educational psychology at the London Day Training College, the most influential teacher training college in the country.⁷⁸ They were both born well outside the metropolitan professional élite into which their abilities eventually admitted them. Adams started his career as a teacher, and then a teacher-trainer in Scotland. In 1898 he became rector of the Free Church Training College, Glasgow, and also held a lectureship in education in Glasgow University. Appointed principal of the London Day Training College and the first Professor of Education at London University in 1902, he held both posts for the next twenty years. Nunn started to teach at his father's school at the age of sixteen, but when his father died in 1890, leaving him the whole responsibility, he resigned the headmastership and started to make his career in the state sector. In 1903 he joined the staff of the London Day Training College, becoming Professor of Education in the University in 1913 and Principal of the College in 1922. When the college was transferred to the university in 1933 he became its first Director.

⁷⁶ Flugel, *Brit. J. Psych.*, p. 305.

⁷⁷ *Ibid.*, p. 2; see also Flugel's, *A Hundred Years of Psychology*, pp. 26–8.

⁷⁸ On Adams, see Ballard, 'Sir John Adams', *Brit. J. Educ. Psych.* Vol. 5, Part 1 (February 1935), pp. 107; *DNB* 1931–40, pp. 2–3; *Who Was Who*, 1929–40, p. 6 col. 2; *The Times*, 2 October 1934; *The Times Educational Supplement*, 6 October 1934; Sir Michael Sadler, *John Adams* (University of London Institute of Education, Studies and Reports, No. 6). On Nunn, see H. R. Hamley, 'Sir Percy Nunn', *Brit. J. Educ. Psych.* Vol. 15, Part 1 (February 1945), pp. 1–4; *DNB* 1941–50, p. 636; *Who Was Who*, 1941–1959, pp. 857 col. 2–858 col. 1.

The invention of educational psychology

Both turned to psychology for practical rather than scientific reasons, hoping that it would provide guidelines for successful teaching and insights into the mental processes of their pupils. Adams enlisted the subject's support in his battle against the all-pervasive doctrine of formal training – the idea that the purpose of education is to train the mental faculties and that the best subjects are those which provide the most rigorous mental gymnastics. His first book, *The Herbartian Psychology Applied to Education* (1897), was one of the earliest attempts to base educational theory on modern psychological principles. He insisted that progressive teaching should focus its attention on the needs of the individual pupil rather than just on the logic of the subject:

Verbs of teaching govern two accusatives, one of the person, another of the thing; as *Magister Johannem Latinam docuit* – the master taught John Latin.

Thus far the Latin rudiments. When the master seeks to apply the principle in real life, he finds that he can manage his double accusative only by the possession of a double knowledge: he must know Latin; and he must know John. Not long ago it was considered enough to know Latin ... John was either taken for granted or held to be not worth knowing.⁷⁹

He criticised psychology's traditional indifference to 'the matter of age' and welcomed the emergence of genetic psychology and Child Study, hoping that the demands of professional teachers would stimulate scientific psychologists to make further advances in their theoretical work.⁸⁰ Nunn found in psychology a means of implementing his belief that 'the primary aim of all educational effort should be to help boys and girls to achieve the highest degree of individual development of which they are capable'.⁸¹ His conversion to a psychologically based approach to education was the fruit of practical experience. When he took up his first teaching post at Halifax, his main concern was to learn how to control his class, and he soon found that the best way to do this was to understand children's intellectual interests.⁸² He set himself firmly against formal discipline and based all his teaching, in particular his teaching of mathematics, on the interests of the pupils. His textbook on *Education: Its Data and First Principles* (1920) was an eloquent plea for child-centred education – that is, education shorn of the traditional emphasis on rote learning and guided by the psychology of individual differences.

Their joint contribution to the establishment of educational psychology was considerable. They provided it with a permanent place in the London Institute of Education, popularised its arguments in their textbooks, lecture courses, and addresses to teachers, and furnished some of its leading practitioners with influential positions. Adams' writings on *Herbartian Psychology* (1897), *The Evolution of Educational Theory* (1912), *The New Teaching* (1918), and *Everyman's*

⁷⁹ Quoted in Ballard, 'Sir John Adams', pp. 5–6.

⁸⁰ Adams, *The Evolution of Educational Theory* (1912), p. 68.

⁸¹ Nunn, *Education: Its Data and First Principles* (3rd edn, 1945), p. 5.

⁸² H. R. Hamley, 'Sir Percy Nunn', pp. 1–2.

Psychology (1929) rapidly became standard reading for apprentice teachers. His lightness of style was unusual in the educational literature of the period: 'Instead of the stiff dignity of an academic treatise one found a free and easy style, virile, racy, and eminently readable'.⁸³ His lectures were popular and influential. 'There are 20,000 teachers in London', Sir Robert Blair, London County Council Education Officer once remarked, 'and the greatest of them is John Adams.'⁸⁴

Nunn consolidated the institutional position which Adams had fashioned for psychology in the London Institute. He made a successful bid to create a post for Burt in his training college.⁸⁵ Convinced that psychology was about to revolutionise education, he insisted that the College could not be regarded as adequately staffed until it appointed a psychologist.⁸⁶ He suggested that Burt was an ideal man for the job, since he was 'a man of recognised position in the psychological world, able to face his students with the authority of an original worker'; he hoped that his appointment would 'give him a unique opportunity of training a small number of specially qualified students to carry out elsewhere duties of a kind he has performed in London'.⁸⁷ He insisted that, if the University decided to create a Chair in Education, it should go to a psychologist rather than an historian of education: 'the fact ... that educational psychology is rapidly growing and needs an original and able researcher, indicates that it, rather than history, should have the chair, provided a suitable occupant can be found; and I have mentioned the name of a man who would be generally regarded as highly qualified for it.'⁸⁸ Having secured Burt's services, Nunn continued to advance the cause of psychology in the college, suggesting, for example, that a disused kitchen might be turned into a psychological laboratory by the simple measure of removing the cooking range.⁸⁹ When Burt finally moved to University College, London, Nunn pointed to his enormous work load as a reason for the employment of more qualified psychologists by the College.⁹⁰

Nunn used his pivotal position in the educational world to advance the cause of the psychology of individual differences. He sat on the Board of Education's consultative committee and played an influential part in the drafting of its reports. He was a member of the Child Guidance Council ('though the very great pressure upon my time makes me, I fear, an extremely ineffective one'⁹¹) and a member of Sir Philip Hartog's committee of inquiry into the reliability of examinations.⁹² He

⁸³ Ballard, 'Sir John Adams', p. 1.

⁸⁴ *Ibid.*, p. 4.

⁸⁵ Greater London Council Record Office, EO/TRA/2/27, LCC London Day Training College, Memorandum on the University Teachers of Education by Nunn.

⁸⁶ *Ibid.*, p. 3.

⁸⁷ *Ibid.*, p. 3.

⁸⁸ *Ibid.*, p. 3. Nunn's notes on Dr. Barker's memorandum (Barker was principal of King's College, London), p. 2. ⁸⁹ GLCRO, EO/TRA/2/27, Nunn to Miss Fawcett, 6 February 1924.

⁹⁰ London Institute of Education Archives (henceforth LIEA) File on Burt, Nunn's memorandum on the appointment of Burt's successor (n.d. ?1933).

⁹¹ LIEA, Board of Education Correspondence 1925-30, Nunn to Crowley, 7 May 1928.

⁹² LIEA, International Institute Examinations Enquiry, 1929-32. See, in particular, Memorandum by Sir Philip Hartog and Nunn, 1 April 1932, Nunn to Sir Michael Sadler, 19 November 1930.

was also a member of the Labour Party advisory committee on education, playing an important part in persuading leading Labour educational theorists, such as R. H. Tawney, of the value of mental measurement. His popular book on *The Teaching of Algebra* (1914), which many regarded as marking a revolution in the teaching of mathematics, was based, like most of his teaching, on two fundamental psychological principles: be guided by the child's natural interests, however difficult it is to discover them, and follow the psychological rather than the logical order in the presentation of material.⁹³ His textbook, *Education: Its Data and First Principles* (1920), was one of the most influential educational textbooks between the wars, and popularised psychological arguments about delinquency, the role of play in education, and the value of intelligence testing.⁹⁴ Sensitive to developments in psychological theory, his chief concern in producing the second edition of his book was 'to take due account of recent advances of knowledge, particularly in psychology'.⁹⁵ In his third edition, in response to rapid advances in the theory of intelligence testing and to an increase in public curiosity as a result of the 1944 Education Act, he decided to include a whole chapter on mental measurement.⁹⁶

W. H. Winch and P. B. Ballard helped to introduce psychology to the LCC education department.⁹⁷ They both came from similar social and educational backgrounds, becoming pupil teachers, then full-time teachers, and gaining university qualifications relatively late in life. Winch became a pupil teacher in a London elementary school, attended the Borough Road Training College, and taught in public elementary schools in the East End of London. In 1888 he started taking time off school to sit London University examinations, and in 1895 he was granted unpaid leave of absence to study Moral Sciences at St John's College, Cambridge. Ballard became a pupil teacher at Maesteg, Glamorgan, moved to London to attend the Borough Road Training College (where he was almost a contemporary of Winch's) and then began to teach at Settles Street School, also in the East End of London. He combined his teaching career with higher academic study as an external student at London University, taking his BA in 1891 and MA in 1903. They both moved from teaching to join the inspectorate of the London County Council. Winch became an Inspector for the London School Board (later the London County Council) when he came down from Cambridge in 1898, taking leave of absence from 1905 to 1913 to devote all his time to educational research. Ballard became an Inspector of elementary schools under the Glamorganshire

⁹³ Hamley, 'Sir Percy Nunn', p. 3. See, in particular, his treatment of the Calculus and the Exponential.

⁹⁴ The importance of the book is reflected in the number of reprints and editions it went through. First published in 1920, it was reprinted in 1920, 1921, 1922 (three times), 1923, 1924, 1925, 1926, 1927, 1928, 1929 (twice). A second, revised, edition was published in 1930 and reprinted in 1930, 1931, 1933, 1934, 1935, 1936, 1937, 1941. A third, revised, edition was published in 1945.

⁹⁵ Nunn, *Education: Its Data and First Principles* (2nd edn, 1930), p. vii.

⁹⁶ *Ibid.* (3rd edn, 1945), pp. 5, 129–52.

⁹⁷ On Winch, see S. A. Sharp and A. P. Bray, 'W. H. Winch: A Founder of the Experimental Approach in Education', *British J. Educ. Studies* Vol. 28, No. 1 (Feb. 1980), pp. 34–45.

County Council in 1904 and a District Inspector under the LCC in 1905, with particular responsibility for Camberwell and Deptford. In 1928 he was promoted to the rank of Divisional Inspector, dealing mainly with London's grammar schools.

Their psychological writing was inspired by a vision of a rational educational system, based on psychological theory and guided by dedicated experts. Convinced that educational theory required the services of 'one who is both a skilled teacher and a good psychologist',⁹⁸ Winch wanted to bring pedagogical practice and psychological theory into a closer harmony. His book, *Problems of Education*, pointed to the confusions caused by the divorce between theory and practice and argued that teachers and psychologists should take more notice of each other's work.⁹⁹ He looked forward to the creation of a group of 'education students', trained in both education and psychology, and capable of synthesising the two approaches.¹⁰⁰ Ballard's interest in the subject was inspired by his experience as a teacher in crowded and regimented East End schools, and he looked to psychology for theoretical support for his conviction that English teaching needed to be thoroughly reformed. He hoped that intelligence testing would ensure that each child was taught according to his natural level, and that the new psychology of infant development would encourage a less disciplinarian approach to psychology which explored the differences between minds rather than the similarities between them.¹⁰¹ 'Experience in the classroom has confirmed the findings of psychology', he argued. 'The discerning teacher knows that there is no such thing as a homogeneous class – a group of children at the same intellectual stage, ready for the same intellectual food, capable of making the same intellectual growth.'¹⁰²

Both made important contributions to the development of psychology, carrying out original research in London schools, encouraging the formation of a body of professional psychologists, and popularising the methods and results of the burgeoning discipline. In particular, they played an important part in selling intelligence tests to some sections of the London educational establishment. Winch spent the years between 1905 and 1913 as a full-time educational researcher in London, carrying out psychological experiments in a number of board schools.¹⁰³ His approach was eclectic and pragmatic – he concentrated on collecting a plethora of experimental data rather than on developing a unifying psychological theory – and his interests were consequently diverse: 'immediate memory' (1904, 1906), the transfer of memory (1908, 1910), children's perceptions (1914), mental adaptation (1913), colour preferences (1909), the relationship between social class and 'mental

⁹⁸ Winch, *Problems in Education* (1900), p. 30. Quoted in Sharp and Bray, 'W. H. Winch', p. 35.

⁹⁹ *Ibid.* See, for example, p. v.

¹⁰⁰ London County Council Education Committee Minutes: General Purposes Sub-Committee Report, 26 July 1905, pp. 3,346–7. Quoted in Sharp and Bray, 'W. H. Winch', p. 36.

¹⁰¹ See, for example, *Mental Tests* (1920), *Group Tests of Intelligence* (1922), *The Changing School* (1925), *The Practical Infant Teacher* (1929). ¹⁰² Ballard, *The Changing School*, pp. 184–5.

¹⁰³ Sharp and Bray, 'W. H. Winch', p. 36.

proficiency' (1911–12), and the efficiency of different teaching methods.¹⁰⁴ His textbook, *Problems in Education* (1900), attempted to deal with 'the burning questions of to-day' from 'the philosophic and psychological side'.¹⁰⁵ He tried to adapt Binet's intelligence tests for use in English schools and used them widely in London County Council schools between 1911 and 1914.

Ballard combined his position as Inspector with an active career as a psychological researcher, constantly exploring the psychological dimension of educational problems and the educational applications of new psychological ideas. His most innovative piece of research, 'Obliviscence and Reminiscence' evolved directly out of a practical educational problem. Early on in his career, he was asked to investigate teaching in a school on which HMIs had reported adversely. He decided to test the headmaster's suggestion that the boys were doing badly because of poor memories by making them learn a poem. Against all his expectations, he found that they remembered most of the poem when he first tested them and even more of it when he retested them two days later. He played an important part in the development of the British Psychological Society, serving as a member of its educational section and sitting on the editorial board of the *British Journal of Educational Psychology*. Throughout his professional life he was a tireless propagandist for the new discipline, writing numerous books and articles, broadcasting on the radio, and speaking at educational conferences. His leading passion was for the mental testing movement, and he did his utmost to sell the tests to the educational establishment, arguing that they were accurate and efficient, that they liberated teachers from the unjust criticism of school inspectors, and that they held the key to a progressive and child-centred approach to education.

These pioneers were succeeded by the first generation of more or less professional educational psychologists; men and women who started their professional careers with qualifications in psychology, spent their working lives practising or professing the subject, measured out their time in steps up the occupational hierarchy, and made their livings out of their knowledge of their discipline. When they spoke with authority on education, they spoke as psychologists. Born within a few years of each other, they consolidated the achievements of the pioneers, attracted a variety of gifted pupils into the discipline and, to some extent at least, sold the subject to the educational establishment. Until the end of the Second World War the commanding heights of the subject were under their control.

They came from a wider range of social background than the previous generation of full time psychologists. Their average social class was much lower, and they no longer had ready access to private funds looking instead to their subject for financial support. Unlike Nunn, Winch and Ballard, however, they did not try to combine

¹⁰⁴ *Ibid.*, pp. 37–8. For a list of Winch's publications, see G. Sutherland and S. Sharp, "'The Fust Official Psychologist in the Wuurld": Aspects of the Professionalisation of Psychology in Early Twentieth Century Britain', *History of Science*, Vol. 18 (1980), Appendix 2, pp. 202–4.

¹⁰⁵ Winch, *Problems in Education*, p. v.

an intellectual interest in psychology with a career as teacher trainers or education inspectors. They consequently had vested interests in the success of professionalisation.

Burt's father was a country doctor,¹⁰⁶ and Valentine's was a Methodist minister.¹⁰⁷ Thomson came from the Northumberland working class,¹⁰⁸ Susan Isaacs was born into the northern lower-middle class.¹⁰⁹ They tended to turn to psychology as a result of academic accident or intellectual enthusiasm. (Since it had not yet turned itself into a profession, psychology did not attract those who were looking for a safe and respectable career.) Burt was trapped in the subject by an accident of flexibility in the Oxford Greats Course. His training at both Christ's Hospital and Jesus College, Oxford, was in classics; his inclination from family background and personal interest was to medicine. He tried to change to medicine, but his college authorities simply refused: he had won a Scholarship in classics, and classics he must study. But Oxford, which had so far been a model of institutional rigidity, allowed him to take psychology as an optional paper in 'Greats', and he seized his chance.¹¹⁰ Thomson's recruitment was even more peculiar. His career as scholarship boy trapped him in the world of education. Although he obtained a doctorate in physics from Strasbourg *summa cum laude*, he was bound to return to teach at Armstrong College.¹¹¹ His syllabus included a compulsory course in educational psychology, and the subject captured his attention. He consequently went to Cambridge to do some experimental work with Myers.¹¹² Psychology allowed him to apply the mathematical and measuring techniques he had mastered in physics. It also presented him with an instrument of justice. Convinced that the educational system was prejudiced against children from rural schools and in favour of children from the better equipped suburban schools, he looked to intelligence tests to rectify this imbalance.¹¹³

¹⁰⁶ On Burt, see: Hearnshaw, *Cyril Burt, Psychologist*, and *Proceedings of the British Academy* Vol. 58 (1972), pp. 475–92; Burt's 'Autobiography', in E. G. Boring and H. S. Langfield (eds.), *History of Psychology in Autobiography* (1951), IV, pp. 53–73; A. R. Jensen, 'Obituary', *Psychometrika* Vol. 37, No. 2 (June 1972), pp. 115–17; H. J. Eysenck, 'Obituary', *British Journal of Mathematical and Statistical Psychology* Vol. 25, Part 1 (May 1972), pp. i–iv; *The Times*, 17 October 1971 (e).

¹⁰⁷ On Valentine, see: *Brit. J. Psych.* Vol. 55 (1964), pp. 385–90 obituary notices by Burt and Pear; L. B. Birch, Obituary, *Bull. Br. Psych. Soc.* Vol. 17, No. 57 (1964), pp. 47–50; *Brit. J. Educ. Psych.* Vol. 26 (1956) contains a list of publications, compiled by Birch and an article by Burt 'The Contributions of C. W. Valentine to Psychology', pp. 8–14.

¹⁰⁸ On Thomson, see, *The Education of an Englishman. An Autobiography* (Edinburgh, 1969); E. G. Boring et al. (eds.), *A History of Psychology in Autobiography* (1952), IV, pp. 279–95; Burt, Obituary notice, *British Journal of Statistical Psychology* Vol. 8, Part 1 (May 1955), pp. 1–2; P. E. Vernon, 'The Contributions to Education of Sir Godfrey Thomson', *Brit. J. Educ. Studies* Vol. 10 (1961–2), pp. 123–38.

¹⁰⁹ On Susan Isaacs, see: D. E. M. Gardiner, *Susan Isaacs* (1969); *The Times Educational Supplement*, 16 October 1948, p. 484 (c).

¹¹⁰ Hearnshaw, *Cyril Burt, Psychologist*, pp. 8–11. Eysenck was also trapped into studying psychology by a bureaucratic accident. See Hans Eysenck, *Rebel with a Cause. The Autobiography of Hans Eysenck* (1990), p. 47.

¹¹¹ Thomson, *Education of an Englishman*, p. 70.

¹¹² *Ibid.*, p. 82.

¹¹³ *Ibid.*, pp. 100–1.

The invention of educational psychology

The educational world also played an important part in Susan Isaacs' career. She went to Manchester University to help her career as an infant school teacher, and her tutor invited her to turn her one year teacher's training qualification into a degree. Her initial interest had been in the progressive educational theory of Dewey and Froebel; she then flirted with philosophy; her subsequent conversion to psychology enabled her to maintain her dual interests in children and the philosophy of mind.¹¹⁴

This generation tended to have a formal training in psychology. Many managed to study the subject while they were still undergraduates, taking it as an option within another discipline or else turning to it in their spare time. In Oxford, McDougall was willing to take anyone who came to him. Burt read psychology as an optional paper in *Literae Humaniores*. In Cambridge, Rivers, Myers and Ward set about introducing able undergraduates to the subject. Valentine read psychology as part of the Moral Science Tripos. The syllabus included four hours of compulsory experimental psychology in the laboratory each week, and Valentine, like many others, was captivated by the experience. New recruits tended to form close personal relationships with their academic patrons. Patrons treated them as allies in the discovery of an unknown territory as much as pupils: the amount of interest and care they displayed for their work was immense. Burt was quickly accepted into McDougall's circle. He discussed William James' principles with him on Monday afternoon; worked with him in his laboratory on Wednesday; acted as a subject for other research workers on Friday; and was a frequent guest in his house in Boar's Hill.¹¹⁵

They tended to go on to take a higher qualification in psychology. For many this meant a period abroad – and, as for so many disciplines in this period, abroad meant Germany. Wurzburg in particular had become the goal for young psychologists who were destined to play an important role in the development of psychology in Great Britain and who could not get the graduate training they needed at British universities.¹¹⁶ Burt and Valentine both went there to study under Kulpe, but the personal friendships they formed there were as important as the practical instruction they received from the University. Valentine, who found 'the laboratory work of Kulpe sterile and tedious' was nevertheless 'very glad he went, for it was through this that he met Burt, Flugel and Pear, who became life-long friends'.¹¹⁷ For the less fortunate, professional training meant post graduate work in England, usually in Cambridge or University College, London. Susan Isaacs, for example, won a graduate Scholarship to study psychology under Myers in Cambridge. But post graduate qualifications were still not universal. Thomson's

¹¹⁴ Gardner, *Susan Isaacs*, p. 37. One of her fellow students was Ellen Wilkinson.

¹¹⁵ University of Liverpool, *Burt Papers*, D. 191/11, 'Reminiscences of William McDougall', p. 1.

¹¹⁶ Hearnshaw, 'British Psychologists at the University of Wurzburg at the Beginning of the Century', in O. Kuhn (ed.), *Grossbritannien und Deutschland* (Munich, 1974), pp. 661–71.

¹¹⁷ Birch, 'Obituary', p. 49.

doctorate was in physics, not psychology. His 'connection with psychology has been unusual and almost despite myself':¹¹⁸ he never had any formal training in the subject and never took a qualifying exam. For his formal introduction into the profession he relied on his personal friendship with Myers and Spearman.

A qualification in psychology was not a passport into a profession: there were simply too few jobs to go round. Some, like Burt, were lucky; others had to scrape around for a job. Isaacs held a variety of jobs – lecturer in psychology, Darlington Training College (1913–14); lecturer in logic, Manchester University (1914–15); the principal of Malting House School, Cambridge (1924–27). The study of education provided a supplementary source of jobs. Both Thomson and Valentine spent their academic lives within departments of education. The previous generation of psychologists had tended to be men of independent means; to them the survival of the discipline was a matter of emotional commitment rather than personal necessity. But they tempted into the subject a generation generally lacking in their personal advantages; to them the success of the profession was a matter of personal urgency. Trapped in a marginal subject, they set about turning it into an established profession.

They tended to treat psychology as a full-time job, confining their lives to the discipline. Yet their professional careers were often rather complex. Though they continued to regard themselves as 'psychologists', they moved from job to job and from technique to technique. In particular, they worked both as theoretical and applied psychologists, developing the scientific arguments of their discipline and attempting to apply them to practical educational problems. Burt had two rather distinct careers, holding full-time academic posts from 1908 to 1913 and from 1932 to 1950, and working as psychologist to the London County Council, employed to apply the subject to immediate practical problems, from 1913 to 1932. He thus combined expertise in two areas which now have distinct career structures. He was also a pluralist – a measure of the lack of institutional support for professional psychologists. His London County Council appointment was only part-time, and he combined it with a laboratory assistantship in Cambridge from 1913–1914, a post at the National Institute of Industrial Psychology from 1922 to 1924, and a professorship at the London Day Training College from 1924 to 1932. Susan Isaacs qualified both as a psychologist and a psychoanalyst, combining her post as head of the department of child development at the University of London Institute of Education (1933–1943) with her private practice as an analyst.

They frequently offered their professional help to Local Education Authorities interested in applying psychological methods to their scholarship examinations. Thomson advised the Newcastle Education Authority on 'how with most justice to select eleven-year-old children in the primary schools for the privilege of free secondary school education';¹¹⁹ Isaacs advised the Wiltshire education authority

¹¹⁸ Boring *et al.* (ed.), *History of Psychology*, Vol. 4, p. 294.

¹¹⁹ *Ibid.*, p. 284.

on keeping children's records;¹²⁰ and Valentine became Chairman of the Birmingham Higher Education Sub-Committee in 1919.¹²¹ Burt naturally kept the LCC informed about developments in the technology of mental testing throughout his period as official psychologist.

They presided over the professionalisation of British psychology. When they went into the discipline its future was in the balance; when they retired it had won an established status. Burt felt that the battle was almost won in 1951. 'Both during and since the war,' he reflected, 'the official recognition of psychologists has still further established the position of psychology as a distinct and independent science, with its own technical methods, its own trained experts, and its own special way of solving human problems.'¹²² The crucial role they played in professionalisation is reflected in the power they managed to acquire. As the profession expanded, so they accumulated rewards: Burt was President of the British Psychological Society from 1941 to 1943 and Thomson from 1944 to 1945. They controlled the psychological journals: Burt was acting editor of the *British Journal of Psychology* from 1915 to 1918 and Valentine was editor of the *British Journal of Educational Psychology* from 1931 to 1956. Burt retained control over the *British Journal of Statistical Psychology* from its foundation in 1947 until it was wrested from him in 1963. His abuse of his position provides us with some insight into the power he had managed to accumulate. Throughout his editorship after Thomson's death he filled the journal with his own articles, often written under pseudonyms, reviewed books under various assumed names, praising himself and deprecating others, and altered the manuscripts of contributors at will.

Predictably, this generation began to look like an obstruction to more recent recruits. The Second World War was followed by a generational struggle between this group and their successors – a struggle which was open in Burt's case and concealed in a number of other areas. An attempt was made to prevent the accumulation of offices. In 1953 the BPS publications committee limited the tenure of editorship of journals to a normal period of five years and a maximum of six. The President of the Society was elected for one year only.

Yet the final displacement of this generation should not be allowed to obscure its positive contributions to the professionalisation of the discipline. These psychologists created an *esprit de corps* for the discipline, forming a network of colleagues, drawn together by a common interest in an innovative and unpopular discipline, and sharing the same mentors and similar educations. They began to create an historical identity for their subject, looking to the past to legitimise the professional claims of the present and presenting themselves as links in an historical process. They wrote obituaries of their friends, recollections of their teachers, and histories of their institutions. Burt was more effusive than anyone else in his generation: he published obituaries and articles on Galton, McDougall, Myers, Spearman,

¹²⁰ Sutherland, *Ability, Measurement and Merit*, p. 240.

¹²¹ *Ibid.*, p. 206.

¹²² C. Burt in H. Dingle (ed.), *A Century of Science* (1951), p. 285.

Measuring the mind

Fisher, Thomson, Brown, Thurstone, Lee Kelly, Valentine, the history of English psychology, of the concept of intelligence, and of the application of mathematical techniques to psychological problems; he wrote several historical memoranda for the British Psychological Society, notably one on the child guidance movement; and he responded rapidly and enthusiastically to requests for information about the history of psychology.

They made important advances in psychological method. A quest for a proper and distinctive methodology is a common characteristic of a buoyant profession, and this generation was united by its concern for method. A scientific method promised to establish educational psychology in the community of respected sciences; to defend it from external interference and amateur imitation; to reinforce and prolong the process of apprenticeship; and to elevate the subject in the eyes of laymen. These psychologists sought their method in three distinct areas: statistical technique, scientific experiment, and clinical treatment. Spearman, Burt and the London School favoured statistics; Isaacs and other academic psychologists influenced by the psychoanalytical movement stressed diagnosis and cure. It was common to become the master of more than one technique. Burt worked as a clinical psychologist at the LCC and predominantly as a statistical psychologist at University College, with achievements ranging from the diagnosis and treatment of juvenile delinquents to a major contribution to the theory of factor analysis.

Cyril Burt and the psychology of individual differences

Cyril Burt was undoubtedly the most important member of this group of psychologists. For over forty years he pioneered the application of psychological theory to education, to the study of children's development, and to the assessment of mental qualities. His appointment to the London County Council in 1913 marked him out as 'the first official psychologist in the world'; and provided both an inspiration and a role-model for the school psychological services and the child guidance movement. He adapted the Binet-Simon mental and scholastic tests for English schoolchildren and acted as a tireless exponent of their practical and theoretical virtues. His studies of delinquent and backward children rapidly established themselves as classic works of applied psychology.

Burt distinguished himself as an academic as well as a practical psychologist. In 1932 he succeeded Spearman as professor of psychology at University College, London, then the senior position in the discipline in the United Kingdom; he consequently exercised an enormous influence over the training of aspirant educational psychologists. He struggled to provide the discipline with solid theoretical foundations, seeking in factor analysis 'a few, permanent, and pregnant concepts by means of which we can describe both persons and traits'.¹ His influence continued to be felt outside the scientific community. The Consultative Committee of the Board of Education lent heavily on his evidence in preparing its cycle of reports on psychological tests, on the education of adolescents and of children in primary and infant schools, and on the organisation of secondary education.² He wrote widely in the newspapers and was one of the first British scientists to exploit the potential of both radio and television. His significance lies in the range of his work as well as in the quality of his individual contributions. Spearman made a major contribution to psychological theory, Ballard devoted himself to popularising mental tests, and Nunn helped to sell psychology to the teacher training establishment; but Burt alone combined success in all these areas, moving easily between the worlds of scientific research, educational administration, teacher training and popular journalism.

¹ Burt, *The Factors of the Mind* (1940), p. 95.

² See below for a detailed examination of Burt's role in framing these reports.

Burt's main interest lay in 'the psychology of individual differences'. He maintained that individuals differed significantly in their mental qualities; that these differences owed more to 'nature' than to 'nurture'; and that objective tests could be used to measure inborn capacity. Inspired by Francis Galton and systematised by Charles Spearman, 'the psychology of individual differences' generated both a theory of mental abilities and a technology for measuring them, thus turning itself into the leading 'scientific research programme' in inter-war educational psychology. It underlaid the use of psychological tests in educational and vocational selection and was later used in defence of educational selection and social inequality.³ The continuing sale of books by Hans Eysenck and Richard Herrnstein also suggests that it found a considerable popular audience.

Burt is made all the more intriguing by the hotly disputed accusation that some of his arguments rested on fraudulent data.⁴ Shortly after his death Burt's critics accused him of 'the most sensational charge of scientific fraud this century'. According to them, he fabricated research material on identical twins and scholastic standards; invented collaborators in order to add weight to his fabrications; often guessed the IQs of parents he interviewed but later treated his guesses as hard evidence derived from rigorous psychometric assessments; and filled the *British Journal of Statistical Psychology* with articles written under pseudonyms and intended to support his intellectual positions. But in the last few years his reputation has been revolutionised once again. Two closely written and carefully argued books have anatomised the anatomisers and concluded that Burt was innocent of the major charges levelled against him.⁵

Intellectual origins of the psychology of individual differences

The science of individual differences was invented by Francis Galton, systematised by Karl Pearson, and applied to psychology by Charles Spearman.

Galton⁶ was an archetypal member of the Victorian 'intellectual aristocracy'.⁷

³ See, for example, the use made of Burt's work in H. Eysenck, *The Inequality of Man* (1973) and R. J. Herrnstein, *IQ in the Meritocracy* (Boston 1973). See also Jeffrey Gray, 'Why should Society Reward Intelligence', *The Times*, 8 September 1972. For an interesting example of recent use of psychometric argument, see Mickey Kaus, *The End of Equality* (1991), pp. 25–57.

⁴ For exposures of Burt's psychometric data, see A. R. Jensen, 'Kinship Correlations Reported by Sir Cyril Burt', *Behavioural Genetics* Vol. 4 (1974), pp. 1–28; Leon Kamin, *Science and Politics of IQ* (Potomac, 1974); O. Gillie, 'Sir Cyril Burt and the Great IQ Fraud', *New Statesman*, 24 November 1978, pp. 688–94; D. D. Dorfman, 'The Cyril Burt Question: Further Findings', *Science* Vol. 201 (1978), pp. 1,177–85; Hearnshaw, *Burt*, pp. 227–62.

⁵ Robert B. Joynton, *The Burt Affair* (1979) and Ronald Fletcher, *Science, Ideology and the Media. The Cyril Burt Scandal* (New York, 1991).

⁶ On Galton, see Karl Pearson, *The Life, Letters and Labours of Francis Galton* Vol. 1 (Cambridge, 1914), Vol. 2 (1924), Vols. 3A and 3B (1930); Francis Galton, *Memories of My Life* (1908); D. W. Forrest, *Francis Galton: The Life and Work of a Victorian Genius* (1974); and Daniel J. Kevles, *In the Name of Eugenics. Genetics and the Uses of Human Heredity* (1985), pp. 3–19. A vivid pen-portrait appears in Beatrice Webb, *My Apprenticeship* (1926), pp. 134–5.

He turned to the study of inheritance only after he had established his scientific reputation as an explorer; but, once he had hit upon the subject, he worked upon it with prodigious – indeed, obsessive – energy until his death in 1911. Troubled by doubts about his own intellectual abilities, induced by his marked failures at Cambridge, and reconciled to childlessness, he wished to bolster up his self-confidence by tracing the manner in which abilities ran in families like his own; psychological theory had to take the place of any practical proof of his academic ability or his genetic superiority. He was uneasy about his social position and conscious of the gulf which divided families like his own from older Warwickshire gentry families (such as the Dugdales and Warwicks), and wanted to assert the biological virtues of the ‘intellectual aristocracy’.⁸

To understand inheritance he turned to the science of statistics, then in its infancy.⁹ His favourite motto was ‘whenever you can, count’, and he followed it with an obsessive diligence, measuring everything from the frequency of fidgets in a bored audience to the distribution of beauty around the country.¹⁰ He made two main contributions to the mathematics of mental measurement: the application of error theory to biological populations and the invention of the concept of correlation.¹¹ Error theory rested on the assumption that, although all measurement is subject to some degree of error, it is nevertheless possible, by taking enough measurements of the same object, to work out how much error is involved in any given measurement. The mean of the various measurements represented the ‘true’ value of the quantity. Galton rapidly fell in love with ‘this extraordinary beautiful law’,¹² praising it in the most extravagant terms.¹³ His interest lay, however, not in the mean but in the distribution of deviations from it; he used the curve to analyse a population in terms of its members’ variations from the normal rather than to distinguish between ‘true’ and ‘false’ values. Since, as Mackenzie has pointed out, it made no sense to refer to a genius as an ‘error’ of nature, he also helped to change the language of statistical argument, referring to a ‘probable error’ as a ‘standard deviation’ and the ‘law of error’ as the ‘normal distribution’.¹⁴ He reasoned that

⁷ See N. G. Annan, ‘The Intellectual Aristocracy’, in J. H. Plumb (ed.), *Studies in Social History: A Tribute to G. M. Trevelyan* (1955), pp. 241–87, for an analysis of this group.

⁸ Burt, ‘Francis Galton and his Contribution to Psychology’, *Journal of Statistical Psychology* Vol. 16 (1962), p. 14, n 1.

⁹ For details about Galton’s contributions to statistics, see Helen M. Walker, *Studies in the History of Statistical Method* (Baltimore, 1929), pp. 45–8, 86–92, 101–9, 184–8; Donald A. MacKenzie, *Statistics in Britain, 1865–1930. The Social Construction of Scientific Knowledge* (Edinburgh, 1981), pp. 51–73; Sutherland, *Ability, Measurement and Merit*, pp. 115–18. Kevles, *In the Name of Eugenics*, pp. 13–19; Stephen M. Stigler, *The History of Statistics. The Measurement of Uncertainty before 1900* (1986), pp. 265–99; and Gerd Gigerenzer et al., *The Empire of Chance. How Probability Changed Science and Everyday Life* (Cambridge, 1989), pp. 53–9. My discussion draws heavily on these sources, particularly MacKenzie and Kevles.

¹⁰ Forrest, *Francis Galton*, p. 45. Burt also draws attention to this passage in ‘Francis Galton and His Contribution to Psychology’, p. 15, n 5.

¹¹ Sutherland, *Ability, Measurement and Merit*, p. 115. ¹² Galton, *Memories*, p. 304.

¹³ Galton, *Natural Inheritance* (1889), p. 86. ¹⁴ Mackenzie, *Statistics in Britain*, pp. 58–9.

mental characteristics, like physical characteristics, are normally distributed in the population.¹⁵

He developed the concept of correlation (or co-relation, as he preferred)¹⁶ to explain the relationship between two dependent variables, such as the height and arm length of a man. Karl Pearson felt that Galton's work on correlation represented nothing less than a 'revolution in our scientific ideas'.¹⁷ In particular, correlation could be used to measure the relationship between the characteristics of a parent and a child, and between one set of an individual's abilities and another.¹⁸

Galton applied these statistical techniques to the analysis of natural ability, which he defined as a combination of intellect and character.¹⁹ He insisted, against the conventional wisdom of the time, that ability is determined more by nature than by nurture:

I have no patience with the hypothesis occasionally expressed, and often implied, especially in tales written to teach children to be good, that babies are born pretty much alike, and that the sole agencies in creating differences between boy and boy, and man and man, are steady application and moral effort ... The experiences of the nursery, the school, the university, and of professional careers, are a chain of proofs to the contrary.²⁰

Ability was mainly inherited, and the range of mental powers between the cleverest and the dullest was enormous, 'reaching from one knows not what height, and descending to one can hardly say what depth'.²¹

Galton's main problem lay in his lack of reliable empirical material. Impressed by the 'many obvious cases of heredity among the Cambridge men who were at University about my own time',²² he started off by studying the kinship connections among his friends. In *Hereditary Genius*, he broadened his sample, analysing the pedigrees of 977 eminent members of the English establishment, distributed among 300 families. He had no qualms about claiming that his evidence proved that 'characteristics cling to families' and that ability goes 'by descent'.²³ In the 1870s he turned to the study of generations of sweet peas in an attempt to understand the relationship between certain quantitative and measurable characteristics in a parent and in its offspring.²⁴ But his main breakthrough in gathering evidence came when he established an anthropometric laboratory at the International Health Exhibition, which opened in the South Kensington Science Museum in 1884,²⁵ and managed to measure some 9,000 people, including both parents and children, for a variety of

¹⁵ Galton, *Hereditary Genius*, p. 32.

¹⁶ Sigler, *History of Statistics*, p. 297.

¹⁷ Pearson, *Life of Galton* Vol. 3, Section A, p. 56.

¹⁸ Gillian Sutherland, *Ability, Merit and Measurement* (Oxford, 1984), p. 118.

¹⁹ Galton, *Hereditary Genius*, pp. 37–8.

²⁰ *Ibid.*, p. 56. Cf. Darwin's response to the thesis of natural equality, quoted in Forrest, *Francis Galton*, p. 101.

²¹ Galton, *Hereditary Genius*, p. 66.

²² Galton, *Memories*, p. 288.

²³ Galton, *Hereditary Genius*, p. 5.

²⁴ Galton, 'Typical Laws of Heredity', *Proceedings of the Royal Institution* Vol. 8 (1877), pp. 282–301.

²⁵ See, for example, Galton, 'The Anthropometric Laboratory', *Fortnightly Review* new series Vol. 31 (1882), pp. 332–8.

physical characteristics. He published his results, duly processed by his pet statistical techniques, in his influential book, *Natural Inheritance*, in which he discussed one of the central problems of evolutionary theory: the transmission of given characteristics from one generation to another.

Burt devoted his life to refining Galton's intellectual legacy. He revered him as the 'father of British psychology', suggesting that he had made 'the first attempt to turn the study of individuals into a reputable branch of science'²⁶ and that his 'contributions to the methodology of the mental sciences' had 'been more influential than those of any other Englishman'.²⁷ Galton provided him with most of his ruling intellectual passions, notably his belief in the 'need to substitute a scientific procedure for casual observation and subjective impression';²⁸ his concern with inherited variations from the norm; his interest in measurement and quantification; his commitment to a meritocracy as against a 'relatively decadent aristocracy of birth';²⁹ and his anxiety to prevent the deterioration of the race by ensuring that 'what hitherto had been done in relative ignorance' might 'in future be guided by scientific research and rational planning'.³⁰

Galton even helped to inspire his first research project. In 1903, as President of the Anthropometric Section of the British Association, Galton organised a survey of the mental and physical characteristics of the British population and William McDougall, Secretary of the Psychological Committee, encouraged some of his pupils, including Burt, 'to develop and standardise tests of general intelligence and other abilities' for use in schools. 'With much help from Galton', Burt started a project which was to consume most of his intellectual life.³¹ Burt even ascribed some of his specific techniques, such as his twin studies, to Galton's influence.³² His writings are full of references to Galton – a glance at his essay on Galton's influence on psychology suggests how deeply he was steeped in Galtonian lore – and he made sure that his students were aware of his legacy. 'Burt had a happy knack of telling anecdotes about people and making them real for us', one of his students was later to recall, 'and although, strictly speaking, Galton did not found *our* department, we were made aware of his influence and his genius'.³³

Karl Pearson played the part of Galton's 'aggressive lieutenant', systematising his somewhat loose-ended ideas and providing his 'school' with a stable institutional base.³⁴ He ensured that 'Galtonianism' was still a dynamic intellectual

²⁶ CBP, D 191/11, 'London Calling Asia: In Perspective', p. 1.

²⁷ Burt, *Contributions of Psychology to Social Problems* (Hobhouse Memorial Trust Lecture, 1953), pp. 6–7.

²⁸ Burt, 'Intelligence and Fertility. The Effect of the Differential Fertility Rate on Inborn Mental Characteristics', *Occasional Papers in Eugenics* No. 2 (1946), p. 6.

²⁹ Burt, 'Francis Galton and His Contribution to Psychology', p. 14.

³⁰ *Ibid.*, p. 40; cf. Burt's confession of faith on p. 41.

³¹ *Ibid.*, pp. 39–40.

³² *Ibid.*, pp. 22, 25.

³³ Oliver Gillie Papers, Sybil M. Grane to Gillie, 20 June 1977.

³⁴ For an account of Pearson, see E. S. Pearson, *Karl Pearson. An Appreciation of Some Aspects of his Life and Work* (Cambridge, 1938) and Kevles, *In the Name of Eugenics*, pp. 21–40. See also, B. Norton, 'Karl Pearson and the Galtonian Tradition: Studies in the Rise of Quantitative Social

force between the wars, endowed with its own journals, its own body of disciples, and its own laboratory. Together with his colleague and friend, W. F. R. Weldon, he founded a new scientific discipline, 'biometry'.³⁵ Concerned exclusively with the statistical study of evolution and heredity, biometry soon began to acquire the trappings of a full-blown research school, with its own laboratory at Gower Street and its own journal, *Biometrika*. When Galton died in 1911 he left University College £45,000 to promote research into eugenics and to found a 'Galton Eugenics Professorship', a position which naturally went to Pearson. Endowed with ample research time, money and space, and inspired by an unshakeable commitment to biometry, Pearson turned his department into the focus of the English school of statistics, attracting researchers from the continent and the United States as well as Britain and pioneering a number of statistical breakthroughs.

The school's output was outstanding in both quantity and quality, with Pearson writing over 400 articles, dealing with problems central to the development of eugenics and biometry.³⁶ Convinced that abilities were inherited rather than shaped by the environment and that, in general, individuals occupied the social position which they 'deserved' – in other words, which had been pre-ordained for them by their biological inheritance – he organised a series of investigations into the 'biology of social stratification'. In 1906 David Heron, one of his research assistants, published a paper on *The Relation of Fertility in Man to Social Status*, which demonstrated that the inhabitants of middle-class areas of London were reproducing themselves at a much lower rate than the inhabitants of working-class areas, and which predicted a demographic crisis, with the worst elements rather than the best producing each new generation.³⁷ Both Pearson and Heron felt that only one conclusion could be drawn from this evidence: evolution had gone into reverse and national deterioration had set in. Burt's first major published article, 'Experimental Tests of General Intelligence', was an attempt to test Heron's argument, using evidence from children at a well-known preparatory school (the Dragon School) and children at an elementary school, 'where the parents were local tradespeople and workingmen'.³⁸

But it was a fellow psychologist, Charles Spearman, who provided Burt with his most powerful academic tools. Inspired by Galton's *Inquiries into Human Faculty and its Development*, Spearman set about analysing the results of battery tests which

Biology', PhD thesis, University College London, 1978. On his politics, see B. Semmel, *Imperialism and Social Reform* (1960) and 'Karl Pearson: Socialist and Darwinist', *British Journal of Sociology* Vol. 9 (1958), pp. 111–25.

³⁵ On Weldon, see K. Pearson, 'Walter Frank Raphael Weldon', *Biometrika* Vol. 5 (1906), pp. 1–52 and Kevles, *In the Name of Eugenics*, pp. 27–31.

³⁶ Pearson, 'Mathematical Contributions to the Theory of Evolution. 3. Regression, Heredity and Panmixia', *Philosophical Transactions of the Royal Society of London* Vol. 187 (1896), pp. 253–318.

³⁷ D. Heron, *The Relation of Fertility in Man to Social Status* (1906).

³⁸ Burt, 'Experimental Tests of General Intelligence', *Brit. J. Psych.* Vol. 3 (1909), pp. 94–177.

had been applied to some schoolchildren on the Isle of Guernsey – including tests of sensory discrimination (pitch, brightness, weight etc.) and estimates of intelligence derived from school grades and the ratings of teachers and classmates – and came to the resounding conclusion that ‘all the mental powers measured did obviously correlate with each other in considerable degree’. He then ‘fell to brooding’ on his figures, working out ‘coefficients of correlation’ to measure precisely how far his figures were related.³⁹ The result of all this brooding was “‘General Intelligence’: Objectively Determined and Measured’,⁴⁰ a seminal article which helped to transform the psychology of individual differences into a dynamic scientific discipline.

In an attempt to understand ‘Intelligence in a definitive objective manner, and to discover means of precisely measuring it’,⁴¹ Spearman employed a technique which was similar to ‘factor analysis’, and which was designed to reduce a elaborate table of correlation coefficients to more manageable dimensions. Moving from the analysis of the intercorrelation of different test results to speculation on the underlying nature of mental abilities, he unhesitatingly rejected a number of common hypotheses about the organisation of the mind. The mind was not divided into a number of compartmentalised faculties, as most psychologists suggested: the mere existence of positive correlations between different tests was enough to dispense with any such theory. Nor were abilities clustered into several groups, or arranged ‘oligarchically’ (as Spearman himself expressed it). Instead, the structure of the mind was ‘monarchic’: abilities were primarily manifestations of one underlying general ability:

every individual measurement of every ability ... can be divided into two independent parts which possess the following momentous properties. The one part has been called the ‘general factor’ and denoted by the letter *g*; it is so named because, although varying freely from individual to individual, it remains the same for any one individual in respect of all the correlated abilities. The second part has been called the ‘specific factor’ and denoted by the letter *s*. It not only varies from individual to individual, but even for any one individual from each ability to another.⁴²

All mental acts involve the thinker in deploying two distinct types of ability: a ‘general ability’, which is the same for every mental act, and a ‘specific ability’, which is related to the type of act occurring. *G* is naturally the most interesting quality for any mental tester: the more a test measures *g* and eliminates *s*, the more revealing will it be about the innate ability of the individual tested.

By as early as 1904, then, the technical literature on the psychology of individual differences already included all the various hypotheses and techniques which Burt

³⁹ See Spearman’s autobiographical essay in C. Murchison (ed.), *A History of Psychology in Autobiography* (Worcester, Mass., 1930), I, p. 322.

⁴⁰ “‘General Intelligence’, Objectively Determined and Measured’, *Amer. J. Psych.* Vol. 15 (1904).

⁴¹ *Ibid.*, p. 206. ⁴² Spearman, *The Abilities of Man: Their Nature and Measurement* (1927).

was to try to force into a coherent system. Such statistical devices as the normal distribution curve, the coefficient of correlation and factor analysis provided him with all the tools he needed to interpret tests given to large numbers of children. Spearman's idea that there is a central fund of mental energy, fixed by inheritance, common to all mental acts, varying from person to person, and open to objective, abstract and mathematical definition, provided him with a theoretical understanding of the object which he was trying to measure. In Burt's own words, Spearman's work had 'opened up an entirely fresh field and ... initiated an entirely new campaign'.⁴³

Psychologist to the London County Council

As Sutherland and Sharp have noted, Burt's appointment to the LCC was the first of its kind in the world, marking him out as a pioneer of a new applied science.⁴⁴ It brought official support to a discipline which had hitherto been starved of both resources and respect; it also reinforced Burt's position in his profession, helping to turn him into the most quoted and discussed figure in modern British psychology. The London County Council provided Burt with unique opportunities and unparalleled resources – access to the London school population; the co-operation of teachers, medical officers, care committee workers, and researchers; an in-house press which was willing to publish technical and highly statistical reports; and the support of the largest local education authority in the United Kingdom. There can be no doubt that he seized his opportunities and exploited his resources, laying down guidelines for both the school psychological services and the child guidance movement, and managing to amass a unique – and highly controversial⁴⁵ – body of material on the London school population, in particular on the subnormal, the gifted, and the delinquent.

The London County Council made the appointment for a variety of reasons – because it was expanding compulsory elementary education, because it recognised the vast range of abilities within the school population, because it worried about the possible deterioration in the quality of the race, and because it insisted on the use of psychological as well as medical techniques in selecting the mentally retarded. Set up by the London Education Act of 1903, the Local Education Authority was both the largest and most innovative in the United Kingdom. Its inspectorate formed a self-conscious administrative élite, determined to set the pace for other

⁴³ Board of Education. *Report of the Consultative Committee on Psychological Tests of Educable Capacity* (HMSO, 1924), p. 14.

⁴⁴ For a discussion of the debate over Burt's appointment and of the implications of the appointment for the relationship between psychology, education and medicine, see Gillian Sutherland and Stephen Sharp, "The First Official Psychologist in the World": Aspects of the Professionalisation of Psychology in Early Twentieth Century Britain', *History of Science* Vol. 18 (1980), pp. 181–208. This article has been most useful in the discussion which follows. See also Fletcher, *Science, Ideology and the Media*, pp. 104–6.

⁴⁵ *The Times*, 25 October 1976, p. 3 (c).

Local Education Authorities and confident that scientific experts could solve social problems. Confronted with a large and growing school population, composed of children drawn from different educational backgrounds and endowed with varying levels of intellectual ability, it sought novel solutions to unprecedented problems. Mounting evidence about the poor physical and mental condition of the child population, combined with the suspicion that the overall quality of the race was declining, helped to harden the resolve to extend further services to schoolchildren; and in 1907 Local Education Authorities were obliged to carry out the medical inspection of all children and to make adequate provisions for their health care.

Mentally defective children posed particularly pressing problems for the educational system, and London did more than any other authority to supply solutions for these problems. The London School Board had been in the forefront of the campaign for special provision for backward children, and the London County Council inherited both a number of special schools and a policy committed to their preservation and expansion. (Burt was later to find that he was only systematising work already begun by amateurs and that 'isolated teachers have already elaborated valuable schemes of work and practical devices for teaching, and have collected records and data of the utmost utility'.⁴⁶) But, despite this enlightened legacy, serious conflicts remained. The conditions in the special schools together with the problems of teaching difficult children persuaded teachers and medical officers to take a generous view of the term 'defective' (the more children who could be labelled 'defective' the better), whereas parents resented the stigma attached to attendance at such schools. Such conflicts only emphasised the central problem of dealing with the backward: that the authorities still lacked a clear definition of mental retardation. Demand mounted for both a scientific understanding of mental deficiency and for an objective scale for measuring individual subnormality.

Dr James Kerr, London's Medical Officer for Education, was one of the first officials to respond to this demand. Determined not to be out-manoeuvred by Dr George Newman, the Chief Medical Officer of Health to the Board of Education and a personal rival,⁴⁷ he went out of his way to emphasise his concern for the deficient and to demonstrate his knowledge of the scientific literature on their classification and treatment. He devoted a section of each of his annual reports from 1903 onwards to a discussion of special education, anatomizing its most characteristic problems.⁴⁸ In 1903 he wrote on imbeciles and epileptics; in 1904 on word-blindness and the special treatment of the backward; in 1905 on the

⁴⁶ Burt, *LCC Development Memorandum No 1. Backward Children. Report on Provision for Backward Children*, p. 4.

⁴⁷ On the rivalry between Kerr and Newman, see Bentley B. Gilbert, *The Evolution of National Insurance in Great Britain: The Origins of the Welfare State* (1966), pp. 133–43.

⁴⁸ Greater London Council Record Office (GLCRO), SBL Annual Report. Medical Officer (Education) 1903–9. Shrubsall summarised these reports for the Special Schools Sub-Committee. See GLCRO, SSS-C, agenda papers for the meeting of 20 November 1911, p. 2.

distribution of mental qualities; in 1906 on the classification of the backward and the associations of mental deficiency; and in 1907 on the 'development of articulatory capacity'. In 1908 he summarised 'a census of 5,000 children in the special schools to determine the number likely to do better in an intermediate school and the probable results of special school education on their subsequent wage-earning capacity'.⁴⁹ Finally, in 1909, he drew attention to the Binet tests of intelligence, beating Newman by a year. He suspected that Binet's tests might provide a means of distinguishing between intelligence and training and pointed out that his assistant, Dr Shrubsall, had already applied them in London schools.⁵⁰ Most of the major problems which were to confront Burt as the Council's official psychologist had already been outlined by Kerr by as early as 1909.

In May 1911, the Finsbury Local Association of the Children's Care (Central) Sub-Committee urged the Council to stop 'sending children who were merely intellectually dull and backward to the mentally defective schools',⁵¹ setting in motion a series of administrative initiatives and counter-initiatives, which were to result in the appointment of an official psychologist. On 17 July, the Special Schools Sub-Committee ordered Kerr to arrange for an examination of all three schools for mentally defective children,⁵² paying particular attention to children who might be fit to be transferred to ordinary schools.⁵³ Shrubsall carried out the investigation, producing a detailed and sophisticated report of work. He insisted that the key problem was not 'to find out what the child knows or has learned, but the extent to which the ordinary channels of education are open and available',⁵⁴ and he included an authoritative discussion of mental tests, concluding that 'the tests have received an international approval as an index of general intelligence'.⁵⁵

Shrubsall pointed out that pressure of time generally meant that medical officers failed to establish friendly relations with the children and could only apply a handful of tests; they were forced to rely heavily on the teacher's report, although it was in the interests of the teachers to exaggerate the children's difficulties and rid themselves of the problem.⁵⁶ Kerr also pointed out that the re-examination of the special school children had been an arduous affair, with each examination taking

⁴⁹ GLCRO, SSS-C, Agenda for consideration by the Special Schools Sub-Committee, 20 November 1911, p. 2, where Shrubsall provided a convenient summary of Kerr's reports.

⁵⁰ GLCRO, SBL and LCC, Report of the Medical Officer (Education) for the months ended 31 December 1909, p. 73. For Newman's early writings on the Binet-Simon tests, see PP 1911, 17, Cmnd 5925, *Report of the Chief Medical Officer*, Ch. 10. PP 1912-13, 21, Cmnd 6530, *Report of the Chief Medical Officer*, Appendix E.

⁵¹ GLCRO, LCC Special Schools Sub-Committee, agenda papers for meeting on 29 May 1911, item 31. ⁵² The schools were South Grove, Priory Road and Offord Road.

⁵³ GLCRO, LCC Special Schools Sub-Committee, agenda papers for meeting on 29 May 1911, item 31.

⁵⁴ GLCRO, SSS-C, Agenda for consideration by the Special Schools Sub-Committee, 20 November 1911, p. 1. Report by the Medical Officer (Education) (16 November 1911), which summarised the Sub-Committee's decision on 17 July 1911. ⁵⁵ *Ibid.*, Shrubsall's report, p. 4.

⁵⁶ *Ibid.*, p. 13.

‘about four times the amount of time usually given to the examination of a special school child’.⁵⁷ The implications of these remarks were obvious: if the Sub-Committee wanted to rid itself of the injustice and expense incurred by the misclassification of children, then it needed to devote more resources to the task of selection. When the Sub-Committee asked what increase in staff the general use of Binet-type testing would require, he suggested two new full-time medical appointments – a substantial bid for an expansion of his department.⁵⁸ The Chief Education Officer, Robert Blair, immediately out-manoeuvred him by proposing the half-time appointment of a ‘psychologist’ to concentrate on borderline cases.⁵⁹ The novelty of this idea was outweighed by the fact that it would save a good deal of money – and what was more, the London inspectorate already included a qualified psychologist with a detailed knowledge of London schools: W. H. Winch.⁶⁰ After protracted discussion the Council decided to advertise for a psychologist.⁶¹

The advertisement attracted thirty-eight applications, an indication both of psychology’s success in turning itself into a vigorous scientific discipline and of its failure to provide attractive academic jobs for its recruits – and also, of course, of the appeal of even a half-time appointment with the London County Council. The selection committee put Burt onto an admirable short list of six⁶² and then, on 3 December 1912 appointed him to the post. It recorded that it was impressed by the fact that he had used his John Locke Scholarship in Mental Philosophy to devote himself ‘wholly to experimental research upon tests of general intelligence in school children’ and that he had travelled in Germany, France, Switzerland and Russia studying their schools, universities and psychological laboratories.⁶³ That said, his appointment owed something to luck as well as to merit. The short list was an impressive one.⁶⁴ In particular, William Brown, a contemporary of Burt’s at Oxford, had an outstanding list of achievements behind him: two Oxford degrees, one in ‘Greats’ and one in Physiology, a London DSc, a medical training, and a

⁵⁷ *Ibid.*, p. 4. ⁵⁸ *Ibid.* Report by the Medical Officer (Education), p. 1, concluding sentence.

⁵⁹ GLCRO, SSS-C, agenda papers for meeting of 6 May 1912, p. 1 (a), Kerr’s report for 12 December 1911.

⁶⁰ *Ibid.*, pp. 2–3 (b), report of EO, 15 February 1912. On Winch’s qualifications for the position, see Sutherland and Sharp, ‘Aspects of the Professionalisation of Psychology’, pp. 184, 187.

⁶¹ GLCRO, LCC Minutes of proceedings July–October 1912, Minutes for meeting on 22 October 1912 on the appointment of a psychologist in the education officer’s department, p. 863.

⁶² GLCRO, LCC EGPS-C, minutes of meeting 15 November 1912, p. 490, minutes 18 and 24.

⁶³ GLCRO, LCC. Minutes of Proceedings November–December 1912, Minutes on the appointment of a psychologist in the education officer’s department, 3 December 1912, p. 1410.

⁶⁴ Besides Winch, then aged forty-eight and the front runner for the post, it included the Rev. F. P. Aveling, aged thirty-six, Lecturer in Analytical Psychology at University College, London and later Professor of Psychology at King’s College, London; William Brown, aged thirty, lecturer in Psychology and Head of the Department at King’s College, London and later Wilde Reader at Oxford; W. G. Sleight, aged forty, Lecturer in Education at Graystone Place Day Training College; and S. H. Watkins, aged twenty-eight, Assistant Lecturer in Education at University College, Cardiff.

book on *Mental Measurement*, published in 1911.⁶⁵ Not surprisingly, Burt emerged as the favoured candidate only after the Committee had voted three times.

Burt's official duty was simply 'the examination of children nominated for admission to schools for the mentally defective'.⁶⁶ But he soon increased the scope of his work, extending the range of children he dealt with and emphasising the need for a systematic investigation of the London school population. In the beginning of 1915 he informed C. W. Kimmins that:

I propose to begin systematically working through one or two districts in the county, visiting every school both ordinary and special. My chief object will be the examination of mentally defective candidates; but I propose, if possible, to include in my survey the following cognate problems,

1. The distribution of backward children;
2. The standardisation of scholastic and non-scholastic tests;
3. The determination of average and extreme attainments.⁶⁷

His empire-building was inspired as much by loyalty to the Galtonian tradition as by personal ambition. As always, his main interest lay in the theoretical problems of individual psychology rather than in the practical business of classifying the subnormal. He wanted to amass material on the distribution of intelligence and attainments in the school population; on the commoner causes of mental and educational subnormality; and on the psychoneurotic, the delinquent, and the supernormal,⁶⁸ to mention only his most pressing interests.

He found considerable interest in his work and enthusiasm for his methods among the Inspectorate. On 9 March 1916, Robert Blair sent out a memorandum asking his inspectors 'if you were an autocrat, and had the means of carrying out your will, what are the six reforms which you would carry out, and the order in which you would do them'.⁶⁹ A number of the replies put educational psychology high on their list of priorities. C. W. Kimmins argued that the three most urgent reforms in education were as follows:

1. Far more attention to be given to the scientific study of the child leading to
 - (a) Intensive work along the line of children's interests and abilities
 - (b) Increased expressional work with less fruitless burdening of the memory, and

⁶⁵ GLCRO, LCC EGPS-C, agenda papers for meeting on 22 November 1912, enclosure containing *curricula vitarum* and references for these candidates with papers for item 21. Hearnshaw is wrong to argue that Burt was the youngest of the short-listed candidates (Burt, p. 34): Watkins was a year younger than him. The full title of Brown's book was *The Essentials of Mental Measurement* (Cambridge, 1911). He produced a second edition in 1921 in collaboration with Godfrey Thomson.

⁶⁶ GLCRO, LCC Minutes of Proceedings, July–October 1912, Report of the Education Committee for 26 June and 3 July on the appointment of a psychologist in the education officer's department, p. 287.

⁶⁷ University of Liverpool, Cyril Burt Papers, D 191/2, Burt to Kimmins, 9 January 1915.

⁶⁸ He later imagined that he had been appointed, in part, to carry out a psychological investigation of the entire school population, see *The Causes and Treatment of Backwardness* (1953), pp. 30–1.

⁶⁹ GLCRO, EO/GEN/1/46, Post-War Reconstruction, Educational Reforms 3, Inspectors Observations, 1916, Sir Robert Blair's minute for 9 March 1916.

Cyril Burt and the psychology of individual differences

- (c) Greater freedom for the child's natural development and less imposition of adult methods.
2. Better provision to be made for the discovery and treatment of the supernormal child
 - (a) In the better grading of children into such groups as sub-normal, normal, and super-normal
 - (b) In the selection of children for scholarships and promotion by ability and intelligence, etc
 - (c) In discovering the fitness of children leaving school for particular groups of employment, and
 - (d) For the selection of industrial ability in adults on lines roughly laid down by Munsterberg in 'Psychology and Industrial Efficiency'.
3. Encouragement to be given by means of scholarships and fellowships to educational experiment and research. For the organisation of this work a strong educational research board to be appointed.

He also suggested that a considerable emphasis should be placed on 'practical work in experimental psychology' in teacher training courses.⁷⁰ P. B. Ballard shared Kimmins' enthusiasm for psychology, listing the establishment of 'a large department for pedagogical research' as his first priority and the improvement in 'the machinery for dealing with the supernormal child, and for the child showing special talent in one discipline' as his fifth.⁷¹

Burt's reply to the memorandum provides us with a sharp insight into both his hopes for educational reconstruction and his plans for the post of educational psychologist. Under the heading 'reforms in education' he submitted the following list:

1. *Census of Educational Abilities* of the school population, periodically repeated and entailing –
 - (a) estimates of educational facilities required by different degrees and kinds of ability,
 - (b) standards of achievement, optimal as well as minimal, attainable under different conditions and at crucial stages in the school career,
 - (c) tests of progress or deterioration in the educational system and its branches,
 - (d) allocation (as far as possible) of individuals of appropriate ability to appropriate vocations.
2. *Research-Centres*
 - (a) for testing new methods of teaching,
 - (b) for studying exceptional individuals, super-normal as well as sub-normal.
3. *Residential School Communities* for those whose home conditions and parental treatment are inadequate to their abilities and disabilities.
4. *A Revised Curriculum*, no longer tending to ignore –
 - (a) the training of 'reasoning' in favour of 'suggestibility'
 - (b) the training of 'emotions' (i.e. the instinctive, moral, and aesthetic sources of character),

⁷⁰ *Ibid.*, Kimmins to Blair, 13 March 1916.

⁷¹ *Ibid.*, Ballard to Blair, 11 March 1916.

Measuring the mind

- (c) the child's material and social environment as it appeals to him,
- (d) the child's future status as a citizen and a worker of a specific class.
- 5. Cautious application of the more plausible methods of so-called '*Scientific Business Management*' to the administrative work of teachers and minor officials.
- 6. An attempt to create a *Scientific Profession of Teaching* by –
 - (a) modifying methods of training, appointment, and promotion,
 - (b) multiplying facilities for observation and research,
 - (c) collecting and publishing reports on educational problems, based upon exact records, experiments, and statistics, not merely upon conferences and discussions,
 - (d) educating teachers' associations to become scientific bodies rather than debating societies or trade unions.⁷²

He hoped that the psychologist would become a key expert in a scientifically managed society, measuring and classifying its citizens and then allocating them to their appropriate positions in the educational and occupational hierarchy.

Burt's position in the Council provided him with opportunities and resources unique in his profession. He gained automatic access to the London school population and enjoyed the co-operation of teachers, care-committee workers, school inspectors, and medical officers. Teachers who were confronted with dull and difficult children soon began to petition him for help. 'Thomas C. W. The above child is a pupil in this school', a Bethnal Green master wrote to him. 'He is a continual nuisance in class and in my opinion not fit to be with normal children. He is not only mentally, but morally deficient, and I should esteem it a favour if you could examine and report on him at your earliest opportunity.'⁷³ Spearman offered him unrestricted access to his laboratory and the National Institute of Industrial Psychology provided him with materials and research assistants.⁷⁴ The Council also undertook to publish the reports of his investigations – 'a valuable aid to the development of a scientific child psychology', he later acknowledged, 'since at that date no private publisher would have been willing to print big volumes consisting largely of tests, tables, graphs, and half-tone illustrations'.⁷⁵

Naturally he ran into numerous obstacles and frustrations, not least an inefficient and time-wasting bureaucracy. 'This council is a great joke', he wrote to his mother:

One day they send me a map of London nine years old. The next a list of everybody's salaries. After that they give me an old attaché case. A week later a brand new one. Then £2 worth of stamps. Then a mysterious pad of paper and official note paper (and two envelopes). Several days later envelopes (and no paper). The next present is to be an Atlas of London and a Handy Guide.⁷⁶

⁷² *Ibid.*, Burt to Blair, 10 March 1916.

⁷³ Quoted in Hearnshaw, *Burt*, p. 35.

⁷⁴ CBP, D 191/14, Burt to his mother (n.d.). He also added that 'all the teachers are very nice: and I think they seem pleased with my point of view'.

⁷⁵ Burt, *Causes and Treatment of Backwardness*, p. 31.

⁷⁶ CBP, D 191/14, Burt to his mother (n.d.), p. 3 (p.s.).

The post-war economic depression halted the expansion of the special schools and crippled provision for subnormal and abnormal children, robbing the 1913 and 1914 Mental Deficiency Acts of any practical force. Burt put in a number of requests for paid assistants, but all were refused.⁷⁷ When he moved to University College, London in 1932, his job was frozen, and he was not replaced until 1949.⁷⁸ Yet, in general, his opportunities outnumbered his frustrations, and he continued to approach his work with heady optimism and astonishing vitality.

In dealing with his daily business he began to form a clear conception of the new profession's scope. He stressed the distinctions between theoretical and applied work and determined to subordinate academic to practical considerations. He presented himself as the pioneer of a new profession, shaping the methods of psychology for use in new circumstances and laying down firm guidelines for his successors. On 17 March 1914, he wrote to Kimmins about his growing sense that educational psychology was a distinct discipline:

I have come to realise in a very concrete way that a psychologist who is doing educational work is really starting a new and independent science. Educational psychology is not merely a branch of applied psychology. Medicine is not merely applied physiology. The medical investigator has been found, by practical exigencies to build up an independent science of his own, of work not in the physiological laboratories, but in the hospital and by the bedside. Similarly the educational investigator cannot merely carry over the conclusions of academic psychology into the classroom. He has to work out almost every problem afresh, profiting by, but not simply relying on, his previous psychological training. He has to make short cuts to practical conclusions, which, for the time being, leave theory or pure science far behind. Education is thus not a simple field for the illustration and application of what is already known; it is, as you say, a great field for fresh research.⁷⁹

Burt made enormous contributions to this 'great field for fresh research' during his time at the Council. Between 10 May 1913 and 31 October 1914 he examined personally, or with the help of teachers, more than 2,000 children in Council schools, including about 400 subnormal children, 200 certified mental defectives, and about 1,400 normal children. He classified many difficult children as 'backward' rather than 'defective' and advised teachers to set up special classes for the backward in their schools, arguing that this would 'constitute one of the most economical and satisfactory solutions to the problem presented by backward and border-line cases, and at the same time relieve the pressure upon the special schools'.⁸⁰ In 1917 he published a detailed investigation of *The Distribution and Relations of Educational Abilities*, dealing with the distribution of educational ability among defective and normal children and discussing the relations between

⁷⁷ Hearnshaw, *Burt*, p. 36.

⁷⁸ *Ibid.*, p. 45.

⁷⁹ CBP, D 191/2, Burt to Kimmins, 17 March 1914.

⁸⁰ LCC: Report by Education Officer submitting a report by Mr. C. L. Burt, the Council's Psychologist, as to the work of the psychologist from 10 May, 1913, to 31 October, 1914, p. 1.

ability in different subjects in the school curriculum. He concluded that ability was governed by general inborn intelligence; that it was distributed evenly in the school population, with a few at the top, the mass in the middle, and a few at the bottom; and that the difference between the normal and the subnormal was a matter of degree rather than kind.⁸¹

He then turned to constructing a series of tests of mental capacity and scholastic achievement, hoping that a refinement in psychological methods would lead to the elimination of doubtful cases. In 1921 he published his *Mental and Scholastic Tests*, a classic work which contained everything a curious reader might want to know about the science and art of mental testing: a guide to the practical use of the tests; a discussion of the theoretical validity of the results, including important material on item analysis, the distribution of intelligence, the mental ratio, the line of demarcation between the normal and the defective, and the relation between mental ability and educational attainment; and a series of scholastic tests for reading, spelling, arithmetic, writing, drawing, handwork and composition.⁸² He combined his work on testing and classification with a keen interest in clinical psychology and child guidance. In 1925, thirteen years after he took up his appointment, he published what was perhaps his most impressive book, *The Young Delinquent*.⁸³

How to be an educational psychologist

‘Of rules of method’, Burt reflected, ‘the psychologist is tempted to say with another professor of medicine “Each case must be a rule to itself”. Method should be individualised, not universalised, modified for this pupil, and revised for that, not written down, once and for all cases and occasions, in a book.’⁸⁴ In practice, however, he relied on two standard methods: observation and experiment.⁸⁵ He interpreted ‘observation’ broadly. He traced the child’s family tree, recording its genetic inheritance, in elaborate pedigree charts⁸⁶ and then studied its local and family environment, examining the world it was trying to respond to. ‘To study a mind without knowing its milieu is like studying a fish without seeing water’,⁸⁷ he once remarked, and he took his own injunction seriously enough to spend some time living in the East End in order to immerse himself in the social world of his patients.⁸⁸ He built up case histories, consulting all the available sources on the

⁸¹ Burt, *The Distribution and Relations of Educational Abilities* (1917).

⁸² Burt, *Mental and Scholastic Tests* (1921, 4th edn, 1962).

⁸³ Burt, *The Young Delinquent* (1925). Translated into Danish in 1937 and Swedish in 1941; 4th edn, 1944.

⁸⁴ Burt, *Mental and Scholastic Tests*, p. 350.

⁸⁵ Burt, *Backward Child*, pp. 62–3.

⁸⁶ See, for example, Burt, *Young Delinquent*, ch. 2, ‘Hereditary Conditions’, pp. 29–62. On the part played by these pedigree charts in eugenic thought, see Pauline M. H. Mazumdar, *Eugenics, Human Genetics and Human Failings. The Eugenics Society, its Sources and Its Critics in Britain* (1992), pp. 58–95.

⁸⁷ Burt, *Subnormal Mind*, p. 15.

⁸⁸ Hearnshaw, *Burt*, p. 39.

child – teachers, parents, medical officers and school inspectors. Finally, he tried to make a careful clinical study of his subject. He also made extensive use of children's drawings, arguing that they 'open avenues to strange places in the childish mind, regions that otherwise would remain untouched and unexplored'.⁸⁹ Since their style developed in well-marked stages – scribble in infancy, lines at age three, stiff geometric forms at five, a realistic side view at seven and representation at ten – they 'reflect in a most suggestive fashion' the child's 'mental progress as a whole'.⁹⁰

He regarded experiments as nothing more than observation by other means. Their value lay in the fact that their conditions were created and controlled, rather than given and random.⁹¹ In practice, he relied almost exclusively on one form of 'experiment', the mental test.

Mental tests were relatively recent inventions when Burt started his career. The first tests looked for physical methods of diagnosis and tried to establish a direct relationship between the size of the brain and the quantity of intelligence it contained. But their results were both crude and curious, resulting in a rather ludicrous debate about 'large-brained criminals' and 'small brained men of eminence'.⁹² Francis Galton and Alfred Binet put the subject on rather firmer foundations, Galton by pioneering the study of individual differences and Binet by inventing the first tests designed to measure the efficiency of the working of the higher mental processes. Commissioned by the French Minister of Public Education to pick out children with basic learning difficulties, he assigned an age level to a variety of simple intellectual operations, determined by the earliest age at which the average child could complete the task, and ranked children both against their peers and against a normal development curve. He thus distinguished between mental age and chronological age and focused interest on the key problem of the development of intellectual capacity.⁹³ His scale was rapidly taken up in both Europe and America, and was adapted to local circumstances and improved in response to criticism.⁹⁴ William Stern invented the notion of intelligence quotients

⁸⁹ Burt, *Mental and Scholastic Tests*, p. 417.

⁹⁰ Burt, 'Mental Development', *The Listener*, 21 May 1930, p. 900, cols. 1 & 2. *Mental and Scholastic Tests*, pp. 417–29.

⁹¹ Burt, 'Experiments', *The Listener*, 11 June 1930, p. 1028, col. 1.

⁹² Gould, *The Mismeasure of Man*, pp. 92–5. For recent attempts to revive craniometry, see below, pp. 382–3.

⁹³ A. Binet and T. Simon, *The Development of Intelligence in Children*, trans. E. S. Kite (New Jersey, 1916); *A Method of Measuring the Development of Intelligence in Children*, trans. C. H. Town (Chicago, 1913).

⁹⁴ R. M. Yerkes, J. W. Bridges, R. S. Hardwick, *A Point Scale for Measuring Mental Ability* (1915); L. M. Terman, *The Measurement of Intelligence* (1919); L. M. Terman, G. Lyman, L. Ordahl, N. Galbreath & N. Talbert, *The Stanford Revision of and Extension of the Binet-Simon Scale for Measuring Intelligence* (1917); W. H. Winch, 'Binet's Mental Tests: What They Are, and What We can do with Them', *Child Study* Vols. 6–8 (1913–15) C. Burt, 'The Measurement of Intelligence by the Binet Tests', *Eugenics Review* Vol. 6 (1914), pp. 36–50, 140–52. For an annotated bibliography of the literature on the Binet-Simon scale before 1914, see S. C. Kohs, 'The Binet-Simon Measuring Scale for Intelligence', *Journal of Educational Psychology* Vol. 5 (1914), pp. 215–24, 279–90, 335–46.

Measuring the mind

by the simple arithmetic device of dividing mental age by chronological age and then multiplying by 100 to get rid of the decimals.⁹⁵

Burt's life was bound up with mental tests. They provided essential equipment for his life-long pursuit of 'innate, general cognitive ability'. They offered a scientific measuring device. 'It is now possible,' he argued, 'to measure the child's intellectual growth with almost the same accuracy as we can measure his physical growth'.⁹⁶ They helped to solve a number of practical teaching problems. 'A simple method for testing the abilities of schoolchildren has become an urgent practical need', he noted. 'No appeal is more often addressed to the psychologist than the demand for a mental footrule.'⁹⁷ He started his psychological career by standardising mental tests for schoolchildren, and wrote one of the earliest, and most perceptive, critiques of Binet's intelligence tests.⁹⁸ By 1921 he had established himself as 'undoubtedly one of the greatest living authorities on these tests'.⁹⁹

In his work with emotionally disturbed children, clinical treatment was also a central part of his method. His technique varied with the individual: every effort was 'a fresh and specific experiment in individual psychology'.¹⁰⁰ Sometimes he gave the child a grave talking-to; sometimes he tried to establish a sympathetic relationship; sometimes he relied on counsel to others – advice to the mother, information to the teacher, instructions to the social worker. On one occasion he even conducted a psychoanalysis of a hysterical schoolgirl.

The delinquent, the backward and the gifted

Burt's main interests as an applied psychologist lay with three groups of abnormal children: the delinquent, the backward and the gifted. In *The Young Delinquent* (1925), he turned to 'the child whose failings are moral', using a mixture of case histories and statistical analyses to investigate the causes of delinquency, describe its manifestations, and outline remedies. Always fond of roaming around the poorer areas of cities, Burt began to study delinquents seriously when he lived in a university settlement, situated on the edge of Liverpool's docklands, and continued the habit when he became official psychologist to the LCC.¹⁰¹ He had plenty of personal knowledge of the social and moral conditions of metropolitan slums, and supplemented his personal knowledge by consulting social workers, who were then much preoccupied by the relationship between crime and poverty.¹⁰² But as a professional psychologist and self-styled disciple of Galton, he was convinced that the causes of crime were psychological as well as social. As a result, his main

⁹⁵ W. Stern, *The Psychological Methods of Measuring Intelligence*, trans. G. M. Whipple (1913).

⁹⁶ Burt, 'The Mind of the Child', *The Listener*, 1 October 1930, p. 513, col. 2.

⁹⁷ Burt, *Mental and Scholastic Tests*, p. 1.

⁹⁸ Burt, 'The Measurement of Intelligence by the Binet Tests', *Eugenics Review* Vol. 6 (1914), pp. 36–50, 140–52. ⁹⁹ A. Blair in his introduction to Burt, *Mental and Scholastic Tests*, p. xix.

¹⁰⁰ Burt, *Young Delinquent*, pp. 10–11.

¹⁰¹ Victor Bailey, *Delinquency and Citizenship. Reclaiming the Young Offender 1914–1948*, pp. 13–17, 126. ¹⁰² Bailey, *Delinquency and Citizenship*, p. 8–13.

contribution to criminology was to challenge mono-causal explanations of crime, whether crudely hereditarian or clumsily environmental. His central thesis was that the fundamental cause of crime was not bad surroundings but the 'the workings of these bad surroundings on the thoughts and feelings of a susceptible mind'.¹⁰³

He rejected Lombroso's extreme hereditarianism – there was no fixed criminal personality, he argued, and no sudden break between crime and ordinary naughtiness – and insisted that what mattered was rather a jumble of inherited weaknesses, dominant in the delinquent but present in us all, which drove the weak to crime.¹⁰⁴ Instead, he emphasised the importance of the environment, particularly the intimate home environment. The delinquent's home was commonly characterised by poverty, broken family ties, and irregular discipline; his neighbourhood tended to be dominated by unemployment, resistance to work and schooling, and the bad influence of adult friends and strangers, and gangs of youths.¹⁰⁵ Intellectually, their average intelligence was low (though variations in ability between delinquents were wide); the typical delinquent, when he had reached adulthood, had a mental age of no more than nine. Educationally, they were backward¹⁰⁶ – indeed, he felt that 'nothing is so startling' as their 'extraordinary lack of knowledge' – and temperamentally, they were unstable. Instincts, repressed in most of us, were close to the surface in the delinquent.¹⁰⁷

The Backward Child dealt with children with learning difficulties.¹⁰⁸ Defined as 'all those who in the middle of their school career would be unable to do the work of the class next below that which is normal for their age', the backward made up about 1.5 per cent of their age group.¹⁰⁹ Burt divided these into distinct groups: those whose problems were innate, general and extreme; those whose problems were innate, general, but modest; those whose problems were specific rather than general; and those whose problems resulted from a refusal rather than an inability to learn.

Hereditary, environmental and personal factors all played their part. Poverty and maternal inefficiency took a heavy toll on children, while poor schooling discouraged learning.¹¹⁰ Sensory defects caused problems. If poor eyesight turned the blackboard into a blur, or if bad hearing made the teacher incomprehensible, the child rapidly fell behind.¹¹¹ Left-handedness was also a major problem, reducing manual efficiency, and often resulting in shame, anxiety and stuttering.¹¹² In severe cases of backwardness the causes were invariably hereditary. The child's

¹⁰³ Burt, *Young Delinquent*, p. 188.

¹⁰⁴ *Ibid.*, pp. 26–9. For an intriguing discussion of this theme, see Rose, *Psychological Complex*, pp. 192–6.

¹⁰⁵ Burt, *Young Delinquent*, pp. 62–206.

¹⁰⁶ *Ibid.*, pp. 291–398.

¹⁰⁷ *Ibid.*, pp. 399–598.

¹⁰⁸ See also: *Report on Provision for Backward Children*, LCC Development Memoranda No. 1 (1918). *Report of an Investigation upon Backward Children in Birmingham*, City of Birmingham Education Committee (1921). 'The Backward Child', *The Listener*, 8 October 1930.

¹⁰⁹ Burt, *Backward Child*, pp. 77–8.

¹¹⁰ *Ibid.*, pp. 89–134.

¹¹¹ *Ibid.*, pp. 208–95.

¹¹² *Ibid.*, pp. 270–359.

learning difficulties were built into his genes, and no amount of special coaching could remove them. His problems were general, affecting reasoning, memory, span of attention, speed of association and attention.¹¹³ In less severe cases, only specific mental factors were retarded, ranging from the perceptual and sensory to the associative.¹¹⁴ Defects of temperament, whether due to inheritance or environment, had an important role, and explained educational backwardness among children of adequate intelligence. The mind, he argued, is not an intellectual machine; it is bound up with the emotions; and emotional problems can seriously impair mental efficiency. The neurotic and unstable, the sensitive and repressed, the hysterical and dishonest, however intelligent, might all join the ranks of the backward.¹¹⁵

In treating the backward, it was essential to distinguish children who are genuinely defective and those who are merely retarded. If the defective were given extra coaching, or the retarded were put into schools for the defective, then effort was wasted and personal tragedy multiplied. The backward needed extra instruction and special guidance; with care they might be able to resume normal educational progress. The defective, on the other hand, if they were to develop to the full limits of their meagre powers, 'must have a special time-table, and special teaching methods adapted to his narrower mind'.¹¹⁶ The distribution of IQs rather than the dictates of custom should determine the organisation of education. A three-tier system, with one level for the fast, one for the average and one for the slow, was the most practical.

Burt failed to complete his trilogy on the subnormal child; his planned volume on neurosis was never written. There is nothing suspicious about this. Burt was sympathetic to Freud's theory of neurosis, and his training under McDougall had convinced him of 'the profound importance of studying emotional factors, particularly when they were unconscious'. The battle lines between psychology and psychoanalysis had not yet been drawn up, and he was personally involved in the treatment of neurotic children. If his ideas on children's neuroses cannot be found in any single definitive text, at least they can be pieced together from his numerous scattered writings in the subject.¹¹⁷

Neurosis, he argued, was a mental rather than a physical problem, a disorder rather than a disease; the psychologist, not the doctor, should be called upon to cure it. Though the neurotic were subnormal, their subnormality was acquired, not innate and emotional, not intellectual. More than any other group they resembled the delinquent, but they took their problems out on themselves more than on others. Their own peace and efficiency was their first victim.

¹¹³ *Ibid.*, pp. 441-63.

¹¹⁴ *Ibid.*, pp. 464-537.

¹¹⁵ *Ibid.*, pp. 538-63.

¹¹⁶ *Ibid.*, p. 575.

¹¹⁷ 'The Unstable Child', *Child Study* Vol. 10 (1917), pp. 61-79; 'The Neurotic School Child', *Studies in Mental Inefficiency* Vol. 4 (1923), pp. 7-12; 'The Nervous Child', *The Listener*, 29 October 1930; 'The Analysis of Temperament', *British Journal of Medical Psychology* Vol. 17 (1938), pp. 158-88; 'The Incidence of Neurotic Symptoms among Evacuated Children', *Brit. J. Educ. Psych.* Vol. 10 (1940), pp. 9-15.

Burt was also passionately concerned with children at the opposite end of the range of abilities: the 'supernormal' or 'gifted'. Intellectually, he was fascinated by them. Like many members of the 'intellectual aristocracy', he wanted to understand the nature, origins, and incidence of genius, and Francis Galton's *Hereditary Genius* was his model and inspiration. Emotionally, he sympathised with them. 'To my mind', he wrote, 'it is the bright even more than the defective or the dull who merit special help and attention.'¹¹⁸ He pitied intelligent working-class children, handicapped in school by the cultural poverty of their homes, and did everything he could to extend their opportunities by testing capacities rather than attainment. He held the gifted to be 'the nation's most valuable asset'¹¹⁹ and hoped that everything possible could be done to discover and nurture them. Throughout his life, he acted as an eloquent advocate of their cause. Towards the beginning of his career he wrote that 'if the child population and the community at large have profited by the establishment of special schools and classes for the educationally incompetent, how much more would they profit by refining the procedures for discovering and training those who are the most efficient of their age'.¹²⁰ Towards the end of his career, he helped to found MENSA and advocated the cause of super-schools for children with IQs of 160 or above.

In *The Gifted Child* he drew together his thoughts on the subject. He defined the gifted as those with IQs of 130 or above – the brightest 2.5 per cent of their age group – and noted that they had marked common characteristics, being stronger and healthier than average, free from emotional and physical abnormalities, endowed with an unusual fund of curiosity and common sense, and blessed with rare social qualities.¹²¹ Educationally and socially, they were destined to be successful.¹²² Their value seemed obvious to him, their neglect suicidal. Their numbers, he argued, were declining: the balance of fertility between the high IQ professional classes and the low IQ manual classes was taking a heavy toll. The state did little to cater for their peculiar needs, since grammar schools only catered for people of moderately high ability, and left the gifted frustrated. He felt that the nation needed a system of super-schools, drawing them together into communities, supplying their special intellectual needs, and consciously shaping an intellectual and political élite.¹²³

From child study to the factors of the mind

In the 1930s, Burt's main interest shifted from educational practice to statistical theory. He lost contact with children and teachers and lived increasingly in a world of mathematical abstractions. His post at the Council had forced him to deal with

¹¹⁸ CBP, 'London Calling Asia: In Perspective', p. 6.

¹¹⁹ CBP, D191/26, Letter to Dr. Wall, 15 July 1963.

¹²⁰ Burt, *The Distribution & Relations of Educational Abilities*, p. 44.

¹²¹ Burt, *The Gifted Child* (1975), pp. 160–75.

¹²² *Ibid.*, pp. 176–87.

¹²³ *Ibid.*, pp. 189–207.

dull and delinquent children; his job was to provide immediate solutions to practical problems. He spent his time in devising tests and in diagnosing individual children, and his assistants were teachers, medical officers and parents rather than trained psychologists.¹²⁴ *The Young Delinquent* (1925) was an exercise in field research as much as an example of controlled psychometric science: it was based upon a close personal knowledge of London delinquents and was full of telling clinical examples. His pupils at the London Day Training College were impressed by his contact with subjects:

I recall the odd children with 'officers' and parents and teachers... who regularly waited outside the door of Sir Cyril Burt's room at the end of each day. Problem children or the early cases which later found their way into *The Young Delinquent*... Sir Cyril did so much to present an intelligent, sane and sensible attitude of mind to children. He encouraged observation of all kinds in an effort to discern what was natural growth.¹²⁵

But his appointment as professor of psychology at University College, London stimulated his interest in the theoretical foundations of the psychology of individual differences. He responded to academic promotion by losing contact with his subjects and turning himself into a master of statistical theory. His main concern was to defend psychology's claim to be a respectable quantitative science; he increasingly looked upon individual children as mere examples of psychological theory. 'After I was transferred from a Chair of educational psychology to one of general psychology', he later lamented, 'I am afraid I became increasingly out of touch with children, parents, teachers and educational administrators.'¹²⁶ A number of his earlier pupils also regretted his shift of interest. 'Professor Burt's knowledge of children gave us something which I feel we'd not have got elsewhere', one commented in 1952, 'and I hear that in recent years at University College he put that early work behind him. It is as a child psychologist, with real children in the common room, that I like to think of [Burt] – not in connection with factor analysis.'¹²⁷

Burt was determined to prove three fundamental propositions: that general intelligence exists; that it can be isolated and measured; and that it is inherited rather than acquired. As early as 1909 he concluded a paper with the triumphant statement that: 'Parental intelligence... may be inherited, individual intelligence measured, and general intelligence analysed; and they can be analysed, measured and inherited to a degree which few psychologists have hitherto legitimately ventured to maintain.'¹²⁸ He reiterated this basic argument throughout the rest of

¹²⁴ See, for example, Burt, *The Factors of the Mind*, p. vi.

¹²⁵ LIEA, 'Jubilee Lectures of 1952: Correspondence', H. W. C.'s recollections.

¹²⁶ Letter to the Secretary of the Secondary School Examination Council, 8 August 1960. Quoted in Hearnshaw, *Burt*, p. 131.

¹²⁷ LIEA, 'Jubilee Lectures of 1952: Correspondence', anonymous contribution.

¹²⁸ 'Experimental Tests of General Intelligence', *Brit. J. Psych.* Vol. 3 (1909), p. 176.

his long career, even devoting his last, and posthumously published, paper to proving that 'the hypothesis of a general factor entering into every type of cognitive process' and 'the contention that differences in this general factor depend largely on the individual's genetic constitution' were 'wholly consistent with the empirical facts' and thus 'beyond all question'.¹²⁹ For all his certainty, a number of psychologists challenged all three of his assumptions, generating one of the most acrimonious and intractable debates in the history of the discipline. Convinced of the correctness of his position, and yet assailed by a number of critical colleagues, Burt set about reinforcing his arguments with highly sophisticated mathematical techniques.

Godfrey Thomson was perhaps the most perceptive critic of the theory of a general factor. In 1916, while he was still a lecturer in education at Armstrong College, Newcastle, he demonstrated that the hierarchical arrangement of correlation coefficients noted by Spearman did not necessarily depend on a general factor; it might equally well be explained by the laws of chance. He managed to produce a hierarchy from the results of a set of imitation 'mental tests' which were known not to have a common factor, since they were the throws of dice.¹³⁰ His conclusion was both tentative in its tone and devastating in its implications:

There is therefore nothing to show whether the many cases brought forward by him [Spearman] really contain a General Factor or not. It must not be hastily and illogically concluded by anyone that therefore General Ability is a fiction. Its existence is, so far as the mathematical argument goes, an entirely open question ... All I have shown is that Professor Spearman's calculations are incapable of discriminating between a General Factor and overlapping Group Factors.¹³¹

From the central position in psychometric theory claimed for it by Spearman, *g* was thus relegated to the humble status of one possible hypothesis among many. Thomson went on to reinforce his mathematical objections to *g* with methodological objections to the 'reification and deification' of factors, which he regarded as one of the major occupational hazards of factor analysis.¹³² Pointing out that factors were statistical abstractions rather than concrete entities, he urged psychologists to treat them as 'fluid descriptive mathematical coefficients, changing both with the tests used and with the sample of persons'.¹³³ They may help us to understand the relations between what we loosely call the mind and what we vaguely call its environment; but they tell us nothing concrete about the structure and operation of the brain.

On the basis of this reasoning, Thomson advanced an analysis of mental abilities which differed radically from that of Spearman and Burt. He imagined the mind as

¹²⁹ 'The Inheritance of General Intelligence', *American Psychology* Vol. 27 (1972), p. 188.

¹³⁰ Thomson, 'A Hierarchy without a General Factor', *Brit. J. Psych.* Vol. 8 (1916), pp. 271–81.

¹³¹ *Ibid.*, p. 281.

¹³² See Gould, *The Mismeasure of Man*, pp. 234–321.

¹³³ Thomson, *The Factorial Analysis of Human Ability* (1950 edn), p. 303.

a complex, undifferentiated, and intricate network of neurological linkages – a tissue of homogeneous cells rather than an organised whole with specialised parts.¹³⁴ He insisted that it was almost devoid of structure, a protean and plastic mass without separate and specialised organs.¹³⁵ What structure it had was the result of education rather than a dictate of the genes.¹³⁶ He likened the ‘elements’ of the mind to the ‘molecules of a dissolved crystalline substance’ rather than to ‘grains of sand’, and suggested that the mind essentially consisted of a structureless mass of innumerable *bonds*.¹³⁷ He felt that mental tests simply took a random sample of all the conceivable bonds of the mind, with tests with high *g*-loadings catching numerous neurons in an active state and tests with low *g*-loadings sampling a smaller ‘amount’ of unstructured brain. They revealed the mind’s efficiency at making neurological linkages, whilst conveying nothing definite about the structure of mental processes.¹³⁸

A number of influential American psychologists were equally sceptical about Spearman’s claims. In 1928 T. L. Kelly argued for the existence of a number of group factors, such as verbal, numerical and spatial ability.¹³⁹ In 1938 L. L. Thurstone went even further, dispensing with *g* entirely and replacing it with eight primary mental abilities.¹⁴⁰ Spearman’s simple but convenient model of the mind was being replaced by ever more complex interpretations. By 1959 Thurstone’s 8 factors had swelled into J. P. Guilford’s 120.¹⁴¹ It seemed increasingly clear, then, that factor analysis was capable of extracting a variety of structures, both single and multi-factorial, from any given set of evidence.

The Factors of the Mind (1940) thus dealt with one of the most intractable problems in psychometric theory. Burt’s aim was to develop a ‘meta-theory’ – a model of the mind capable of absorbing and reconciling the various disputed approaches to his subject. He argued for a four-factor theory, with a general factor (Spearman’s *g*), a number of group factors, specific factors (Spearman’s *s*), and some accidental factors.¹⁴²

His approach was sufficiently general to embrace all rival formulations. In Spearman’s terms, it was monarchic in recognising the domination of *g*, oligarchic in identifying group factors, and anarchic in insisting on *s*-factors in each test. Yet his compromise was a cunning one, sacrificing inessentials in order to protect the notion of ‘innate general cognitive ability’. Whereas rival theorists had used the evidence for group factors to question the existence of *g*, Burt used it to reinforce and improve the monarchic model.¹⁴³ He continued to argue for a hierarchical

¹³⁴ *Ibid.*, p. 303. ¹³⁵ *Ibid.*, p. 306. ¹³⁶ *Ibid.*, pp. 316–17. ¹³⁷ *Ibid.*, p. 307.

¹³⁸ *Ibid.*, pp. 303–20. ¹³⁹ T. L. Kelley, *Crossroads of the Mind of Man* (1928).

¹⁴⁰ L. L. Thurstone, *Primary Mental Abilities* (1938). Cf. William Stephenson, ‘Tetrad differences for Verbal Sub-Tests’, *Journal of Educational Psychology* Vol. 22 (1931), pp. 255–67; W. P. Alexander, ‘Intelligence Concrete and Abstract’, *British Journal of Psychology Monograph Supplement* Vol. 19 (1935); E. Koussy, ‘The Visual Perception of Space’, *ibid.*, 20 (1935).

¹⁴¹ J. P. Guilford, ‘Three Faces of Intellect’, *American Psychologist* Vol. 14 (1959), pp. 469–79.

¹⁴² Burt, *Factors of the Mind*, p. 103. ¹⁴³ Gould, *The Mismeasure of Man*, p. 287–8.

model of the mind, preserving the pre-eminent role of *g* and enumerating further levels subordinate to *g*: 'there is first a comprehensive general factor, covering all cognitive activities; next a comparatively small number of broad group factors, covering different abilities classified according to their form or content ... The whole series appears to be arranged on successive levels, the factors on the lowest level being the most specific and the most numerous of all.'¹⁴⁴ He modified Spearman's suggestion that *g* was innate and *s* a function of training by promoting the influence of the environment and education to the group factors as well. He thus managed to retain the distinction between an inherited and ineluctable general ability and a set of more specialised abilities which were amenable to environmental manipulation.

Burt repeatedly emphasised the practical value of the identification of 'innate general cognitive ability'. He insisted that, although the abstract foundations of factor analysis were 'still the subject of some controversy, its concrete applications, particularly in the sphere of education and vocational guidance, have proved more stimulating and more fruitful than any other line of approach'.¹⁴⁵ The origin of the technique lay in the need to determine the key characteristics of different individuals.¹⁴⁶ Since educational psychologists were concerned with the long-term future of the child, they needed to be able to predict his intellectual progress.¹⁴⁷

Burt was willing to rest his reputation as a theoretical psychologist on *The Factors of the Mind* (1940). He hoped that it would resolve a number of acrimonious debates in the psychometric community, that it would justify the use of psychological tests in educational and vocational selection, and that it would improve the status of psychology within the wider scientific community. 'I have just finished off a rather large book embodying many years of work', he wrote to his sister in May 1940, confessing that he thought it might 'prove to be a more lasting contribution to psychology than anything else I have written'.¹⁴⁸ He hoped that it might 'save the statistical situation over here' by demonstrating that 'the statistics required are very simple and really rather logical than mathematical'.¹⁴⁹ He wanted to advertise the rigour and sophistication of British psychology to American critics who found it amateur and ill argued. By reconciling the opposed factions within British psychology, he hoped to demonstrate that factor analysis was not just 'a special branch of psychological research, but a logical technique available for use in every complex science'.¹⁵⁰ Psychologists, who were repeatedly criticised for being 'hopelessly slipshod in their experimental and statistical proofs',¹⁵¹ would provide the 'simpler sciences like physics and chemistry'¹⁵² with one of their most productive techniques.

¹⁴⁴ Burt, 'The Structure of the Mind', *Brit. J. Educ. Psych.* Vol. 19 (1949), p. 199.

¹⁴⁵ Burt, *Factors of the Mind*, p. v.

¹⁴⁶ *Ibid.*, p. 11.

¹⁴⁷ *Ibid.*, p. 57.

¹⁴⁸ CBP, D 191/14, Burt to his sister, Marion Burt, 27 May 1940, p. 3.

¹⁴⁹ *Ibid.*, pp. 3-4.

¹⁵⁰ Burt, *Factors of the Mind*, p. xii.

¹⁵¹ CBP, D 191/14, p. 2.

¹⁵² Burt, *Factors of the Mind*, p. 4.

The book's luke-warm reception was one of the major disappointments of Burt's life. The fact that it was published in 1940 inevitably limited its audience; but even those who read it failed to be overwhelmed with much enthusiasm. Thomson wrote a highly critical review, refusing to concede that his position was but a specific example of Burt's overall analysis.¹⁵³ The debate over *g* continued, and scepticism increased rather than diminished among American psychologists. Instead of returning to factor analysis, younger psychologists were increasingly critical of the Galtonian tradition.¹⁵⁴ Disappointed by the reactions of his fellow psychologists, and frustrated in his attempt to reconstruct statistical psychology, Burt became increasingly critical of the profession which he had done so much to create.

The moral message of Burt's psychology

Like many members of his generation, Burt wanted to create a 'science of morals', capable at once of explaining and reforming men's moral lives. Sceptical of religious teaching, critical of received authority, and enamoured of scientific method, he hoped to reconstruct morals on rational foundations. He urged that 'the doctrine of original naughtiness and sin' should be 'replaced or re-interpreted by a biological explanation of the origin, nature, and function of human instincts'.¹⁵⁵ His psychology transformed immorality into maladjustment and replaced retribution with treatment. More generally, he urged that the passions should be subordinated to rational control: emotional life needed to be rationalised in order to preserve psychological health. Despite this, his work had a marked moral message. Presented in scientific terms, it was infused with his own ethical values.

Burt's values were rooted in a combination of secularised evangelicalism and social darwinism. He praised self-restraint, self-help and self-reliance and deprecated self-gratification, self-indulgence and dependence. He tended to regard life as an obstacle race, and hoped that the able and diligent would be rewarded with social success: for him competition was a guarantee of national efficiency as well as individual justice. By destroying artificial privileges and uprooting vested interests competition could unleash energy and ensure national success. To this moral vision, he added a faith in the authority of science and the efficacy of measurement.

Yet his psychology tempered both evangelicalism and Darwinism. The evangelicals had argued that success or failure reflected individual moral character. The poor owed their position to laziness and improvidence and the rich – or at least the new rich – derived their success from hard work and self restraint. Social darwinists had celebrated social competition as an analogue of biological competition, evincing little sympathy for the weak and incompetent. In emphasising the role of inheritance in fixing individual abilities, Burt absolved

¹⁵³ For a summary of his criticisms, see Thomson, *Some Recent Work in Factorial Analysis and a Retrospect* (1946), esp. p. 1.

¹⁵⁴ See below, pp. 284–93.

¹⁵⁵ Burt, 'Psychology and the Emotions', *School Hygiene* Vol. 7 (May 1916), p. 69.

individuals from responsibility for their life chances. Since abilities were distributed in a biological lottery, the dull could hardly be blamed for their dullness. Burt's psychology adapted social darwinism for the citizens of the welfare state.

Burt was critical of materialist explanations of moral problems. Behavioural problems, he argued, were at root psychological problems: 'conduct and misconduct are always, in the last analysis, the outcome of mental life'.¹⁵⁶ He conceded that poor social conditions might foster deviant social conduct; but he insisted that not all the poor were immoral, nor all the immoral poor.¹⁵⁷ Mental conditions were far more potent than economic. In analysing the family he argued that 'The real difficulty resides, not so much in the external and obvious defects of the home – poverty, unemployment, neglect, weak discipline – as in the inner, complicated tangle of habits, attitudes, and reactions that have grown up in the minds of the more active inmates.'¹⁵⁸

He insisted that the stable family was the ideal environment for normal personal development. An affectionate marriage, a regular pattern of work and leisure, a sustained interest in children's well-being, calm and consistent discipline – all these made for mental health and personal happiness.¹⁵⁹ Strained family relations and gaps and stop-gaps in the family cycle rapidly resulted in nervous disorder or mental breakdown,¹⁶⁰ robbing the child of respect for his parents and hence of respect for himself, his fellows, and for the whole basis of morality.¹⁶¹ Defective discipline, whether too strict, too lenient, or nonexistent, led to mental anguish.¹⁶² Most disastrous of all was 'the union of license and severity within the same home, perhaps in the person of the same capricious parent'.¹⁶³ Burt laid particular emphasis on the mother's role in sustaining family relations and ensuring children's well being:

Wherever the child's mother is lacking in intelligence, in temperamental stability, or in general force of character, where she is indifferent to the mental welfare of her family, or herself overburdened by domestic worries or by frailties of heredity and health, there the child's whole mental and moral development suffers together.¹⁶⁴

He combined a commitment to the importance of the family with an understanding of its fragility.¹⁶⁵ If its successful functioning was the source of mental health, then its frequent breakdown was the origin of common pathology. 'Nearly every tragedy of crime', he argued, 'is in its origin a drama of domestic life'.¹⁶⁶ Convinced that 'we are too timid of intruding on the privacies of another man's home',¹⁶⁷ he argued that the state ought to supplement the family, providing

¹⁵⁶ Burt, *Young Delinquent*, p. 608 and cf. p. 260; *Subnormal Mind*, p. 4.

¹⁵⁷ Burt, *Young Delinquent*, pp. 92–3.

¹⁵⁸ *Ibid.*, p. 124; *Subnormal Mind*, p. 16.

¹⁵⁹ For a rather different interpretation of this theme, see Nikolas Rose, *The Psychological Complex*, pp. 176–96.

¹⁶⁰ *Subnormal Mind*, p. 126.

¹⁶¹ *Young Delinquent* p. 99.

¹⁶² *Ibid.*, p. 95.

¹⁶³ *Ibid.*, p. 98; *Subnormal Mind*, p. 170.

¹⁶⁴ *Backward Child*, p. 133.

¹⁶⁵ See Christopher Lasch, *Haven in a Heartless World. The Family Besieged* (1977), p. 120.

¹⁶⁶ *Young Delinquent*, p. 124.

¹⁶⁷ *Ibid.*, p. 124.

services where it failed to provide them and repairing domestic relations where they threatened to weaken. He hoped that the helping professions would lift the economic and emotional burden of childrearing and that psychologists would ease the psychological difficulties of care. He argued that removing a child from his home should always be a last resort – it was better to improve the child's home than to take him from it – but recognised that in certain desperate cases children should be boarded out.¹⁶⁸

He insisted that schools played an invaluable part in supplementing the disciplinary shortcomings of unsuccessful homes.

The material equipment and moral discipline of the average elementary school are ... far more enlightened and far less inadequate than those of the average working man's household. Life is more wholesome; time is mapped out and occupied; supervision, both by teacher and by fellow pupil, is constant and effective.¹⁶⁹

Schools could bring moral reform to even the most reprobate slum dwellers and provide emotional security for even the most neglected children. He insisted that the gradual reduction in the size of classes, the fuller study of each child as an individual, and the infusion of routine work with free activity, had done much in the past, and would do more in the future, to diminish crime and improve mental health.¹⁷⁰ In his psychology the role of the school was transformed as well as extended: instead of simply teaching the elements of knowledge it also dealt with the mental and emotional training of the child. By providing an education informed by psychological principles it turned out healthy citizens and prevented subsequent mental derangement and character deformity.¹⁷¹ He also suggested that schools might be supplemented by clubs: 'Many a young delinquent has been reclaimed by enrolling him as a member of an athletic society, of a boys' brigade, or of a boy scouts' patrol.'¹⁷²

Burt was in the forefront of criminological reform, arguing that delinquents should be treated as unique individuals, motivated by a mixture of personal failure and social pressures, rather than as representatives of a biological type.¹⁷³ As well as emphasising the social origins of crime, he argued that a mixture of enlightened investigations and careful character-training could turn a troubled teenager into a good citizen.¹⁷⁴ Contemporary penal policy he regarded as unduly primitive, intent on punishing symptoms rather than rooting out causes:

To whip a boy, to fine him, to shut him up in a penal institution, because he has infringed the law, is like sending a patient, on the first appearance of a fever, out under the open sky to cool his skin and save others from the infection. It is as blind and unintelligent as the primitive treatment of malaria in the days when the parasite was unlooked for and the mosquito ignored.

¹⁶⁸ *Ibid.*, p. 117.

¹⁶⁹ *Ibid.*, p. 185.

¹⁷⁰ *Ibid.*, p. 202.

¹⁷¹ Burt, 'Psychology and the Emotions', p. 67. See pp. 13–14 for details of his scheme.

¹⁷² *Young Delinquent*, p. 199. See also p. 524.

¹⁷³ Cf. Bailey, *Delinquency and Citizenship*, pp. 16–17.

¹⁷⁴ *Ibid.*, pp. 62–3.

He argued that young offenders should be treated rather than punished. Penal policy should be based on the evidence of science rather than the prejudices of officials; courts should concentrate on the psychology of the offender rather than the nature of the offence.¹⁷⁵ He argued that 'with moral disorders as with physical, we must find and fight not symptoms but causes': only when causes had been discovered could cures be devised.¹⁷⁶ Treatment should be adapted not to the nature of the offence, but to the nature of the factors provoking it. 'Already', he suggested, 'the outworn maxim of traditional justice, that the punishment should fit the crime, though set to memorable music in an optimistic key, is now giving place to the sounder principle that the treatment must fit the delinquent.'¹⁷⁷ An enlightened jurisprudence, based on psychological science, was to replace a barbaric jurisprudence, based on conventional prejudice. He was optimistic about the possibilities of informed state intervention. 'By scientific research, by organised social effort, by early detection and treatment, the burden of sickness and poverty has been progressively lightened', he argued. 'What has thus been done for obstacles to health and happiness must now be attempted for the wider and profounder evils that beset the growing soul.'¹⁷⁸

He felt that scientific vocational guidance might increase productivity and reduce unrest.¹⁷⁹ Vocational maladjustment often led to social maladjustment. 'The bright aspiring lad with a job too tediously mechanical for his smart wits and high ambitions, the slow and bungling dullard with a job too difficult for his weak mind – both are equally ready to try their hands at unlawful but more stimulating escapades.'¹⁸⁰ Likewise, educational guidance might improve educational efficiency: by adapting the curriculum to the child rather than the child to the curriculum, it reduced unrest, aroused interest and promoted learning.

In general, he was an enthusiastic supporter of state intervention. Unimpressed by the *laissez-faire* model of the 'nightwatchman state', and contemptuous of the claims of 'common sense', he argued that the state should be empowered to intervene not only in the economy but also in the private lives of its citizens.¹⁸¹ Anarchic individualism ought to be tamed not only in the economy but also in child rearing and education.¹⁸² The compulsory medical inspection and treatment of schoolchildren, he argued, had made an inestimable contribution to the common good. The compulsory psychological inspection and treatment of families might multiply these obvious advantages. Burt prophesied the end of ideology long before the sociologists of the 1950s.¹⁸³ He argued that collective grievances were rooted in

¹⁷⁵ Burt, *Young Delinquent*, p. 611.

¹⁷⁶ *Ibid.*, p. 5; Bailey, *Delinquency and Citizenship*, p. 108.

¹⁷⁷ Burt, *The Young Delinquent*, p. 611.

¹⁷⁸ *Ibid.*, p. 22.

¹⁷⁹ *Ibid.*, p. 202.

¹⁸⁰ *Subnormal Mind*, p. 172; *Young Delinquent*, pp. 179–81.

¹⁸¹ On this theme in general, see Lasch, *Haven in a Heartless World*, pp. xiv–xv and *passim*.

¹⁸² See Lasch, *Haven in a Heartless World*, p. 13.

¹⁸³ Cf. Raymond Aron, *The Opium of the Intellectuals* (1954, 1962 edn), pp. 305–24 and Daniel Bell, *The End of Ideology. On the Exhaustion of Political Ideas in the Fifties* (Glencoe, Illinois, 1960).

personal problems. They resulted from poor vocational guidance rather than structural antagonisms: scientific management would lead to the withering away of industrial conflict and socialist ideology. Burt's psychology replaced politics with therapy.¹⁸⁴

He insisted that civilised society was founded on individual repression. Fond of contrasting the savagery of the instincts with the restraint of civilised society, he insisted that men are natural savages restrained only by convention.

No change, so far as we can tell, has occurred in the innate constitution of man since first he emerged from barbarism. The instincts which we inherit to-day are identical with those that served our forefathers, half a million years ago, on the Asiatic steppes or by the European swamps. The same situations rouse us; the same movements relieve us. We are tugged, every one of us, savage and civilised, sinner and saint, by the same simple strings.¹⁸⁵

Strong instincts needed to be regulated by firm habits and fixed sentiments.¹⁸⁶ 'Habits, mechanical and irresistible, must be implanted, lessening the constant need for voluntary attention and strenuous self-control, and leading their possessor automatically to do the right thing in the right way whenever the right moment arrives.'¹⁸⁷ The training of children should begin in the nursery and continue, in graded moral exercises, throughout formal education.¹⁸⁸ But he insisted that, in the long run, restraint should be voluntary rather than imposed: social control needed to be converted into self-control.¹⁸⁹ The aim of moral education was to free the child from the need for external control. 'The ultimate aim', he pointed out, 'must be to produce a self-governing creature, not a creature who needs always to be governed by others'.¹⁹⁰

Yet restraint could be overdone: men could fall sick from too much civilisation. Convinced that Victorian society had been over-restrained, Burt added his support to the liberalisation of English culture, attacking sexual repression, advocating birth control and permissive child rearing and supporting the companionate marriage. Unlike his libertarian successors, he realised that personal liberation needed to be tempered with psychological maturity. The healthy man in Burt's psychology was a virtuoso of the psyche, perpetually balancing instinct with restraint, never granting his passions too much nor denying them more than they could stand. Since children could hardly be expected to be such virtuosos,¹⁹¹ he suggested that psychologists were responsible for ensuring their mental health. Through the adroit manipulation of the environment they could redirect animal energies into constructive activities:

By providing occupations and duties, more congenial in nature and more exacting in difficulty, by granting freer outlets for emotional tendencies, and a fuller play to the

¹⁸⁴ Lasch, *Haven in a Heartless World*, p. 19. See also Paul Halmos, *The Faith of the Counsellors* (1965), esp. pp. 7, 13, 16, 17. ¹⁸⁵ *Young Delinquent*, p. 421. ¹⁸⁶ *Ibid.*, p. 524.

¹⁸⁷ *Ibid.*, p. 524. ¹⁸⁸ *Ibid.*, p. 533-5. ¹⁸⁹ *Mental and Scholastic Tests*, p. 236.

¹⁹⁰ *Young Delinquent*, p. 522. ¹⁹¹ *Ibid.*, p. 512.

Cyril Burt and the psychology of individual differences

spirit of activity, many instinctive propensities that would otherwise be driven to mutiny and provide motives for crime, may, when emancipated from repression and adroitly redirected, yield energy for legitimate purposes and enthusiasm for nobler ideals and strenuous work.¹⁹²

He insisted that there were no sharp lines of cleavage between the normal and the abnormal. In the late nineteenth century, many psychologists had emphasised the barriers which separated the abnormal from the rest of the population. Lombroso even suggested that criminals were an alien stock, degenerate, barbarous and predestined to crime.¹⁹³ The theory of a normal distribution of characteristics within a population dispelled these crude arguments, demonstrating that all differences were differences of degree: a graded continuity linked the bright and the dull, the good and the bad. In his discussion of juvenile delinquents, Burt summed up this argument eloquently:

No deep gulf exists to separate the sinner from the saint, the white sheep from the black. It is all a problem of degree, of a brighter or a darker grey. This graded continuity, the normal melting into the abnormal by almost imperceptible shades, is entirely in accord with what we know of most other forms of mental deviation. The insane, the neurotic, the mentally deficient are, none of them, to be thought of as types apart, anomalous specimens separated from the ordinary man by a profound and definite gap; the extreme cases merge into the borderline, as the borderline merge into the average, with no sudden break or transition.¹⁹⁴

Unlike Lombroso, Burt regarded delinquency 'as nothing but an outstanding sample – dangerous perhaps and extreme, but none the less typical – of common childish naughtiness'.¹⁹⁵ ('Few of us, however capable, however righteous we now take ourselves to be', he confessed, 'have never perpetrated a criminal act, never experienced a criminal temptation.'¹⁹⁶) The line of demarcation between the delinquent and the normal was essentially arbitrary, a matter of social convenience rather than psychological disposition.¹⁹⁷ These arguments discredited the case for separating the handicapped and the maladjusted from the rest of society and strengthened the case for treating their problems as part of the wider problem of child development.¹⁹⁸

Burt and his profession

Burt occupied a central position in his profession, enjoying the support of his seniors, the friendship of his contemporaries, and the admiration of his juniors. He built up a network of allies in a number of distinct areas – academia, the London

¹⁹² *Mental and Scholastic Tests*, p. 235.

¹⁹³ See Leon Radzinowicz and Roger Hood, *A History of English Criminal Law and its Administration from 1750. Volume 5. The Emergence of Penal Policy* (1986), pp. 3–27. See also Havelock Ellis, *The Criminal* (1890).

¹⁹⁵ *Young Delinquent*, p. vii.

¹⁹⁷ *Ibid.*, p. 15; *Backward Child*, pp. 13–14.

¹⁹⁴ *Young Delinquent*, p. 14. See also *Subnormal Mind*, pp. 3–4, 36.

¹⁹⁶ *Ibid.*, p. 355.

¹⁹⁸ Bailey, *Delinquency and Citizenship*, p. 63.

County Council, the Board of Education, teacher training colleges and schools, and the media. He used his position to further the professionalisation of his discipline as well as to advance his own reputation. Anxious about psychology's scientific reputation and disappointed with the average quality of its recruits, he set about reforming its methods, improving its teaching and recruitment, and selling it to the British establishment.

He drew his professional patrons from three groups: academics, teacher trainers, and local government officials – in other words, from the entire range of 'pioneers' of his profession. Spearman recommended him highly for the post at the London County Council, arguing that 'he is considered by most experts to be the most brilliant and promising of the younger generation of psychologists in the British Isles. In this opinion I concur. As regards his special qualifications for the post as detailed in the advertisement of the London County Council, it is precisely in the examination of children that he has made his professional reputation.' Sherrington echoed these sentiments and commented on the excellent personal relationships he had established with both teachers and children.¹⁹⁹ Robert Blair soon became an enthusiastic supporter of his work, suggesting, in his preface to *The Distribution and Relations of Educational Abilities* (1917), that 'there should be no teacher in the London service for whom the memoranda do not throw a flood of new light on old problems'²⁰⁰ and praising Burt for initiating 'a group of investigations which, if continued extensively and intensively, should lift the practice of teaching from empiricism and lay it on a broad scientific foundation'.²⁰¹ Ballard's popular textbooks on mental testing repeatedly praised Burt as the foremost pioneer of testing in Britain.²⁰² After his retirement he wrote to thank Burt for his help and inspiration:

I see by the *British Journal* that you pursue your professional work with unabated vigour. Well do I remember the account that appeared nearly 40 years ago of your researches at Oxford. I owe more to those articles of yours than you know. They showed me how interesting, valuable and necessary educational research was.²⁰³

Nunn was determined that Burt should fill the new professorship of educational psychology at the London Day Training College, arguing that only a man of his stature would be able to attract students to an unfamiliar discipline.²⁰⁴ His popular writings on educational theory always spoke highly of Burt's work, presenting him as a model research scientist and a prophet of progressive education.²⁰⁵

¹⁹⁹ GLCRO, LCC EGPS-C, minutes for meeting on 22 November 1912, enclosure containing *Curricula Vitae* and references for the six shortlisted candidates.

²⁰⁰ Burt, *LCC: Distribution and Relations of Educational Abilities*, p. vii.

²⁰¹ *Ibid.*, p. viii.

²⁰² See, for example, *Mental Tests*, pp. 11, 27.

²⁰³ CBP, D 191/14, Ballard to Burt, 26 December 1942.

²⁰⁴ GLCRO, EO/TRA/2/27, Percy Nunn, London Day Training College, Memorandum on the University Teachers of Education, pp. 3–4.

²⁰⁵ See, for example, Nunn, *Education: Its Data and First Principles* (2nd edn, 1930), p. 64.

Burt belonged to a tightly-knit and powerful generation of psychologists. Even within the 'cosy' world of English academic science,²⁰⁶ they formed a remarkably close group, recruited by common mentors and united by intense friendships and similar experiences. Members of this group spoke highly of Burt's scholarship and generosity; their prefaces are littered with thanks for his help with proofs. In *The Normal Child and Some of His Abnormalities*, for example, Valentine recommended Burt's work on juvenile delinquency as 'still unequaled for its combination of strict critical examination of extensive evidence together with a great human interest in, and understanding of, individuals'.²⁰⁷ Both personal affection and professional self-interest ensured that all the leading members of this generation spoke highly of Burt's work and integrity.

Burt exercised an enormous influence over subsequent generations of psychologists, supervising an astonishing number of research degrees – fourteen MAs and ten PhDs while at the London Day Training College and fifty-four MAs and MScs and eighty-seven PhDs while at University College, London²⁰⁸ – and impressing most of his pupils with the lucidity of his mind and the clarity of his vision. Brian Stanley recalled that 'he must almost have hypnotised us, for I can remember no other occasion when I have distrusted not only my own watch but an outside clock, because I could not believe that he had really lectured for fifty minutes'.²⁰⁹ John Watson was awestruck by Burt and found his imagination 'fired' by *The Young Delinquent*, which he and his friends discussed 'far beyond the confines of the lecture rooms'.²¹⁰ Most of his pupils looked upon Burt's lectures as the high point of their academic week, describing them as superb pieces of showmanship, delivered in a suave and witty style. 'Sir Cyril Burt was so brilliant a teacher that frequently the lecture theatre was crowded out long before he was due to start.' Dr Ralph Hetherington has described the effect he could have on an undergraduate audience:

We had a splendid hour when we fired every conceivable question at Burt and he would preface his answers by saying 'of course this is not my field and I don't know much about it', and then come out with a complete and detailed erudite answer. It really was a tour-de-force of a performance which I shall treasure looking back on it all my life, to see a first-class mind getting to grips with a wide range of questions, neurological, sociological, academic, psychological, introspective, experimental. The whole lot he seemed to answer as if he were any way truly an expert in the field ... We were very much under the spell of Burt. I think he was very much the guru of the department, and he was a very famous man in those days. I think he had just got his knighthood and so he had all the aura of the great man.²¹¹

²⁰⁶ James D. Watson, *The Double Helix* (New York, 1980 edn), pp. 15–16.

²⁰⁷ Valentine, *The Normal Child and Some of his Abnormalities* (Harmondsworth, 1968 edn), p. 124.

²⁰⁸ For a complete list of theses presented by Burt's students, see Hearnshaw, *Burt*, pp. 339–47.

²⁰⁹ LIEA, 1952, Jubilee Lectures, Reminiscences 1930–40, Brian Stanley to Miss Gordon.

²¹⁰ LIEA, 1952, Jubilee Lectures, Reminiscences 1930–40, John P. Watson to Miss Gordon, 16 October 1952.

²¹¹ BPSA, Tapes and Transcripts, Filing Cabinet 1, drawer 2, R. Hetherington interviewed by Kenna.

R. B. Cattell even gave up chemistry for psychology after listening to one of Burt's lectures, inspired with 'a feeling that only here was there a radical solution to our social problems'.²¹²

Students were not the only people to be captivated. Burt carried on a long correspondence with Leslie D. Crowther, a prisoner at Nottingham and then Wandsworth, who looked upon him as both a friend and an inspiration. 'I am going to do justice to myself in the future', Crowther promised Burt, 'and you are giving me faith to do good by your writing, for I feel that I am not looked upon as the lowest of the low by everybody'.²¹³ He even pestered his hero for a photograph of him on the grounds that 'I could look at it and remember that I have a friend who will give me a kind word and good advice'. 'My appreciation for a photograph would be inexpressible', he continued, 'but I would always treasure it, and it would remain my dearest property and remind me of someone who gave me kindness when it was most needed'.²¹⁴ Indeed, it is arguable that Burt was at his best with patients who were dependent upon him and pupils who presented no challenge to him; as soon as his more able pupils began to produce challenging results he tended to turn against them, revealing that he was capable of extraordinary spite as well as painstaking care.²¹⁵

His talent for self-publicity extended his influence far beyond the narrow confines of universities and prisons. He spoke on radio and television, wrote in newspapers and magazines, and gave prestigious public lectures, turning himself into the best-known psychologist in the country.²¹⁶ In 1930 he gave a long series of radio talks on 'The Study of the Mind' and 'The Mind of the Child'.²¹⁷ Thereafter he became a familiar broadcaster, frequently appearing on 'The Brains Trust', and commanding an easy and popular style. In 1950 he gave his last series of radio lectures, forced to retire because of his increasing deafness.²¹⁸ He received numerous requests to explain some of the key conclusions of psychology to the newspaper-reading public. Louise Morgan, a journalist for the *News Chronicle*, reminded him that she visited University College before the war 'with a plan to get your wisdom scattered among the lesser breeds' and confessed that 'I believe most profoundly that you can educate the still Old Testament public opinion of this country. I think after Shaw you have done more for Britain than any man living'.²¹⁹ Burt was a master of persuasion, exploiting his audience's prejudices to hammer his arguments home. In an attempt to persuade the Marxist readership of the *Daily*

²¹² *Ibid.*, Cattell interviewed by F. W. Warburton, summer 1961, p. 1. See also John Dover Wilson, *Milestones on the Dover Road* (1969), p. 108. For other reminiscences of Burt, see CBP, D 191/2, Cohen to Hearnshaw, 31 January 1974; LIEA, Gladys Dwyer to Gordon, 2 April 1952, p. 3.

²¹³ CBP, Crowther to Burt, 15 March 1956, p. 3.

²¹⁴ *Ibid.*, 27 January 1956, p. 3.

²¹⁵ Hearnshaw, *Burt*, pp. 147–8, 284–91.

²¹⁶ Cf. Bailey, *Delinquency and Citizenship*, p. 14 on his talent for popularising one aspect of his work, on young delinquents.

²¹⁷ These talks were reprinted in *The Listener* for 1930. See, Hearnshaw, *Burt*, p. 324 for a list.

²¹⁸ Again, these talks were reprinted in *The Listener* for 1950. See Hearnshaw, *Burt*, p. 330.

²¹⁹ CBP, D 191/14, Morgan to Burt, 27 July 1946.

Worker that intellectual inequalities were innate he argued that 'you and I will agree that, even if we had the opportunity and the desire, we could not successfully plan and organise for a nation on the scale which Stalin has achieved: we just haven't the brains.'²²⁰

Burt was almost as revered abroad as he was at home. Walter Lippmann, for example, was no fan of psychometry, dismissing it as a pseudo-science doomed to pass into 'that limbo where phrenology and palmistry and characterology and the other Babu sciences are to be found'.²²¹ But he went out of his way to exempt Burt from his strictures. He regarded his studies as models of their kind: elegantly written, lucidly argued and, above all, suffused with a kind of common sense and personal sympathy which had been utterly lacking in American work.²²² He praised his well-developed understanding of the influence of poor environment on intellectual performance²²³ and singled out his 'profoundly illuminating discussion of mental defect'.²²⁴ If Americans wanted a balanced assessment of the present value and future promise of the tests, he argued, then they could do no better than turn to Burt:

We need a revaluation which will give us some sort of trustworthy notion of how to interpret the tests. I am inclined to believe that such a revaluation has been made by one of the great authorities on the subject, and that if his report were studied and taken to heart as a model of method and temper, mental testing in America would free itself from the danger of foolish boasting and obscurantist objection.²²⁵

Burt thus built up an extensive network of personal allies, stretching over several generations and reaching into a number of distinct professions. He started to teach in 1908 and continued to supervise research students until well into the 1960s. He pursued two distinct careers, one as an academic and one as an applied educational psychologist. His pupils found work in highly diverse areas, becoming academics, teachers, educational administrators, social workers, child guidance officers, and applied educational psychologists. He also belonged to a plethora of voluntary organisations and pressure groups, notably the British Association for the Advancement of Science, the Child Study Society, the British Psychological Society, the Eugenics Education Society, and the National Association for the Care and Control of the Feeble-Minded. The rudimentary nature of the professional social services and the role of committed amateurs in the treatment of the backward and delinquent ensured that such organisations, however ramshackle, provided invaluable points of personal and professional contact.

²²⁰ Burt, 'Intelligence and the Birthrate', *Daily Worker*, 30 January 1947. Burt's article generated an extensive correspondence. See CBP, D 191/22, 'Intelligence and the Birthrate'.

²²¹ Walter Lippmann, 'A Future for the Tests', *The New Republic*, 29 November 1922, p. 10.

²²² Lippmann, 'Mr Burt and the Intelligence Tests', *The New Republic*, 23 May 1923, p. 307.

²²³ Lippmann, 'Rich and Poor, Girls and Boys', *The New Republic*, 29 May 1923, pp. 295-6.

²²⁴ Lippmann, 'A Judgment of the Tests', *The New Republic*, 16 May 1923, p. 322.

²²⁵ Lippmann, 'Mr Burt and the Intelligence Tests', *The New Republic*, 23 May 1923, p. 307; See also, 'A Judgment of the Tests', *The New Republic*, 16 May 1923, p. 323.

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His power base in the educational world was particularly broad. His post with the London County Council put him in close contact with influential local government officials, notably Sir Robert Blair, C. W. Kimmins, and P. B. Ballard. As professor of educational psychology at the London Day Training College, he was at the heart of the world of teacher training; his numerous pupils carried his psychological ideas to schools scattered throughout the British Empire. His role as the key psychological adviser to both the Hadow and Spens Committees of the Board of Education also put him in contact with central government officials, educational experts, and local teachers.

He deliberately cultivated support from several distinct constituencies. To the educationalist he was a model applied scientist, promising to help the teacher 'to establish the claim that his profession is a learned one' and holding out a solution to the pressing problem of selecting children for further education: the IQ test. To the politician he was a model civil servant and expert, translating scientific concepts into layman's language, producing perfect memoranda, and speaking eloquently on committees.²²⁶ To the scientist he was a master of scientific method bent on developing a science of individual differences. He presented intelligence tests as scientific measuring instruments, and he made himself the master of the language of pure science: mathematics. To the general public he was a model populariser of science, churning out skilful and influential broadcasts and newspaper articles. His support from each of these constituencies was mutually reinforcing. He was knighted for his contributions to education; his knighthood emphasised his pre-eminence in the psychological profession as the first psychologist to receive such a public reward. He was given his professorship at University College because of his contribution to the psychology of individual differences and statistical method; his professorship increased his influence on the Board of Education. His success as a public broadcaster turned him into psychology's public spokesman; his work increasingly came to represent not simply his personal convictions but also the accepted public wisdom of the profession.

Despite his personal eminence, Burt was highly critical of the quality of his profession, sensitive to snubs from the likes of physicians and research scientists. During the First World War he found that 'the big shots' in the medical profession did not 'like anything "psycho"'.²²⁷ When he was trying to establish a number of child guidance clinics in the 1920s he ran up against the formidable opposition of Sir George Newman: 'we went to see the great Sir George Newman at the Ministry of Health about it the other day', he wrote to his sister. 'He is terrifically anxious that the rights of doctors should be safeguarded. He wants every child to be seen by the school doctor before being handed on to the Clinic.'²²⁸ He was turned down for a Fellowship of the Royal Society on the grounds, he was later told, that the popular style of *The Young Delinquent* was unworthy of a scientific treatise. He

²²⁶ See below, pp. 220–52.

²²⁷ CBP, D 191/6, Burt to Marion Burt, 16 July 1917.

²²⁸ *Ibid.*, 3 April 1927.

realised that 'mathematically minded scientists like Fisher, Haldane, not to mention the physicists, think that psychologists are hopelessly slipshod in their experimental and statistical proofs'.²²⁹ Although he sympathised with his fellow psychologists' worries about their professional status, he often despaired about their overall quality. 'Those already in the work are very anxious to be recognised as having an equal status with doctors', he reflected. But 'until more intelligent people take up psychology, and until the psychological work becomes more scientific and technical, I do not see how they can hope to achieve such prestige'.²³⁰ Without more able recruits, psychology was unable to turn itself into a respected profession; and without turning itself into a respected profession it was unable to attract more able recruits.

He was often scathing about the scientific standards of his fellow psychologists, worrying that British psychology was falling behind in the international scientific race, denied recognition by the establishment and starved of able recruits. 'At the moment British psychology has a reputation for having sunk back into a pre-scientific age', he wrote to his sister. 'Myers, Rivers and others are no longer publishing experimental work, which kept up its high standard. Hence American visitors have continually asked why I don't come to a more congenial atmosphere'. He suspected that most British psychology lacked statistical rigour:

Over here the statistical approach appeals to very few people indeed. Valentine, for example, who is sympathetic, has written this morning that he doubts whether he will be able to take any more statistical articles. Those who subscribe to his journal and make it a commercial concern do not in the least care for statistics apart from four or five exceptional readers.

Americans and Canadians consequently looked down upon it as slipshod and second-rate and lamented the decline in Britain's scientific standards.²³¹ He also found that his research students preferred 'quick sensational results' to thorough investigations. Realising that 'statistical articles will not get published, whereas unverified conclusions may be', they tended to 'scrap the drudgery of multiplying their experiments and analysing their data by prolonged computations'.²³²

He also found that both politicians and the general public were either ignorant or dismissive of the work of psychologists. 'The bother is that it is so difficult to persuade politicians and lay people generally that psychology is an independent science', he confessed. 'They seem to think it must be either a branch of teaching or a branch of medicine'.²³³ The government was often unenthusiastic about their services. Although they were keen to get involved in the war effort even before the outbreak of the Second World War, the government initially ignored them.²³⁴ Burt

²²⁹ CBP, D 191/14, Burt to Marion Burt, 27 May 1940, p. 2.

²³⁰ CBP, D 191/6, Burt to Marion Burt, 13 May 1943.

²³¹ CBP, D 191/14, Burt to Marion Burt, 27 May 1940, p. 3.

²³² *Ibid.*, p. 1.

²³³ CBP, D 191/6 (a), Burt to Marion Burt, 29 August 1942.

²³⁴ Burt, 'Psychology and the Future', *The Listener*, 21 December, 1950 p. 786.

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was also frustrated by the British public's habitual scepticism about psychology, complaining that they refused to trust a scientist who dealt with invisible diseases.²³⁵

Through a combination of personal example and institutional reform, Burt did his best to improve the quality of his profession, adding rigour to its methods and glamour to its reputation. He insisted that it was a respectable science; that it dealt with individual differences in mental ability; and that it relied on measurement, calculation, and sophisticated statistical techniques. For him it was as difficult as physics and as useful as engineering – a complex science, developed by mathematically trained experts, which held the key to human social progress. He even referred disparagingly to 'the simpler sciences like physics and chemistry', suggesting that psychology's relative backwardness resulted from the complexity of its subject matter rather than the poverty of its methods.²³⁶

²³⁵ *Ibid.*, p. 1.

²³⁶ Burt, *Factors of the Mind*, p. 4.

Susan Isaacs and the psychology of child development

Susan Isaacs was perhaps the most influential English-born child psychologist of her generation. She published important studies of children's intellectual and social development; founded an experimental school – the Malting House School in Cambridge – and set up a Department of Child Development at the London Institute of Education; acted as a tireless propagandist for the nursery school movement; and, in general, presented a difficult subject intelligently and attractively to the general public, lecturing to schoolteachers, writing a weekly problem page in *Nursery World*, and giving evidence to the Consultative Committee of the Board of Education. Above all, she did more than anyone else of her generation to introduce educational psychologists to the work of Sigmund Freud, Jean Piaget and Melanie Klein.

Her main interest lay in 'the psychology of child development'. She tried to understand children's intellectual and social development, recreating their conceptions of the world and untangling their most intimate social relations. She was one of the earliest exponents of Piaget's work in English, and initiated criticisms of his analysis of stages of cognitive development which have since become standard. Early in her career, she recognised the fundamental contribution of psychoanalytical theory to understanding human development, and she repeatedly emphasised the emotional needs and unconscious mental processes underlying even the most unremarkable behaviour. She was successively a practising psychoanalyst and a training analyst, and she played a leading role in popularising Melanie Klein's arguments.¹

The intellectual origins of Susan Isaacs' psychology of child development

Like Burt, Isaacs believed that 'psychology is a branch of biology, the science of life'.² Her education as a research student at Cambridge was highly conventional,

¹ Lydia A. H. Smith, *To Understand and To Help. The Life and Work of Susan Isaacs (1885–1948)* (1985), p. 17; *The Times*, 'Obituary', 13 October 1948, p. 6.

² Susan S. Brierley, *An Introduction to Psychology* (1921), p. 42.

introducing her to biological theory and experimental method, and her early writings were littered with references to Darwin, Galton, McDougall and A. F. Shand.³ In her first book, *An Introduction to Psychology*, she insisted that 'the biological outlook' was 'an essential basis for modern psychological study', arguing that understanding of the emotions and the development of personality 'begins when we learn to regard man, in common with other living creatures, as an expression of biological laws, and in particular when we learn to apply to him the concept of evolution'. 'The theory of evolution', she went on, 'laid the foundations of the scientific approach to the study of human nature. Any serious interpretation of psychology must be in harmony with this fundamental attitude.'⁴ Her later interest in Freud only reinforced her enthusiasm for biology. 'There is little need, at this time of day', she wrote in 1933,

to emphasise the enormous importance of biological studies for human life. The economic and social relations of man to-day rest upon biological science. Agriculture, the breeding of animals, the conquest of disease, the maintenance of health, the science of infant welfare and the hygiene of childhood itself, these and many other fundamental aspects of human society are bound up with the progress of biological science.⁵

She also shared Burt's enthusiasm for mental measurement.⁶ 'It is now pretty certain', she argued 'that nature is all-powerful in fixing the level of intelligence or general mental ability to which any one of us attains. It is also reasonably well established that throughout the years of growth this innate general ability keeps with each of us a practically constant relation with the norm of our age; and that none by taking thought can add a cubit to his stature.'⁷ She agreed that, as they grow up, children naturally master more complex and abstract intellectual problems; that mental development is governed by a single general factor; that circumstances do not have a dramatic impact on intellectual growth; and that development ceases at about the age of fourteen.⁸ Dismissing impressionistic theories of intellectual development, she insisted that 'a very large body of concrete and objective facts about children's mental activities at all ages, and in varied fields of mental life, has been brought together in recent years by the technique of mental tests': psychometry had at last provided 'objective and quantitative knowledge of the actual course of mental development'.⁹

³ *Ibid.*, pp. 4-6, 93, 110, 114, 115-17, 119, 124.

⁴ *Ibid.*, pp. 6-7.

⁵ Isaacs, *Social Development in Young Children. A Study of Beginnings* (1933), p. 451. Cf. 'Education in the Nursery', in Victoria E. M. Bennett and Susan Isaacs, *Health and Education in the Nursery* (1931), pp. 271-3. On Freud's debt to the biological sciences, see Frank J. Sulloway, *Freud, Biologist of the Mind. Beyond the Psychoanalytic Legend* (1979).

⁶ She thanked Burt for reading several draft chapters of *Intellectual Growth in Young Children* (pp. x-xi).

⁷ Isaacs, *Intellectual Growth in Young Children* (1930), p. 59. Cf. Isaacs, 'Education in the Nursery', p. 214 and *The Children We Teach. Seven to Eleven Years* (1932), pp. 25, 28, 42, 43.

⁸ *Ibid.*, p. 60.

⁹ *Ibid.*, pp. 63-4.

Convinced that 'we cannot cater properly for the brightest and the stupidest children together in one class', she advocated the extensive use of streaming by 'mental age'.¹⁰ She regarded high intelligence as an 'endearing quality'¹¹ and castigated the practice of 'keeping back' the intelligent child. 'If we try to do that either in school or home, we make him restless and mischievous, or baffled and miserable. There are only too many bright young children whose impulses of mental growth are starved or obstructed in the nursery by the idea that they must not be too "forward"'.¹²

Isaacs owed a huge debt to the nursery school movement. English nursery schools had gradually evolved from the free kindergartens for poor children established by philanthropists in London, Manchester, and other large industrial towns during the last three decades of the nineteenth century. Intended to take children from very poor homes and place them in an improving environment, these schools had from the start devoted particular attention to the physical care of their pupils, and had often, as in Sir William Mather's Free Kindergarten at Salford, provided free meals and baths.¹³ In 1908 the Board of Education's Consultative Committee lent its support to the schools, arguing that children under five should not be taught in infant schools, where they might be subjected to undue mental pressure and physical discipline, but should instead be placed in separate institutions, and allowed freedom of movement, constant change of occupation, frequent visits to the playground, and abundant opportunities for rest. Although no immediate legal or administrative action followed, the movement continued to gather pace. Rachel and Margaret Macmillan agitated for nursery schools, and founded a model school at Deptford in 1911; at the same time, medical officers, appointed by local educational authorities, repeatedly emphasised the importance of monitoring the physical welfare and general training of children under the age of five.¹⁴ Finally, the 1918 Education Act empowered local authorities to help provide nursery schools.

Susan Isaacs shared many of the assumptions of the early supporters of nursery schools, most notably their emphasis on the links between educational innovation and social reform. She echoed Margaret Macmillan's insistence that 'the educational system should grow out of the nursery school system, not out of a neglected infancy'.¹⁵ She argued that the schools had a double function, educational and medical: teachers would be able to shape children's minds and doctors to

¹⁰ Isaacs, *The Children We Teach*, pp. 28–9.

¹¹ Isaacs, *Social Development*, p. 23.

¹² Isaacs, 'Education in the Nursery', p. 216.

¹³ Board of Education. *Report of the Consultative Committee on Infant and Nursery Schools* (HMSO, 1933), pp. 33–4.

¹⁴ *Ibid.*, pp. 36–9. Cf. Board of Education. *Report of the Consultative Committee upon the School Attendance of Children Below the Age of Five* (1908). Margaret Macmillan also emphasised the importance of physical welfare. See Carolyn Steedman, *Childhood, Culture and Class in Britain. Margaret Macmillan 1860–1931* (1990), pp. 189–202.

¹⁵ Quoted in D'Arcy Cresswell, *Margaret Macmillan. A Memoir* (n.d.), p. 152.

inspect their bodies. 'Those who come from poor homes in narrow streets, those who suffer from lack of nourishment or badly chosen food, those who long to play with other children and are alone in a family', she suggested, 'will prosper greatly in a well-run nursery school even at two years of age.'¹⁶ She did, however, radically extend the arguments for a scientific monitoring of the schools, insisting that 'we cannot, of course, sharply separate the care of the body from the welfare of the mind',¹⁷ and suggesting that the psychologist should oversee both the mental and physical development of the infant.

Isaacs was a passionate supporter of progressive education, at least as it was preached by John Dewey. Worried that old-fashioned teaching destroys children's enthusiasm and cramps their intellectual development,¹⁸ she argued that children should be encouraged to educate themselves rather than compelled to learn academic subjects.¹⁹ 'The school is, in my view', she confessed,

simply a point of vantage for the child in his efforts to understand the real world, and to adapt himself to it ... Its task is to bring the world to him, in ways and at a place fixed by his needs and interests. The school, the teacher and the teaching alike are simply a clarifying medium, through which the facts of human life and the physical world are brought within the measure of the child's mind at successive stages of growth and understanding.²⁰

She regarded the Malting House School as the first English example of Deweyism in practice.²¹

But Isaacs owed her greatest intellectual debt, not to Dewey, but to two continental psychologists: Sigmund Freud and Jean Piaget. The British were quick to fall under Freud's spell, with Bloomsbury intellectuals and professional educators proving particularly susceptible.²² Susan Isaacs was among the most enthusiastic of her generation of converts. In 1921 she began a long analysis with J. C. Flugel, an orthodox if unimaginative Freudian, who had been Burt's closest friend at Oxford and became his colleague at University College. She later underwent a brief analysis with Otto Rank and then, in 1927, an extended analysis with Melanie Klein's disciple, Joan Rivière. In 1922 she qualified to analyse patients, and continued to treat both adults and children, often on a daily basis, for the rest of her professional life. In 1923 she was promoted from an associate to a full membership of the British Psycho-Analytic Society, and later became a training analyst at the Institute of Psychoanalysis.²³ 'My own personal study of young children', she felt, 'has served only to increase my deep admiration and gratitude

¹⁶ Isaacs, *The Educational Value of the Nursery School*, pp. 28–9.

¹⁷ Isaacs, *ibid.*, p. 5.

¹⁸ Isaacs, *Intellectual Growth*, p. 82; 'Education in the Nursery', pp. 212, 289–90; *The Children We Teach*, p. 112.

¹⁹ Isaacs, *Intellectual Growth*, pp. 17, 20–1.

²⁰ *Ibid.*, pp. 21–2.

²¹ *Ibid.*, p. 21. Cf. Isaacs, *Social Development*, pp. 18–19.

²² Dean Rapp, 'The Early Discovery of Freud by the British General Educated Public, 1912–1919', *Social History of Medicine* Vol. 3, No. 2 (August 1990), pp. 217–43.

²³ Smith, *To Understand and To Help*, pp. 20–1.

for the genius of Freud, in being able to penetrate so deeply and so surely to the actual mind of the little child, through the study of the minds of adults.²⁴ Impressed by the widespread interest among educationalists in psychoanalytical theory, but worried that, in the process of popularisation, the doctrine was being 'thinned out and watered down ... to make it a little more palatable to the serious-minded but unanalyzed inquirer',²⁵ she became a persuasive public defender of analysis, expounding its arguments, emphasising its depth and subtlety, and disposing of its most insidious enemy, misinterpretation.

Although Isaacs eventually rejected many of Piaget's arguments, she owed him an enormous intellectual debt, and was fulsome in her praise for his work:

The importance and interest of these contributions of Piaget can hardly be over-estimated. He has not only added greatly to our store of facts about the child's belief and ways of thought; he has gone far to show how these hang together as a coherent psychological whole. No psychologist can afford to pass by either the great mass of data which Piaget offers, or his theoretical mode of marshalling the facts. And the philosopher will do well to look at the transformations through which his favourite themes pass in the process of development, and the curious analogies of these with the history of thought, which Piaget brings out.²⁶

She admired his 'extraordinary gift for entering into the child's outlook and offering a theoretical issue to the child in the child's own terms';²⁷ felt that his evidence 'is of extraordinary interest, quite unique in the protocols of child psychology';²⁸ and argued that his 'conclusions and ... methods of investigation are clearly of the utmost importance for genetic psychology, and merit the most close and detailed scrutiny'.²⁹ She visited his *Maison des Petits* in Geneva and, in return, showed him around the Malting House School; she also discussed his arguments with him at considerable length, and published numerous criticisms of his work.

Isaacs's work provides ample evidence for Freud's contention that it is impossible to understand intellectual development in isolation from emotional life and family relations: her abiding interests were clearly rooted in her difficult upbringing. She was the youngest of nine children, two of whom died in infancy. Her father, the editor of the *Bolton Journal and Guardian* and a Methodist lay preacher, was an advocate of hard work, strict economy, and rigid discipline, and frequently sentenced his children to meals of bread and water for even such slight misdemeanours as grammatical errors.³⁰ While she was still at the breast her infant brother caught pneumonia, and her mother, distracted by anxiety and exhausted by

²⁴ Isaacs, *Social Development*, pp. xi-xii.

²⁵ *Ibid.*, p. 404.

²⁶ Review of Piaget's *The Child's Conception of the World in Mind* (1929), p. 508.

²⁷ Review of Piaget's *The Moral Judgement of the Child in Mind* (1934), p. 86.

²⁸ Review of Piaget's *The Child's Conception of Causality in Mind* (1931), p. 89.

²⁹ Isaacs, *Intellectual Growth*, p. 77. Cf. p. x.

³⁰ D. E. M. Gardner, *Susan Isaacs* (1969), pp. 15-18.

nursing the sick child, weaned Susan suddenly, then almost abandoned her. Only her brother's death, when Susan was eight months old, enabled her to recapture her mother's attention.³¹ Always overburdened by domestic duties, her mother fell ill when Susan was four and died two years later; and the household, hitherto admirably managed, began to disintegrate.³² Her last meeting with her mother was traumatic. Her father had fallen in love with a nurse, employed to care for her dying mother, and Susan inadvertently informed her mother of their relationship. Too ill to bear the news, her mother demanded that she should ask God to forgive her for telling such a lie, which she refused to do; and 'the memory of her mother's white face and anguished eyes remained with her all her life.'³³ Her father's marriage to the nurse, shortly after her mother's death, inevitably created further family tension; and Susan resolutely refused to be reconciled with her.³⁴ Unhappy at home, she rebelled at school and rejected conventional politics and morality, refusing to wear corsets and becoming a member of the Fabian Society and an ardent supporter of Women's Suffrage.³⁵ Her adolescent conversion to agnosticism destroyed her relationship with her father, who refused to speak to her for two years and withdrew her from school at the age of fifteen, arguing that 'if education makes women Godless, they are better without it'.³⁶

Isaacs dedicated *Social Development in Young Children* to Joan Rivière 'who has taught me to understand my own childhood', and she was intensely aware of the influence her upbringing exercised over her intellectual life. She felt that much of her work was rooted in infantile feelings of loss, guilt and reparation. The deaths of her brother and mother dissuaded her from having children of her own. 'Even in spite of her great love for children and her close links with her nephews', a friend in whom she had confided her feelings recalled, 'she could not really overcome the deep-laid childhood fear until she was too old wisely to start. So in her own way the intense longing became transformed and she had thousands of children through the help she gave.'³⁷ She felt deep guilt for the death of her brother, whose illness had removed and whose death had restored her mother's attention, and she longed to make reparation for the harm which, in fantasy, she had committed.³⁸ In a revealing passage in *Social Development in Children* she reflected that 'with some girls the need to restore to the mother becomes so persistent and so acute that all their lives are spent in serving other women and children'.³⁹

³¹ *Ibid.*, p. 18.

³² *Ibid.*, p. 19.

³³ *Ibid.*, p. 21.

³⁴ *Ibid.*, p. 25.

³⁵ *Ibid.*, pp. 28, 33, 36.

³⁶ *Ibid.*, p. 31. There are striking parallels between her own history and those of an anonymous girl described in 'Rebellious and Defiant Children' (1934), in Isaacs, *Childhood and After. Some Essays and Clinical Studies* (1948), pp. 34–5. This girl was obstinate, noisy and disobedient at school; and in adolescence became an intellectual rebel against everything her father believed in. Her mother had died when she was about six years of age, after a long and severe illness in which the home had become disorderly and unhappy. She felt herself responsible for all these developments; she also feared that 'her love and desire had damaged her mother's breast by its greedy quality.'

³⁷ Gardner, *Susan Isaacs*, p. 53.

³⁸ *Ibid.*, p. 19.

³⁹ Isaacs, *Social Development*, p. 317.

She also owed a considerable debt to her second husband, Nathan Isaacs. Born into a Russian Jewish family which fled from Warsaw to Basel and then to London, he had a highly successful career in the metal business, becoming Britain's leading authority on the market in tungsten and molybdenum and, during the Second World War, taking full responsibility for the supply of these vital materials. He was also fascinated by philosophy, psychology and education. He provided her with financial support; eased her relationship with Geoffrey Pyke, a gambler on the metal exchanges who financed the Malting House School; and encouraged her work, discussed her ideas, contributed to her writings, bought her a house in Bloomsbury and introduced her to Bohemian intellectual circles in London.⁴⁰

The Malting House School

In the spring of 1924 a bizarre advertisement, written in display type, edged with a striking border, and occupying an entire page, appeared in the *New Statesman*:

WANTED – An educated Young Woman with honours degree – preferably first class – or the equivalent, to conduct education of a small group of children aged 2–7, as a piece of scientific work and research.

Previous educational experience is not considered a bar, but the advertisers hope to get in touch with a university graduate – or someone of equivalent intellectual standing – who has hitherto considered themselves too good for teaching and who has probably already engaged in another occupation ...

Preference will be given to those who do not hold any form of religious belief but this is not by itself considered to be a substitute for other qualifications.⁴¹

The author of the advertisement, Geoffrey Pyke, provided a vivid example of Henry Adams' principle that 'extreme eccentricity was no bar, in England, to extreme confidence; sometimes it seemed a recommendation; and unless it caused financial loss, it rather helped popularity'.⁴² Born in 1893, the son of a Jewish lawyer, who died when Geoffrey was only five years old, Pyke was educated at Wellington, a school attended mainly by the sons of army officers. His mother forced him to wear the dress and observe the habits of an orthodox Jew, and the inevitable persecution – the boys used to indulge in what they called 'Pyke hunts' or, more pointedly, 'Jew hunts'⁴³ – bred in him a contemptuous hatred of established education. During the war, his daring escape from Ruhleben prisoner-of-war camp⁴⁴ persuaded him that he could solve any problem by hard thinking

⁴⁰ Willem van der Eyken and Barry Turner, *Adventures in Education* (1969), p. 20.

⁴¹ Quoted in Gardner, *Susan Isaacs*, pp. 54–5.

⁴² Ernest Samuels (ed.), *The Education of Henry Adams* (Boston, 1973 edn), p. 188.

⁴³ David Lampe, *Pyke. The Unknown Genius* (1959), p. 17.

⁴⁴ In giving a talk at his old school about his imprisonment and escape he concluded: 'when things were at their worst in Germany, even when I was quite certain I'd be taken and shot as a spy, I was never so unhappy, never so completely miserable as I'd been when I was a boy here at Wellington' (*Pyke*, p. 30).

and unconventional planning, and he devised an infallible system for making money on the commodities market. At first he succeeded, and used his money to realise his dream of establishing a school – the Malting House School – as different from Wellington as possible, based upon the idea that young children should be encouraged to discover knowledge for themselves in purposeful play – should ‘discover the idea of discovery.’ He hoped that the school would provide an education for his son, David, free from the semi-official torment which had distorted his own upbringing.

Susan Isaacs was ideally qualified for the job. James Glover, a friend who had begun to analyse Pyke, allayed her initial doubts about taking it;⁴⁵ she managed to establish a feasible relationship with him – he agreed that she would be the equivalent of a Prime Minister and he of a Monarch in a democratic country – and in October 1924, the school met in one of the large rooms of a house Pyke had rented, Malting House in Cambridge.⁴⁶ Initially, the school had ten pupils, all boys, aged between 2:8 (two years and eight months) and 4:10; by 1927 it had twenty pupils, girls as well as boys, aged between 2:7 and 8:6; and, during its three years of existence, it had thirty-one pupils, aged between 2:7 and 10:5. They came from professional families, many of them connected with the University and some of them highly distinguished, including Professor Sargeant Florence’s son, G. E. Moore’s two sons, Lord Adrian’s daughter and a grandson of Lord Rutherford.⁴⁷ They were all of above average intelligence, with IQs ranging between 114 and 166 and with a mean of 131; some of them also suffered from severe behavioural problems.⁴⁸ Initially, it was a day school only, but in its second year it began to take boarders, and in the third year about a third of the pupils lived in the school. The staff numbered two in the first two years, three in the third year, and five in the last term.⁴⁹

The staff tried to ‘stimulate the active inquiry of the children themselves, rather than to “teach them”’.⁵⁰ ‘We avoided offering ready-made explanations to the children’, Isaacs recalled,

not only because we did not want to foster verbalism, but also because we did not want to substitute ourselves as authority for the children’s own discovery and verification of facts. We felt that the child’s own observation, even if incomplete, was more valuable than a just belief accepted on our mere word.⁵¹

The traditional school subjects crystallised out of spontaneous interests in the concrete environment, and the equipment was designed to encourage and reward intelligent curiosity.⁵² One small boy spent most of his time in the school climbing under the flooring, tracing the building’s electrical and plumbing systems.⁵³

⁴⁵ Van der Eyken and Turner, *Adventures in Education* (1966), p. 21.

⁴⁶ Gardner, *Susan Isaacs*, p. 55; Smith, *To Understand and To Help*, p. 63.

⁴⁷ Van der Eyken and Turner, *Adventures in Education*, p. 28.

⁴⁸ *Ibid.*, p. 26.

⁴⁹ Isaacs, *Intellectual Growth*, p. 14.

⁵⁰ *Ibid.*, p. 17.

⁵¹ *Ibid.*, p. 40.

⁵² *Ibid.*, pp. 47–8.

⁵³ Pyke, p. 44.

School discipline was permissive, with the children encouraged to express themselves freely in words, dramatic play and models.⁵⁴ Children under six were given complete verbal freedom, even if their remarks were aggressive or scatological; older children were expected to exercise more self-control. They were allowed to engage in a great variety of activity and discussion. 'These children play with water and with fire', a teacher reported, 'they climb and swing and even smoke, with the grown-ups not indulgently turning a blind eye, but approving and helping.'⁵⁵

All this inevitably gave rise to rumours, and the school acquired a reputation as a 'pre-genital brothel'.⁵⁶ 'The children at that school are encouraged to run wild', some complained. 'They learn by wallowing around in mud all day. Nobody ever makes them wash. And all they do is talk about sex.'⁵⁷ James Strachey, one of the leading figures in psychoanalytical circles, took great delight in spreading scandal about the school, informing his wife that it was making her nephew's life a misery:

All that appears to happen is that they're allowed to do whatever they like. But as all they like doing is kicking one another, Mrs Isaacs is obliged to intervene in a sweetly reasonable voice: 'Timmy, please do not insert that stick in Stanley's eye'. There is one particular boy (age 5) who domineers, and bullies the whole set. His chief enjoyment is spitting. He spat one morning onto Mrs Isaacs's face. So she says: 'I shall not play with you Philip' – for Philip is typically his name – 'unless you have wiped my face.' As Philip didn't want Mrs Isaacs to play with him, that lady had to go about the whole morning with the crachat upon her. Immediately Tony appeared Philip spat at him, and in general cowed and terrified him as had never happened to him before.⁵⁸

In fact, they were not left to run wild: definite limits were placed on their freedom, and these limits became more severe as Isaacs came under Melanie Klein's influence.⁵⁹ She reasoned that absolute freedom was too frightening for young children, that they needed adults to protect them from themselves. The staff tried to exercise authority by reason rather than force. They tried to encourage the children to abandon their often disturbing inner fantasy life and to interest themselves in the objective world. 'In the external world the dramatic inner tensions of the child's mind and the adult's are deflected and diffused', Isaacs argued. 'And in our school our constant aim was therefore to throw our own weight always on the side of an appeal to the world of objective fact, and to stimulate intelligent observation and judgment on the part of the children.'⁶⁰

The Malting House School was a scientific as well as an educational project. Geoffrey Pyke had hoped that it would become a laboratory for the study of

⁵⁴ *Ibid.*, p. 8. ⁵⁵ Quoted in van der Eyken and Turner, *Adventures in Education*, pp. 42–3.

⁵⁶ [John] R[ickman], 'Obituary: Susan Sutherland Isaacs', *International Journal of Psycho-Analysis* Vol. 31 (1950), pp. 281–2.

⁵⁷ Pyke, p. 42.

⁵⁸ James to Alix Strachey, 17 February 1925. Quoted in Perry Meisel and Walter Kendrick (eds.), *Bloomsbury/Freud. The Letters of James and Alix Strachey 1924–1925* (1986), p. 205.

⁵⁹ Gardner, *Susan Isaacs*, pp. 67–8.

⁶⁰ Isaacs, *Intellectual Growth*, p. 33.

children's growth and development; and Susan Isaacs did her best to combine the roles of teacher and observer. The staff kept detailed records of the children's behaviour, jotting down notes whenever they could snatch time from teaching, and Susan Isaacs dictated full records of daily events when the children had gone home or to bed. Eventually a trained stenographer was employed to make a 'strictly verbatim and objective' record of school life.⁶¹

Pyke's ambitions for Malting House rapidly became more grandiose. He wanted to turn the school into the centrepiece of a vast international educational research system, enrolling thousands of children from all classes and of all ages. Obsessed with schemes for expansion, he determined to advertise the schools' virtues. He combed the world for a scientist capable of bringing his discipline to bear on the education of young children, advertising in innumerable newspapers and enlisting the support of Ernest Rutherford, Percy Nunn and J. B. S. Haldane in making his selection; eventually a Russian-born New Yorker, Samuel Richard Slavson, was added to the staff.⁶² He advertised the school widely, and even employed British Instruction Films Ltd to make a documentary record of the school's daily activities. His mixture of shrewd publicity and eccentric showmanship succeeded in bringing his project to the attention of the public.⁶³

All too predictably, as his involvement with the school deepened, so his relationship with Susan Isaacs deteriorated. He insisted on showing visitors through the school during lessons, on arguing about the treatment of the children, and on planning the school's future without consulting his staff. When Isaacs reminded him that he had agreed that the teaching and management of the school would remain under her control, he burst out: 'Whose idea was it? Who got the money to start the whole scheme? Who initiated the policy of working with these children?' He accused her of stealing his theories of child education, of feeding on his genius.⁶⁴ Stung by Pyke's accusations, and annoyed by the introduction of Slavson, Isaacs prepared to leave – only to be pre-empted by Pyke's bankruptcy.

For some time Pyke's lawyer had been urging him to endow the school with the fortune he had made on the Metal Exchange. He refused. In order to finance his more grandiose educational plans, he bought metals on credit through several different brokers, keeping each of them in the dark about the full extent of his speculations. At the high point of his financial career, he cornered as much as a third of the world's supply of tin and formidable supplies of copper. In the United States, however, the copper trade was being welded into a giant international consortium, capable of stabilising prices and eliminating speculation, and Pyke was one of the consortium's archetypical targets. Finally, his infallible graphs,

⁶¹ Isaacs, *Intellectual Growth*, p. 1.

⁶² *Ibid.*, p. 45. Pyke claimed that he received applications from seven professors and university lecturers, sixty-two workers in other branches of science, forty-seven people with other qualifications, and thirty-nine people without qualifications.

⁶⁴ *Ibid.*, p. 61.

⁶³ Van der Eyken and Turner, pp. 46–57.

displaying the interrelationship between the prices of various metals, failed him: prices fell when they should have risen, and he went bankrupt.⁶⁵ His fortune dissolved, his health broke down, and he fled the Malting House School for Switzerland, leaving his wife to sort out the wreckage. In 1928 he tried to revive the school. A few children continued to turn up and the remaining teachers made notes on their activities. But the numbers involved gradually diminished, and on 5 May 1929 Pyke went into a nursing home, suffering from depression, amnesia and paranoia.⁶⁶ He disappeared from the English scene, to re-emerge during the war, under Churchill's sponsorship, as the mastermind behind Operation Habbakkuk, a scheme for freezing and strengthening icebergs for military purposes.⁶⁷ He committed suicide in 1949.

If it ended in disaster, the school at least served a valuable purpose while it lasted, generating a unique body of evidence about the intellectual and social development of schoolchildren. Gesell had watched children through one-way glass; Burt had administered IQ tests; Buhler had described the minute-by-minute behaviour of infants; Piaget had talked with children one by one; Bridges had devised a developmental rating scale; but only Susan Isaacs and her staff had observed children working with other children and adults in a permissive school environment.

Intellectual growth in young children

Central to Susan Isaacs's analysis of intellectual growth was the observation that children do not have different mechanisms of thought from adults.⁶⁸ They know less than adults and have less developed minds than adults; but they do not understand the world in fundamentally different ways from adults. 'In each case', she concluded,

the child's cognitive act is similar in its most essential character to his later acts of understanding, of reasoning, or of practical organisation, as a historian, a scientist or a man of affairs. Each proceeds, in so far as new knowledge or a new application of knowledge is achieved, by the education of relations or their correlates; and in each, taken in relation to the age of the thinker, his general ability will be revealed.⁶⁹

She agreed with Spearman and Burt that children can master progressively more difficult problems until they are about fourteen; that the mechanism of this development is genetic rather than environmental; that significant differences exist between children in their mental abilities; and that mental growth is smooth and general, governed by a single central factor.⁷⁰ She suggested that in mental development there is a progressive hierarchy in the synthesis of experience, as

⁶⁵ Lampe, *Pyke*, p. 53.

⁶⁶ Van der Eyken and Turner, *Adventures in Education*, pp. 63–6.

⁶⁷ M. F. Peritz, 'That Was the War (Second World War Enemy Alien)', *New Yorker*, 12 August 1985, p. 47.

⁶⁸ Isaacs, *Intellectual Growth*, p. 57.

⁶⁹ *Ibid.*, p. 65.

⁷⁰ *Ibid.*, pp. 59, 60, 64.

crude and concrete reasoning provides the basis for sophisticated and abstract understanding.⁷¹ 'The difference between the younger child and the older, between the child and the adult', she argued, 'is thus *not* that the former do not reason, or reason *only* in the form of the perceptual judgment and practical manipulation. It is rather the extent to which, with the younger children, the higher forms of neotic synthesis rest directly upon and grow immediately out of the simpler.'⁷² On the basis of her observations at the Malting House School she suggested that 'the spontaneous behaviour of these little children thus reveals the same continuity of growth as Burt's graded tests of reasoning have demonstrated in children from seven years of age onwards'.⁷³

Not surprisingly, she disagreed strongly with Piaget, disputing his conclusions, distrusting his methods, and demonstrating his limitations. She felt that 'he is carried away, by the sweep of old philosophical allegiances, to rigid abstraction and wholesale hypostases, which ignore concrete psychology and the actual movement of children's minds'.⁷⁴ In particular, she criticised him for studying *the child* in the abstract instead of individual children under particular conditions.⁷⁵ Educated in the English tradition, she emphasised the vast individual differences between children, distrusting the idea that all children of similar ages had similar mental lives, regardless of their intelligence or experience.

She questioned Piaget's insistence that children develop in marked mental and emotional stages.⁷⁶ Socialisation, she argued, is gradual and continuous; and children are capable of adapting themselves to their circumstances with considerable flexibility. She suggested that young children are not invariably egotists, obsessed with themselves and indifferent to the world. Given the opportunity, they take a keen interest in their environment.⁷⁷ They are capable of providing far more sophisticated explanations of mechanical causation than Piaget had ever imagined.⁷⁸ They do not remain trapped in rigid structures of thought, fixed in time and impenetrable to experience. Like civilised adults and savages, they 'function mentally on many different levels according to the moment and the situation, at one time logical and objective, understanding causality practically and verbally, at another egocentric and syncretistic, pre-causal and magical'.⁷⁹

Belying Piaget's idea that young children are invariably trapped in collective monologues, the Malting House children discussed issues, exchanged information, and admitted correction; only very rarely did they indulge in monologues. For some children talk was always a social activity: monologues were alien to them.⁸⁰ She pointed out that adults are also capable of indulging in egocentric thought and

⁷¹ *Ibid.*, pp. 68–9.

⁷² *Ibid.*, p. 84.

⁷³ *Ibid.*, p. 92. Cf. Isaacs, *The Children We Teach*, pp. 138–50.

⁷⁴ Review of *The Child's Conception of the World*, p. 310.

⁷⁵ Isaacs, *Intellectual Growth*, p. 73. Cf. *The Children We Teach*, pp. 71–2.

⁷⁶ *Ibid.*, pp. 79, 88.

⁷⁷ *Ibid.*, p. 80.

⁷⁸ *Ibid.*, p. 81.

⁷⁹ Review of *The Child's Conception of the World*, p. 310; Isaacs, *Intellectual Growth*, p. 92.

⁸⁰ Isaacs, *Intellectual Growth*, pp. 85–6.

collective monologues, arguing that 'if we are to arrive at a true notion of the concrete course of mental development, and of the difference between children and ourselves, we must measure the children against the actual ways of actual men and women, rather than against text-book standards of formal logic'.⁸¹

She insisted that young children are normally capable of distinguishing between fantasy and reality. They are almost as conscious as adults of the difference between feeling and thought; between imagining a wish fulfilled and fulfilling a wish. Their fantasy is a bridge not a barrier between thought and reality.⁸² Through the relentless multiplication of experience and the continuous development of intelligence they build the patterns of the objective world into their minds, testing egocentric fantasy against recognised experience and eventually consigning fantasy to imaginative literature and, in a more disciplined form, to scientific inquiry.⁸³

She argued that Piaget ignored the part which plain and simple ignorance played in children's errors. Many of the questions he put to his subjects – about meteorology, the movements of the sun and moon, and mechanical causation – were concerned with matters of knowledge and training. Children made errors simply because they lacked knowledge and experience; and adults, if ignorant and untrained, would probably have made similar errors. 'The untrained, undisciplined and ignorant mind is, *of course*, egocentric, precausal and magical, in proportion to its ignorance and lack of discipline', she pointed out. 'But after infancy it is not accurate to represent it as ignorant merely *because* of its egocentricity – it is egocentric in large part because of its ignorance and lack of organised experience.'⁸⁴

Piaget's mistakes, she argued, resulted from his clinical method. He invariably isolated children from their contemporaries and asked them a series of questions – how did the sun begin? where do dreams come from? – intended to reveal the child's fundamental, but hitherto hidden, beliefs. Yet this situation immediately put the child at an intellectual disadvantage, revealing his capacity only to deal with a limited and stereotyped situation:

He is sure to show himself at lower levels than in the more varied and co-operative situations of active daily life in school or home. With children as with animals, the psychologist has to offer real problems, those that are significant and attractive to the children or animals themselves. And he has to find ways of measuring and including the typical *best* performance of his subjects if he is to make any pronouncement as to the limits of ability, or to aim at a representative picture of any given age.⁸⁵

Isaacs felt that 'there is always more elasticity, more movement, more life, more variety, more foreshadowing of later modes within the earlier, than Piaget's preoccupation with types and stages allows us to see'.⁸⁶ She argued that children's

⁸¹ *Ibid.*, p. 93.

⁸² *Ibid.*, pp. 106–7.

⁸³ *Ibid.*, p. 109.

⁸⁴ Review of *The Child's Conception of the World*, p. 311.

⁸⁵ *Ibid.*, p. 95. For Piaget's reply to these criticisms, see 'Le Developpement Intellectuel Chez Les Jeunes Enfants', *Mind* Vol. 40, No. 158 (April 1931), pp. 137–60 esp. pp. 146–60.

⁸⁶ Review of *The Child's Conception of Causality*, pp. 91–2.

minds are heterogeneous rather than homogeneous; that many different levels of thought operate alongside each other; that the existence of one type of behaviour under fixed conditions does not imply that another type of behaviour will not occur under different conditions; and that intellectual development 'has the elasticity and vital movement of a living process, not the rigid formality of a logical system'. She concluded with Burt that intellectual development 'is most fully expressed in the *continuity* of development in neotic synthesis, and in the way in which the later and more highly integrated forms draw their life from the simpler and earlier'.⁸⁷

Social development in young children

Like Freud, Susan Isaacs was unsentimental about children's social development. She insisted that children are naive egoists, treating other children as rivals for the affection and approval of adults, and that only adult authority can ensure that they get on together.⁸⁸ She suggested that it is impossible to study the superstructure of social relations without penetrating into the child's more intimate personal and bodily responses to adults and to other children,⁸⁹ and repeatedly emphasised the role of sexual interests, aggression, anxiety and guilt in their social life. She was aware that many observers might be offended by her revelations, but insisted that enlightenment was preferable to prudery. Only a scientific understanding of children's behaviour, however unattractive, could provide the basis of enlightened education.⁹⁰

Young children, she suggested, are initially incapable of social relations. Naturally egocentric, they implicitly expect other people to fall in with their own fantasies, and if they fail to do so, attempt to impose their will upon them.⁹¹ They behave as a number of independent individuals, each concerned with his personal ends and unconcerned with whether these ends contradict or complement the ends of the others. They may be friendly or hostile towards their companions; but even when they are friendly, they treat them not as ends in themselves, but only as a means to serve or obstacles to hinder their own particular interests.⁹² They recognise the presence of others, but not their personalities or independent purposes, treating them merely as pivots upon which their own fantasies can turn.⁹³ When Dan wanted to use a potter's wheel, for example, he asked Gerry to turn the handle for him: 'You turn this handle, will you? And when *your* arm gets tired – I'll get someone else to turn it!'⁹⁴ The play of a number of young children is little more than a congerie of individual fantasies. When these fantasies happen to overlap, they give rise to common activity, and may for a time weld the players

⁸⁷ *Intellectual Growth in Young Children*, p. 97. Contemporary criticisms of Piaget often reiterate Isaacs's arguments. See, for example, Margaret Donaldson, *Children's Minds*.

⁸⁸ Isaacs, *Social Development*, p. 11.

⁹¹ *Ibid.*, p. 30.

⁹² *Ibid.*, p. 213.

⁸⁹ *Ibid.*, p. 12.

⁹³ *Ibid.*, p. 214.

⁹⁰ *Ibid.*, pp. 13–16.

⁹⁴ *Ibid.*, p. 217.

together into a group. When they conflict, they stir children to a vivid, if temporary, realisation of the existence of the independent wills of others, shattering their egocentric assumptions and providing their first effective social education.⁹⁵

She suggested that children's aggressiveness is motivated by their selfish desire for possessions, power and attention. They are determined to have exclusive possession of whatever objects are at the centre of interest at the moment even extending their claims to such things as nursery rhymes, songs, and ideas.⁹⁶ Their immediate response to loss of a possession, however trivial, is hostility and aggression. When Jessica accidentally tore a card which had been sent to all the children Dan threatened to 'get a policeman to put her in prison' and to 'kill her because I hate her'.⁹⁷ They relish the exercise of power and the expression of aggression. The elder boys enjoyed locking the younger ones into a hut as a 'prison'.⁹⁸ Frank's immediate response when he overturned Dan's motor car, breaking its steering wheel, was to shout with glee to the others.⁹⁹ They treat other children as rivals for physical resources and adult affection. Even the roots of group loyalty lie in aggression, with children welded into a social group by common hostility. By projecting their hatreds onto outsiders they are liberated from their egocentric isolation and united by a common aim.¹⁰⁰ Slowly these fluid social relations are solidified into more organised group loyalties and rivalries.¹⁰¹

Why were such well-brought-up children so defiant, rude and difficult? Isaacs insisted that the solution to this problem lies in the psychoanalytic theory of the unconscious mental life of children and adults.¹⁰²

According to psychoanalytical theory, the roots of both love and hate lie deep in the child's unconscious. To a degree which adults find difficult to imagine, infants are dominated by crude wishes and vivid fantasies based upon their everyday sensory experiences. Their first appreciation of the external world is provided by the frustration of their instinctual desires for food and affection.¹⁰³ Their rage at their frustration and helplessness is so intense that they fantasise about killing those who fail to fulfill their desires.¹⁰⁴ Their mental world is constructed out of their basic physiological experiences. 'First one and then another *locus* of bodily sensation and impulse provides a nucleus for the mental life, with its own colouring and its own special structure.'¹⁰⁵ Initially, the child's life is dominated by his mouth and his desire to suck his mother's breast. To him his mother is a protruding nipple, and to love her is to take the nipple into his mouth and to receive the love-gift of milk.¹⁰⁶ After two or three months a biting impulse develops, becoming more acute as he begins to teethe. He indulges in fantasies of cannibalism, hoping to eat and ingest his mother entirely – a desire reflected in the remark 'I love you so much I could eat you'.¹⁰⁷ Even before the height of the oral phase, the rectum begins to

⁹⁵ *Ibid.*, p. 215.

⁹⁶ *Ibid.*, pp. 219–26.

⁹⁷ *Ibid.*, p. 38.

⁹⁸ *Ibid.*, p. 41.

⁹⁹ *Ibid.*, p. 43.

¹⁰⁰ *Ibid.*, p. 253.

¹⁰¹ *Ibid.*, p. 254.

¹⁰² *Ibid.*, p. 207.

¹⁰³ *Ibid.*, p. 288.

¹⁰⁴ *Ibid.*, p. 289.

¹⁰⁵ *Ibid.*, p. 291.

¹⁰⁶ *Ibid.*, p. 326.

¹⁰⁷ *Ibid.*, p. 324.

influence his mental life. First the child gains optimal pleasure from the expulsion of faeces, and later from 'retaining, moulding and mastering the faeces'.¹⁰⁸ Soon the genitals begin to assume psychical significance, but do not outweigh oral and anal impulses until very much later in development.¹⁰⁹

Isaacs argued that the evidence from the Malting House school supported Melanie Klein's interpretation of the child's super-ego. From a very early age the child introjects his parents into his mind. Part of him begins to act towards the rest as (he feels) his parents act towards him. 'It becomes the *parents-in-him*, and in his phantasies is indeed the parents in him. The feeling of guilt is the dread of this part of oneself that *is* the parents, that (in phantasy) judges and condemns and reproaches and punishes; and in punishment does to oneself all that one wanted to do to others.'¹¹⁰ Thus, in the biting phase, when he wants to bite, chew up and ingest the breast, he fears that the 'part of his mind which has come to represent his mother, which *is* in effect his mother inside himself, his super-ego, will bite and chew up and destroy him.'¹¹¹

The child is unbearably jealous of rivals for his mother's attention, with his father and siblings exciting his intense hatred. Not surprisingly, his emotions are at their most chaotic when he witnesses the primal scene – sexual intercourse between his parents. The act stimulates his libido while his ego is at its most defenceless. His mother, absorbed in giving satisfaction to a rival, ignores him; and his parents are completely changed, now representing not the ego but the id. They are double enemies to the young child: they refuse to help his ego and instead continue to stimulate its enemy, his libido. His anxiety is reinforced by fear. 'The mother's position in the sexual relation seems, in addition, to be a helpless and perilous one – utterly different from the mother who supports and helps children; and the father seems to be hurting and attacking her.'¹¹² For the next few years the child's development is dominated by the problem of mastering the existence of sexual relations between his parents.¹¹³ 'By one means or another he has to deal with the stimulated instincts and the resulting anxiety, so as to leave his ego free for the possibility of real development – in skill and understanding, and stable social relations.'¹¹⁴

Much of the child's early emotional life is devoted to controlling his impulses and allaying his anxiety. His main resources in this struggle with himself are introjection and projection. By introjection he takes his parents into his internal mental life; by projection he treats that aspect of himself which causes tension as part of the external world. He ascribes his own aggressiveness, for example, to those around him. His destructive wishes give rise to a sense of guilt and a desire to make

¹⁰⁸ *Ibid.*, p. 292.

¹⁰⁹ *Ibid.*, p. 293.

¹¹⁰ *Ibid.*, p. 270.

¹¹¹ *Ibid.*, p. 293.

¹¹² *Ibid.*, p. 343.

¹¹³ *Ibid.*, p. 301. For a more detailed exposition of this argument, see M. N. Searl, 'Danger Situations of the Immature Ego', *International Journal of Psycho-Analysis* Vol. 10, No. 4 (1929).

¹¹⁴ Isaacs, *Social Development*, p. 302.

restitution. He tries to make amends to his mother, whose breast he bites and, in fantasy, destroys. This desire to make restitution is even more marked in girls than in boys.¹¹⁵

Not surprisingly, the child's attitude towards his parents is highly ambivalent, his love qualified by hatred and anger. He fears that his parents will learn of his anger and exact retribution, matching his sadism with their own.¹¹⁶ Only when he has formed social relations with his contemporaries can he begin to see his parents more nearly as they are, not as 'the gods, the giants and ogres they were to his infantile imagination'.¹¹⁷

Isaacs made it clear that she sided with Melanie Klein against Anna Freud on the issue of the relationship between psychoanalysis and education, as well as a swathe of other issues.¹¹⁸ Insisting that there was an essential difference in the way educator and analyst approach child development, she argued that a knowledge of the unconscious has only a limited pedagogical value.¹¹⁹ The analyst works with the child for a definite time each day in a designated environment, never preventing his patient from revealing his feelings, wishes, fantasies and fears. He has to uncover not only the child's love but also his hate. 'The explosive material of the unconscious', she argued, 'can only safely be handled by trained analysts working in the proper technically controlled analytic environment.' The educator, on the other hand, has to represent the super-ego to the child and win his confidence with affection; 'she must be a "good" parent to the child, even though she be a strict one.' She felt that no one person could combine the two functions of analyst and educator to the same child, and that it would be unwise for a teacher or a mother to attempt to undertake the work of an analyst.¹²⁰ 'An admixture of education and analysis tends to ruin both, and can do little for the child but confuse and bewilder him, and increase his conflicts.'¹²¹

Susan Isaacs and the moral message of mental science

Susan Isaacs was reticent about overt moralising. She concluded *Social Development in Young Children* with a paradoxical statement:

I would like to emphasise once again what seems to me the essential outcome of this deeper understanding of the psychology of young children, namely, that the key lies in *an emphasis on technique rather than on morality*. We have seen how profound a drive towards morality the child has in his own nature. We have not to *create* this in him. What we have to do is to show him how to attain his moral ends in the real world. We

¹¹⁵ *Ibid.*, pp. 304–20.

¹¹⁶ *Ibid.*, p. 389.

¹¹⁷ *Ibid.*, p. 395.

¹¹⁸ See Pearl King and Riccardo Steiner (eds), *The Freud-Klein Controversies 1941–45* (1991), pp. 264–475, 687–751.

¹¹⁹ *Ibid.*, pp. 403–13.

¹²⁰ Melanie Klein, however, analysed all three of her children.

¹²¹ Isaacs, *Social Development*, p. 412.

have to give him the skill which makes possible an effective morality, and the psychological conditions which will foster his own seekings for such skill.¹²²

Yet her writing was infused with a moral message. The issues at the centre of her thought – the proper upbringing of children, the relationship between health and sickness, the claims of individual will and cultural restraint – all belonged to the moral life; and she hoped to influence as well as to analyse personal conduct. Scientific in form, her ideas were inevitably moral in content.

Her education as a moralist was primarily Freudian. Freud had biologised morality and moralised biology, insisting that all intellectual life, moral as well as cognitive, is rooted in physiological fixations. The oral, anal, and phallic phases of development shape the moral nature. For him generosity is oral, stubbornness anal, maturity phallic. His moral philosophy ‘dramatised the body and naturalised the mind’.¹²³ Melanie Klein reinforced this argument, habitually relating psychology to the biological core of the human organism. For her the moral life is shaped by the internalisation of the ‘good’ and ‘bad’ breast, by the intimate experience of feeding and weaning.¹²⁴ The formation of the super-ego, of the moral aspect of the self, Isaacs agreed, is ‘based upon the real bodily experience of taking the mother’s breast into the mouth, and the general domination of the child’s mental life by oral impulses in the earliest months.’¹²⁵ Severe deprivation during suckling can lead to ‘the most serious disturbances in mental life’.¹²⁶

She insisted that a stable family is the ideal environment for normal personal development. The child’s mental health and personal happiness depend upon an affectionate marriage, a secure home and a sustained interest in his well-being. ‘When father and mother are loving and united in the home, the child can reach out to independence and a life of his own, and yet keep an intimate awareness of mutual affection and mutual need.’¹²⁷ The mother naturally plays a central part in stabilising the family, and a great deal depends on her resources of character and affection. Early bereavement or strained family relations are rapidly translated into mental and emotional illness in the young. Parental infidelity, familial tensions and ill-disciplined mothering can rapidly lead to anti-social behaviour.

Yet even strained family relations are normally preferable to no family relations at all.¹²⁸ Institutionalised children, deprived of intimate personal contacts, tend to develop serious personality disorders, including retarded physical and mental growth; ill-health; lack of social feeling; anti-social behaviour and delinquency; inability to sleep, rest and concentrate; and neurosis. Her advice on the treatment

¹²² *Ibid.*, p. 456.

¹²³ Philip Rieff, *Freud: The Mind of the Moralist*, p. 50.

¹²⁴ See, for example, ‘Envy and Gratitude’ (1957), in *Envy and Gratitude and Other Works*, esp. pp. 178–80, 187–8 and ‘Our Adult World and its Roots in Infancy’ (1959), *ibid.*, esp. pp. 251–2.

¹²⁵ Isaacs, *Social Development*, p. 372.

¹²⁶ *Ibid.*, p. 431.

¹²⁷ Isaacs, ‘Fatherless Children’ (1945), in *Childhood and After. Some Essays and Clinical Studies* (1948), p. 186.

¹²⁸ Isaacs, ‘Children in Institutions’ (1945), in *Childhood and After*, p. 224. Cf. ‘Fatherless Children’ in *ibid.*, p. 202.

of orphaned children was simple: 'whether the substitute offered to the child for a home of his own is going to be helpful or not depends entirely on how far it approximates to family life in an ordinary good home'.¹²⁹

The wartime evacuation of schoolchildren confirmed her analysis of the importance of family ties, however imperfect, and the trauma of family breakdown. Hundreds of evacuated children soon returned from Cambridge to London, preferring danger with their families to safety alone. 'In time of danger and uncertainty', she contended, 'individuals have even greater need for unity and for the reassurance provided by the familiar background of their lives.'¹³⁰ 'Since the bombing of London's East End', she added,

we have seen how this need to keep the family together and to cling to familiar home surroundings may override even the worst dangers. Among the simple and poor, where there is no wealth, no pride of status or of possessions, love for the members of one's own family and joy in their bodily presence alone make life worth living. So deeply rooted is this need that it has defied even the law of self-preservation, as well as urgent public appeals and the wishes of authority.¹³¹

She insisted that *avant-garde* contempt for the conventional family, popularised by her Bloomsbury contemporaries and often but ignorantly associated with Freud, was based on a naïve and dangerous misunderstanding of human psychology.

On the other hand, she recognised that the family is the source of most mental trauma as well as of all mental health. The child's development depends upon successful emotional bonding with his mother; but his love for her becomes so overwhelming that he longs to murder his father and possess her exclusively, and his longing fills him with guilt at himself and dread of his avenging father. This trauma cannot be avoided. Only when the child has learned to deal with the family drama, and managed to establish successful relations with his parents and siblings, can he lay claim to mental health.¹³² Her ethic was thus one of resignation: it is by reconciling ourselves to things as they are, and must be, however unpleasant, that we are enabled to tolerate the condition to which we are condemned.¹³³

She insisted that children never escape from the influence of their families. The family situation 'sets the fundamental pattern for his relation to the world as a whole, and all other social situations develop from it.'¹³⁴ For her, as for Freud, we are never our individual selves but merely 'stock characters in the perennial dramatisation of the family quarrel'.¹³⁵ Social solidarity depends upon the state of the family:

Human society rests upon the long plasticity of childhood, coupled with the permanent relation of the child's parents in the sexual and parental functions. The

¹²⁹ Isaacs, 'Children in Institutions', in *Childhood and After*, p. 209.

¹³⁰ Isaacs (ed.), *Cambridge Evacuation Survey. A Wartime Study in Social Welfare and Education* (1941), p. 154.

¹³¹ *Ibid.*, p. 9 n 1.

¹³² *Ibid.*, p. 392 n 1.

¹³³ Cf. Rieff, *Freud: The Mind of the Moralist*, p. 358.

¹³⁴ Isaacs, *Social Development*, p. 388.

¹³⁵ Rieff, *Freud: The Mind of the Moralist*, p. 54.

Measuring the mind

particular tensions of jealous rivalry, the love and longing and hatred, to which the human child is exposed from a very early age take their rise in this family situation. and from these influences and conflicts are ultimately derived all the varied characteristics of later social life. From at any rate the end of the first year, if not before, the human infant has to deal with a vortex of conflicting emotions and desires, loves and hates, towards his parents and brothers and sisters. The way in which he learns to deal with these is the ultimate foundation for his later character and settled social responses. The troubles and difficulties of human life and human psychological development, as well as all the delights and values of permanent social relations, thus take their origin in this central psychic situation.¹³⁶

For her the political was the personal. In their unconscious minds all citizens, however powerful or sophisticated, interpret political life as an extension of the family situation.¹³⁷ Successful childrearing produces balanced and useful citizens, unsuccessful childrearing delinquents and misfits. Children who fail to negotiate the depressive position, and to recognise that the 'good breast' and the 'bad breast' belong to a single mother, become revolutionaries: 'these are the difficult, the delinquent children; these are the adults who fly to arms and unloose the powers of death as a means of creating a new heaven and a new earth.'¹³⁸

She combined a commitment to the importance of the family with an understanding of its fragility. To be successful, childrearing needs to take place in the natural context of the family; but the family is so beset with problems that it requires the support of the helping professions. The economic and emotional burden of childrearing needs to be lifted, and psychological strains within the family repaired. 'There is no better educator for the child than a wise parent', she argued, but 'even the wisest of parents is not sufficient'.¹³⁹ The most important of all supporting institutions in childrearing is the nursery school. 'The nursery school is an extension of the function of the home, not a substitute for it', she argued, 'but experience has shown that it brings to the child such a great variety of benefits that it can be looked upon as a normal institution in the social life of any civilised community.'¹⁴⁰ The school extends the range of the child's social contacts; renders his feelings towards his parents more manageable by deflecting them onto other adults; and teaches him to exercise personal independence. Nursery schools can do something to compensate impoverished children for their ill-equipped homes, ill-educated parents and ill-chosen food. But they are also valuable for the growing number of middle-class children who are brought up in small families, providing them with the considerable psychological benefits of extended families.¹⁴¹ 'The benefits which the nursery school (or large family)

¹³⁶ Isaacs, *Social Development*, p. 298.

¹³⁷ 'Personal Freedom and Family Life', *The New Era*, September-October 1936. Reprinted in Smith (ed.), *To Understand and To Help*, p. 292.

¹³⁸ *Ibid.*, p. 293.

¹³⁹ *Social Development*, p. 392 n 1. ¹⁴⁰ Isaacs, *Educational Value of the Nursery School*, p. 31.

¹⁴¹ *Ibid.*, pp. 28-9. Cf. Isaacs, 'Education in the Nursery', pp. 275-6.

confers upon its children', she argued, 'are bound up with the ease and relief from unconscious (as well as conscious) fear of the parents which the companionship of other children brings to each.'¹⁴²

Isaacs added her support to the liberalisation of childrearing, warning parents against measuring children against idealised standards and repressing their animal appetites. 'Harsh punishments, rigid prohibitions of natural pleasures and healthy activities', she argued, 'serve to increase the child's hate, aggression and anxiety, and are far more likely to turn him into a delinquent than into a useful member of society.'¹⁴³ Sexual curiosity is universal in childhood and parents who treat it with horror threaten their children's emotional development.¹⁴⁴ 'I believe it would be an advantage for all parents of young children', she confessed, 'to have the general knowledge that little children normally have sexual interests, since then they would be less likely to hurt their own children by excessive horror or severity if they met with any open expression of these interests.'¹⁴⁵ She suggested that parents should be willing to indulge their children's natural appetites. They should put weaning off until the end of the first year¹⁴⁶ and should refuse to cajole or threaten the child into eating when he does not want to.¹⁴⁷

But she was equally critical of the extreme libertarian approach to children.¹⁴⁸ Her aim was not the liberation but the better management of the instincts.¹⁴⁹ She felt that many mothers and a number of teachers, reacting against traditional attitudes towards children and anxious about the disastrous effects of restraint and formal teaching, were now erring on the side of lack of control.¹⁵⁰ She felt that 'the possibility of building up good habits in the child rests upon order and rhythm in the behaviour of the people around him and in the general pattern of life.'¹⁵¹ Her book on the *Social Development of Young Children* was consequently a 'contribution to the present general movement for mental hygiene'.¹⁵² She insisted that some degree of repression is 'essential to a balanced conscious life and adaptation to reality'. As Freud had argued, 'the sacrifice of self is the beginning of personality'.¹⁵³ She warned that parents who leave their child entirely free do not thereby avoid repression but instead leave him 'at the mercy of his own primitive super-ego, with all its accompanying phantasies of retribution'.¹⁵⁴ Left to his own

¹⁴² Isaacs, *Social Development*, p. 260.

¹⁴³ Isaacs, 'Children in Institutions', p. 224. Cf. 'Corporal Punishment', *The New Era*, July 1929. Reprinted in Smith (ed.), *To Understand and To Help*, pp. 266–70.

¹⁴⁴ Isaacs, *Social Development*, p. 428.

¹⁴⁵ *Ibid.*, p. 14. Cf. 'A Child's Wonder of Life', *The Nursery World*, 23 April 1930. Reprinted in Smith (ed.), *To Understand and To Help*, pp. 241–5.

¹⁴⁶ Isaacs, *Social Development*, p. 432.

¹⁴⁷ *Ibid.*, p. 434.

¹⁴⁸ Cf. 'Original Sin', *Twentieth Century* (1933). Reprinted in Smith (ed.), *To Understand and To Help*, p. 291.

¹⁴⁹ Rieff, *The Triumph of the Therapeutic. Uses of Faith After Freud* (1966), p. 151.

¹⁵⁰ Isaacs, *Social Development*, p. 419.

¹⁵¹ Isaacs, *Educational Value of the Nursery School*, p. 21.

¹⁵² Isaacs, *Social Development*, p. 16.

¹⁵³ Rieff, *Freud: The Mind of the Moralist*, p. 217.

¹⁵⁴ Isaacs, *Social Development*, p. 424.

devices, the guilty child will fall victim to his jealous anger and destructiveness and punish himself far more severely than will any but the most brutal parent. Parents and educators must instead play the part of a balanced and developed super-ego. 'What is required', she argued, 'is the fostering of the child's belief in love and his sense of security in the real world. And this, provided his inner difficulties are not such as to make him unresponsive to training, is best fostered by a stable, ordered environment and the trust and consideration of the adults upon whom he leans.'¹⁵⁵ The educator, then, can never forgo her function as the super-ego. But 'if she is to help the child to attain security in the real world of social relations, she must exercise that function not for the purpose of prohibitions and punishments, but towards positive ends, opportunities and achievements. She must be on the side of reality of the child's own activity.'¹⁵⁶

Susan Isaacs's moral message is no longer popular. Her enthusiasm for the nuclear family, her hope that women would find 'normal fulfilment in marriage and motherhood', her conviction that therapists should try to turn difficult children into useful citizens and satisfactory parents – all excite the suspicion, and perhaps the scorn, of the intelligentsia. Feminists suggest that she legitimised patriarchy; anti-psychiatrists argue that she perverted therapy to reproduce social subordination; and socialists point to the links between the stable family and the demands of capitalism. It is now conventional to emphasise the limitations, rather than to praise the achievements, of the nuclear family. Popularised by Bloomsbury during Isaacs's own life-time, and revitalised by the gurus of the counter-culture in the 1960s, this attitude has now been institutionalised in social science syllabuses. But her analysis rested on professional experience rather than personal prejudice. Brought up in a difficult family, she was personally more disposed to hedonistic bohemianism than to conventional motherhood. Her practical experience with disturbed children forced her to recognise the importance of family bonds. She repeatedly emphasised the obligations of the father as well as the mother; the family rested on self-sacrifice and mutual obligation. Like Freud, she emphasised the family's limitations whilst accepting its peculiar virtues.

Susan Isaacs and the profession of educational psychology

Susan Isaacs cultivated a remarkably wide range of institutional connections and intellectual interests. She acted as a point of contact between such disparate groups as academic psychologists, clinical psychoanalysts, progressive educationalists, and prospective teachers. She was a highly effective and accurate populariser of Freud; and she did more than anyone else of her generation to introduce educational psychologists to the work of Jean Piaget and Melanie Klein.

She drew her professional patrons from four somewhat ill-assorted groups: academics, teacher trainers, psychoanalysts, and a private businessman. T. H. Pear

¹⁵⁵ *Ibid.*, p. 417.

¹⁵⁶ *Ibid.*, p. 456.

introduced her to psychology while she was reading philosophy at Manchester University and showed some of her writings to C. S. Myers, who arranged for her to take an MA in psychology at Cambridge.¹⁵⁷ J. C. Flugel undertook her first analysis. She later became a member of Melanie Klein's inner circle, and a close friend of Joan Rivière and Nina Searl. Sir Percy Nunn established a Department of Child Development at the London Institute of Education with her in mind and appointed her its first head. Geoffrey Pyke funded the Malting House School project out of his profits from the metal markets, acting as a benevolent, if difficult and eccentric, private patron.

Isaacs lacked Burt's advantage of having formed intimate contacts with a generation of psychologists during her undergraduate and postgraduate training. She went to Manchester rather than Oxford; never visited Wurzburg; and spent only a year in postgraduate work in Cambridge, where she was a mature student, soon to be married. But she rapidly established her position in psychology in London after the First World War. She was a member of the British Psychological Society for most of her professional life, serving on the editorial board of the *British Journal of Educational Psychology* and dominating the Committee for Research in Education; and she was a member of the Council of the National Institute of Industrial Psychology between 1921 and 1929 and of its advisory committee on vocational guidance between 1923 and 1931. Before moving to the London Institute of Education in 1933, she taught courses in psychology for the Workers Education Association, for the University of London and for the LCC.

She provided central and local educational authorities with evidence and advice. Her memorandum to the Hadow Committee on Infant and Nursery Schools formed, together with Burt's evidence, the basis of a long chapter on 'the mental development of children up to the age of seven'.¹⁵⁸ At the request of the Wiltshire Education Committee, she designed a series of record cards, intended to encourage teachers to monitor the performance of individual pupils and directing their attention to their home circumstances, physical conditions, abilities, attainments, interests, and temperaments.¹⁵⁹ She also gave evidence on children in institutions to the Home Office Care of Children Committee.¹⁶⁰

She was deeply involved with practical problems of wartime evacuation. In the 1930s, the government, fearful of heavy casualties from bombing, particularly among school children, had drawn up elaborate plans to evacuate urban families

¹⁵⁷ Gardner, *Susan Isaacs*, pp. 41–2.

¹⁵⁸ Board of Education. *Report of the Consultative Committee on Infant and Nursery Schools* (1933), pp. 69–85. Appendix 3 (pp. 215–41) reprinted excerpts from Burt and Isaacs' evidence. See also Isaacs, 'Education of Children under Seven Years of Age. Memorandum submitted to Hadow Committee', *Brit. J. Educ. Psych.* Vol. 1 Pt. 3 (1931), pp. 262–5.

¹⁵⁹ Susan Isaacs, R. A. C. Oliver, and H. E. Field, *The Educational Guidance of the School Child: Suggestions on Child Study and Guidance Embodying a Scheme of Pupils' Records* (1936). Cf. Gillian Sutherland, *Ability, Measurement and Merit* (1984), p. 240.

¹⁶⁰ For the text of this evidence, see Isaacs, 'Children in Institutions', pp. 208–36.

and disperse them around the countryside.¹⁶¹ No sooner had the phony war broken out than the plans were put into operation.¹⁶² In September, 1939, some 750,000 school children, 542,000 mothers with young children, 12,000 expectant mothers, and 77,000 other people were evacuated from cities threatened with heavy bombing.¹⁶³ This immediately created strains. The simple act of travelling away from home, let alone settling in a new area, was an alien experience to most evacuees: in 1939 less than half the population had left home for a single night in the whole year.¹⁶⁴ The billeting was atrociously organised, with children kept in the dark about where they were going and the rural areas ill-prepared to look after them.¹⁶⁵ Many host families were astonished by the state of the evacuees, complaining about their poor health, shoddy clothes, bad habits and dubious hygiene.¹⁶⁶ In Susan Isaacs's delicate phrase, 'the town was ill at ease in the country. The country was shocked at the manners and morals of the town.'¹⁶⁷ The result was that, as soon as the migration had been accomplished, it began to reverse itself. By January 1940, according to Isaacs, 86–88 per cent of mothers with young children were at home again.¹⁶⁸ Isaacs co-ordinated one of four inquiries into all this, a detailed study of the evacuation in Cambridge, monitoring the progress of the 3,000 children evacuated from Tottenham and Islington, and made numerous practical suggestions for authorities planning similar migrations in the future.¹⁶⁹ She suggested that future plans should be based on an 'understanding of human nature, of the ways in which ordinary parents and children feel and are likely to behave';¹⁷⁰ that social service employees and teachers should be more closely involved in migration; and that children should be provided with activities to occupy their time and distract their attention.

Isaacs's peripatetic academic career meant that she taught a disparate group of people. The audience of her WEA classes included Lionel (later Lord) Robbins and a highly articulate rag-and-bone man. Her students at the Department of Child Development, although few, went on to hold influential positions in teacher training colleges in England and the Commonwealth.

Like Burt, she was an eloquent and enthusiastic populariser of psychology. Under the name of Ursula Wise, she wrote a 'problems column' for *The Nursery*

¹⁶¹ John Macnicol, 'The Effect of the Evacuation of Schoolchildren on Official Attitudes to State Interference', Harold L. Smith, *War and Social Change. British Society in the Second World War* (Manchester, 1986), pp. 10–11.

¹⁶² *Ibid.*, p. 8.

¹⁶³ Richard Padley and Margaret Cole, *Evacuation Survey. A Report to the Fabian Society* (1940), p. 42.

¹⁶⁴ Macnicol, 'The Effect of the Evacuation', p. 4.

¹⁶⁵ *Ibid.*, pp. 12–13.

¹⁶⁶ *Ibid.*, pp. 15–16.

¹⁶⁷ Isaacs, *The Cambridge Evacuation Survey*, p. 2.

¹⁶⁸ *Ibid.*, p. 1. See also, Macnicol, 'The Effect of the Evacuation' pp. 14–15.

¹⁶⁹ The research committee included, among others, John Bowlby and Melanie Klein; and the consultative committee included F. C. Bartless, A. M. Carr-Saunders, Ruth Darwin, M. Ginsberg and Gilbert Ryle. Apart from the Fabian Society studies, the other inquiries were: Barnett House Study Group, *London Children in Wartime Oxford. A Survey of Social and Educational Results of Evacuation* (1947), and William Boyd (ed.), *Evacuation in Scotland. A Record of Events and Experiments* (1944).

¹⁷⁰ Isaacs, *Cambridge Evacuation Survey*, p. 9.

Susan Isaacs and the psychology of child development

World, a weekly magazine for parents and nursemaids. She published two popular books on young children, *The Nursery Years* (1929) and *The Children We Teach* (1932). She also contributed articles to a variety of periodicals, notably *The New Era*, *Home and School* and *The Spectator*, and broadcast on the BBC.¹⁷¹ She enjoyed a considerable gift for presenting Klein's somewhat abstruse theories in clear and convincing language. Thanks to her efforts, ideas which might have been confined to a clique of psychoanalysts were brought before the educated public.

¹⁷¹ For examples of these talks and articles, see Smith (ed.), *To Understand and To Help*, pp. 263–313.

The structure and status of a profession

As Cyril Burt's career demonstrates, the profession was increasingly divided into two branches, each with its own body of expertise and area of competence. One was based on the universities and teacher training colleges and concerned mainly with teaching and research. Its practitioners defined academic orthodoxy and transmitted that orthodoxy to their pupils. The other was based in the school psychological services and the child guidance clinics. Its practitioners dealt with subnormal, delinquent, and difficult children, applying what they had learned in the universities and refining psychological doctrine in the process. In practice, of course, there was a considerable degree of overlap between the two branches. Academics often did some work for Local Education Authorities and usually tried to base their arguments on the evidence and experience of their more practical colleagues. Applied psychologists kept their contacts with the universities and tried to combine academic research with their more practical duties.

The organisation of teaching and research

University College, London served as the academic headquarters of educational psychology until at least the Second World War.¹ Founded by 'an association of liberals' in revolt against Oxford and Cambridge, the College originally catered for modern rather than ancient subjects, for non-conformists rather than Anglicans, and for scientists rather than metaphysicians.² It modelled itself on Scottish and German universities, using as its tools lectures and written examinations: much that is characteristic of professional academic life in England has its origins here.³ It pioneered the teaching of a number of science subjects and its

¹ On psychology in University College, London, see J. C. Flugel, 'One Hundred Years or So of Psychology at University College, London', *Bull. Br. Psych. Soc.* Vol. 27 (1954), pp. 21–31; Hearnshaw, *Cyril Burt Psychologist* (1979), pp. 128–53, and *A Short History of British Psychology 1840–1940*, (1964), pp. 174–7. On the history of University College, see N. Harte and J. North, *The World of University College, London 1828–1978*.

² Harte and North, *University College, London* pp. 4–5 in introduction by N. Annan.

³ *Ibid.*, p. 46.

products went out to colonise other universities. The Galton Laboratory – the first institute of research in English academic life – was attached to the College.⁴

Psychology found it easy to put down roots in this soil. An empirical philosophy of mind had been taught there since Croom Robertson's appointment to the Professorship of Mind and Logic in 1866. Robertson regarded psychology as a fundamental part of philosophy, interested himself in physiology and neurology, and agitated for the professionalisation of thought about the human mind: he founded *Mind* in 1876 to combat the informality of English thought which 'has undoubtedly prevented philosophy from obtaining the scientific consideration which it holds elsewhere' and to foster 'such habits of specialised investigation in psychology as are characteristic of the workers in other departments of science'.⁵ His enthusiasm reinforced the bias of the College. In other universities, personal enthusiasm was frustrated by institutional inertia; in University College institutional enthusiasm had hitherto been frustrated by personal incompetence: the Reverend John Hoppus had paralysed the teaching of philosophy during the thirty-seven years of his professorship (1829–1866).⁶ When the College finally found a man of ability – James Sully – it gave him generous institutional support.⁷

Charles Spearman dominated the department from 1909 to 1931. He 'established the first really live and important school of psychological research in this country', planning a coherent series of investigations and emphasising research rather than undergraduate instruction.⁸ Seven out of the first ten and twelve out of the first twenty Monograph Supplements to the *British Journal of Psychology* came out of his department.⁹ When Burt succeeded Spearman as professor it was 'unquestionably the senior chair of Psychology in the Country'.¹⁰ Burt reinforced its pre-eminent position, increasing the number of undergraduates from 5 in 1931 to 103 in 1947, and of postgraduates from 12 to 71.¹¹

The London Institute of Education (until 1932 the London Day Training College) complemented the work of University College.¹² It provided a crucial point of contact between the university and teacher training and between academic psychology and the practical problems of childhood. Psychology featured in the syllabus from the first, with both Sir John Adams and Sir Percy Nunn maintaining a keen interest in the subject. Psychologists were eventually given jobs on the staff: Cyril Burt, H. R. Hamley and Susan Isaacs all spent some time there. By 1935 the

⁴ *Ibid.*, p. 46.

⁵ 'Editor's Preparatory Words', *Mind* Vol. 6 (January 1876), p. 1.

⁶ Flugel, 'One Hundred Years or So', pp. 22–3. ⁷ Hearnshaw, *A Short History*, pp. 132–6.

⁸ *Ibid.*, p. 201.

⁹ Flugel, 'One Hundred Years or So', p. 26.

¹⁰ Hearnshaw, *Cyril Burt*, p. 128.

¹¹ *Ibid.*, p. 145. For a list of theses presented by Burt's students, see Appendix 2.

¹² On the Institute, see University of London Institute of Education: *Studies and Impressions 1902–1952*. University of London Institute of Education: *Studies and Reports*; D. E. M. Gardiner, *Susan Isaacs* (1969); Hearnshaw, *Cyril Burt*, pp. 42–5.

Institute was 'becoming the focus of educational study not for London only, but for the British Commonwealth'.¹³

Educational psychology soon became one of the Institute's most popular subjects. The syllabus for the Teacher's Diploma included a compulsory introductory course on psychology and an optional advanced course, and both were rapidly oversubscribed. Burt was forced to give elementary practical classes to eighty or ninety students, and he could only keep his advanced class down to manageable size by turning away qualified students. He also found that more and more students wanted to do further research after taking their Teacher's Diploma, and by 1932 his research class included forty-six students, of whom thirty-five were preparing theses.¹⁴ 'If Dr. Burt had not been moved to University College', Nunn noted, 'I should have felt obliged to advise the Provisional Delegacy to recommend either that he should be made a full-time professor of education or, if that were impracticable, that he should have a half-time assistant.'¹⁵ Students found that lectures on psychology introduced them to practical educational problems and provided them with insights into children's mental processes; they regarded them as the highlights of a course which generally 'bore little relation to the actuality of classroom experience'. They were also impressed by the obvious enthusiasm of their teachers. "'Child-centred" education, "free authority" and all the other catchwords, were then very new', one of them recalled. 'I had the impression (or have it looking back) that the staff had the enthusiasm of missionaries for a new faith. Some of this enthusiasm was caught by the students; my impression was of very stimulating and exciting teaching about education, some of it all the more so for being directed against existing practices.'¹⁶ Before the foundation of the department, the psychology of the young child tended to be an interest of isolated academics and educationalists; after its foundation it had found an influential institutional focus.

Psychology clearly found some academic patrons. Yet their generosity should not be over-emphasised; in comparison with the United States it seems rather derisory. Opposition to the subject was remarkably prolonged. Croom Robertson's complaint in 1883 that academic neglect was preventing psychology from turning itself into a professional science – there were too few posts and their duties were too onerous¹⁷ – still applied over half a century later: as late as 1939 there were only six psychology chairs in England and only about thirty university lectureships.¹⁸ Within London help was minimal: it stands out only by virtue of the surrounding

¹³ Sir Michael Sadler, University of London Institute of Education: *Studies and Reports* 6 (1935), p. 6.

¹⁴ LIEA, File on Burt, Professor of Education 1924–32: notes on the appointment of Burt's successor, p. 1. Cf. *Ibid.*, letter from Burt to Nunn, 25 September 1932.

¹⁵ *Ibid.*, Burt's successor, p. 3.

¹⁶ LIEA, Jubilee Lectures, 1952. Correspondence. W. Humphreys to Miss Gordon, 6 April 1952.

¹⁷ *Mind* Vol. 29 (January 1883), p. 2.

¹⁸ H. Misiak and V. S. Sexton, *History of Psychology: An Overview* (New York, 1966), p. 228.

flatness. The title of Spearman's Chair was not changed from the Chair of Mind and Logic to the Chair of Psychology until 1928. Hearnshaw recalls the 'miserable accommodation of the main London departments before 1950'.¹⁹ The department was poor and overcrowded. Only one hand-calculating machine was available for fifty PhD students – and Burt often took that home for his own work.²⁰ Some students took psychology as a soft option, regarding it as science with the difficult bits left out, and the level of mathematical ability was appalling.²¹ University College lacked the funds to cope with the increased popularity of psychology. Dr Ralph Hetherington recalled that after the Second World War the department was 'very much overcrowded with lots of students, all clamouring to do degrees and at the same time with not a great deal of apparatus and certainly not a great deal of room'. This was a world of 'enormous classes, crowded classrooms'; he could not 'remember any small discussion groups at all'. Students still had to do experiments with a Hipps chronoscope, an 'antiquated bit of apparatus' which 'looked like a Victorian model of some kind'.²²

The academic world's parsimony forced educational psychology to turn to outside patrons, including the medical profession, and to a variety of voluntary organisations, notably the British Psychological Society, the National Institute of Industrial Psychology, and the Eugenics Education Society.

After a period of wariness, the medical profession made important contributions to educational psychology, sometimes encouraging further research, sometimes acting as an enthusiastic audience for psychological techniques. The epidemic of shell-shock cases during the Great War revolutionised the relationship between medicine and psychology.²³ Before the War, most doctors had been decidedly sniffy about the new discipline, regarding mental disorders as symptoms of physiological problems, and treating an interest in Freud as a sign of crankiness.²⁴ But the War made psychotherapy respectable: institutions sprang up to treat patients and train therapists; a flood of books and articles appeared on psychotherapy and psychopathology; even general practitioners found themselves mugging up on the writings of psychologists such as W. H. Rivers, T. H. Pear, William McDougall and C. S. Myers.²⁵

The study of shell-shock broke down conventional assumptions about the gulf between the sane and insane, as young men of good breeding and impeccable

¹⁹ 'Sixty Years of Psychology', *Bull. Br. Psych. Soc.* Vol. 46 (January 1962), p. 7.

²⁰ Hans Eysenck, *Rebel with a Cause. The Autobiography of Hans Eysenck* (1990), p. 55.

²¹ Author's interview with Hans Eysenck, 26 May 1982.

²² BPSA Tapes and Transcripts, Filing Cabinet 1, drawer 2, R. Hetherington interviewed by Kenna.

²³ Martin Stone, 'Shellshock and the Psychologists', in W. F. Bynum, Roy Porter and Michael Shepherd (eds.), *The Anatomy of Madness. Essays in the History of Psychiatry. Vol 2: Institutions and Society* (1985), pp. 242–71.

²⁴ *Ibid.*, pp. 243–5.

²⁵ W. H. Rivers, *Instinct and the Unconscious* (Cambridge, 1920); W. McDougall, *An Outline of Abnormal Psychology* (1926); C. S. Myers, *Present Day Applications of Psychology: With Special Reference to Industry, Education and Nervous Breakdown* (1918); G. Elliot-Smith and T. H. Pear, *Shellshock and Its Lessons* (1919).

character were turned, by a few months in the trenches, into gibbering idiots.²⁶ It also created a massive demand for psychotherapy. In 1920, for example, Hugh Crichton Miller set up an Institute of Medical Psychology (later renamed the Tavistock Clinic) in a private house in Tavistock Square.²⁷ The clinic, the first of its kind in the country, aimed at treating patients who suffered from hysteria, abnormal fears and obsessions, neurasthenia, and behaviour disorders. Its general approach was eclectic, embracing 'all the known methods of psychotherapy, such as various forms of suggestion, re-education and mental analysis',²⁸ but it laid particular emphasis on Freudian psychoanalysis. The clinic had always been interested in child psychology – indeed, its first patient was a child – and in 1926 it opened a special children's department. It put particular store on recruiting and training new workers in the field of mental health, providing training courses for medical practitioners in psychotherapy, and for psychologists in educational and clinical psychology. Its overall approach was interdisciplinary, and it appointed a psychiatric social worker in 1925, an educational psychologist (Miss C. Simmins) in 1928, and a child psychotherapist (Miss A. T. Alcock) in 1933.²⁹ Its incorporation into the National Health Service in 1948 both alleviated its pressing financial problems and underlined its importance in the emerging mental health services. The post-war clinic boasted a distinguished staff, including John Bowlby, Dugmore Huner, Melanie Klein, Money-Kyrle, and D. W. Winnicott. It provided a three-year training course for child psychotherapists, which included routine course work, a personal analysis with a member or associate member of the British Psychoanalytical Society, experience with young children, and seminars on child development, psychopathology, social case work, and psychological testing.³⁰

School Medical Officers had to learn at least something about the new technology of mental measurement. Although they were legally responsible for examining and certifying mentally deficient children, they generally lacked any specialised knowledge of the problem, and had to rely on the expertise of psychologists. From 1920 onwards they were obliged to get acquainted with the technical details of intelligence testing. They needed to secure the Board of Education's approval of their qualifications before their certificates of deficiency were legally valid, and the Board normally withheld this unless they attended at least the first part of a two part course on mental deficiency. Established in 1920 by the Central Association for Mental Deficiency/Welfare (notably by Evelyn Fox), this course dealt with the

²⁶ Burt, *Subnormal Mind*, p. 5.

²⁷ On the Tavistock Clinic, see H. V. Dicks, *50 Years of the Tavistock Clinic* (1970); Hearnshaw, *A Short History*, pp. 284–5; Report of the Committee on Maladjusted Children (Underwood Report, 1955), p. 9; 'Tavistock Clinic and Institute of Human Relations – Training Course for Child Psychotherapists', *Bull. Br. Psych. Soc.* Vol. 33 (1957), pp. 9–12.

²⁸ Quoted in Hearnshaw, pp. 284–5.

²⁹ *Ibid.* p. 285.

³⁰ 'Tavistock Clinic and Institute of Human Relations', p. 12, gives details of the course.

assessment and treatment of defectives in general, and with the technicalities of intelligence testing in particular.³¹

A number of paediatricians were also interested in children's psychological problems. They felt that it was impossible to draw a hard-and-fast line between physical and psychological disabilities, and argued that, without a study of both the normal and abnormal child, adult neuroses and psychosis could never be understood. They were increasingly interested in the child's psychological response to the normal strains of growth and the abnormal strains of serious illness. They paid particular attention to the maladjusted child; in 1918, for example, Dr Hector Cameron published a pioneering book on *The Nervous Child*, based on his experiences in the children's department at Guy's Hospital and exploring the links between emotional and physical health. Paediatricians also found that there was a mounting demand for their services in the child guidance movement. In an attempt to co-ordinate the somewhat hectic growth of the new sub-discipline, the British Paediatric Association even established a Child Psychology Sub-Committee, which reported in 1946.³²

The British Psychological Society also helped to finance research and teaching, but only by throwing membership open to anyone who expressed an interest in the subject. In 1919 Myers persuaded the committee that more members meant more membership fees.³³ Three sections, specialising in educational, medical and industrial psychology, were grafted onto a general section,³⁴ and membership leapt upwards (in late 1918 it stood at 98, in late 1919 it reached 427). The educational section became the largest, followed by the medical section. The Society extended its services: in 1924 it sanctioned the formation of regional branches, bringing detailed and regular psychological discussions to the provinces;³⁵ in 1925 it began to finance the production of the *British Journal of Psychology Monographs*; and in 1926 it founded a permanent library. The Society also supported much more specialised discussion than it had been able to before the reorganisation. In 1921 it formed a standing committee for research in education, sponsored by Susan Isaacs,³⁶ and intended to initiate, co-ordinate and publicise psychological research in education.³⁷ It served as a bureau of inquiry for teachers and published an annual list of psychological work on educational problems. It survived until 1935.³⁸

The Educational Section listened to talks by influential guests: Madame Montessori on child psychology, for example, and P. B. Ballard on intelligence

³¹ Ed. 50/267, Chairman of Medical Committee to the Secretary, medical branch, Board of Education, 23 July 1936; Elliot's minute, 28 July 1936; Sutherland, *Ability, Merit and Measurement*, pp. 84–5.

³² British Paediatric Association, 'Report of Child Psychology Sub-Committee', *Archives of Disease in Childhood* Vol. 21, No. 106 (June 1946), pp. 57–60.

³³ University of Liverpool, British Psychological Society Archives (BPSA), Minute Books, BPS Council Meetings, 1918–24, p. 11.

³⁴ Beatrice Edgell, 'The British Psychological Society', *Brit. J. Psych.* Vol. 27, No. 3 (1947), pp. 120–1.

³⁵ *Ibid.*, p. 123. ³⁶ BPSA, Minute Books, BPS Council Meetings 1918–24, pp. 69–70.

³⁷ *Ibid.*, p. 123.

³⁸ Edgell, p. 124.

tests. It held four meetings jointly with the medical section, then almost a psychoanalytical colony, forcing it to come to terms with Freudian child psychology.³⁹ In 1931 it began to publish a specialist journal, the *British Journal of Educational Psychology*, edited by C. W. Valentine. For some time it had been pushing for more space for articles and notices on education; and for some time *The British Journal of Psychology* had been cramped for space for even the most general articles of psychology. On 29 June 1928, for example, Spearman complained 'that records of a considerable amount of important research in educational psychology carried out in this country was being published in foreign journals because there was no suitable publication in England'.⁴⁰ Finally, after protracted negotiations, it formed an alliance with the Training College Association, taking over half the burden of producing the *Forum of Education* in return for a change in its name to *The British Journal of Educational Psychology*. The Educational Section had found its voice; and the alliance between educationalists and psychologists had yet another direct expression.⁴¹

The National Institute of Industrial Psychology pioneered the application of psychological techniques to vocational guidance and occupational selection.⁴² Founded by Charles Myers in 1921, and financed by a number of firms and foundations, notably Rowntree, Cadbury, Cammell Laird, and the Carnegie and Rockefeller Trustees, the Institute reflected the widespread confidence in corporate planning and managerial expertise invented in the United States and reinforced by the First World War. Myers was soon joined at the Institute by a number of other able psychologists: Dr G. H. Miles was assistant director and secretary, Cyril Burt was senior investigator in charge of vocational guidance, Eric Farmer and May Smith were part-time researchers; Isaacs, Brown, Drever, Edgell, Nunn, Spearman, Thomson, and Valentine were all members of various committees. The technical staff increased rapidly, and by the mid-1930s numbered about forty. Since university departments were small, and jobs in applied educational psychology rare, the Institute was one of the discipline's most important institutions. Its main interest lay in the systematic evaluation of the general and specific abilities of its subjects, including their temperaments, character traits, and intellectual abilities, in order to advise them on their choice of careers and, as a result, eliminate 'the all-too-frequent tragedy of square pegs in round holes'.⁴³

³⁹ *Ibid.*, p. 126.

⁴⁰ BPSA, Minute Books: BPS Council Meetings 1924–28, p. 138.

⁴¹ Edgell, 'The British Psychological Society', pp. 126–7.

⁴² On the Institute, see Denis Doyle, 'Aspects of the Institutionalisation of British Psychology: The National Institute of Industrial Psychology 1921–1939', PhD thesis, Manchester University, 1979; C. S. Myers, 'The Early History of the NIIP', *Journal of the National Institute of Industrial Psychology* Vol. 1, Part 1 (January 1922), *Industrial Psychology* (1929) and *Ten Years of Industrial Psychology* (1932); *Feversham Report*, pp. 171–2; B. Evans and B. Wailes, *IQ and Mental Testing: An Unnatural Science and its Social History* (1981), pp. 74–83.

⁴³ BLPS, National Institute of Industrial Psychology papers, 15/6, press cuttings of Gladys Boyd, 'Careers for the Next Generation'.

The structure and status of a profession

The Institute's work was of three kinds, guidance, research, and teaching. It offered private industry advice on problems of staff selection and training, on production planning and methods of work, and on personnel management; it also did some work for various government departments (the Civil Service Commission, the Post Office, the Ministry of Agriculture and the War Office), and for the Birmingham and Hull educational authorities. Under Burt's guidance, it offered vocational advice to anyone who was willing to visit the Institute and pay a fee, applying a battery of tests over a space of about three hours and then compiling a psychological profile out of the results. The Institute devoted much of its research time to compiling and improving psychological tests, including tests of intelligence, clerical aptitude, manual dexterity, mechanical aptitude and spatial ability. It set up a committee to produce a new British revision of the Stanford-Binet scale, co-opting several members of the Board of Education and Board of Control, including C. A. Richardson, A. F. Watts, James Lumsden, and E. O. Lewis, to help with the job.⁴⁴

In addition, the Institute did a good deal to spread the gospel of intelligence testing and vocational guidance, organising popular lectures throughout the country, and particularly in London; publishing a journal, named successively *The Journal of the NIIP* (1922–31), *The Human Factor* (1932–7) and *Occupational Psychology* (from 1938); providing instruction in industrial psychology for the postgraduate diploma in psychology established by London University in 1922; and offering lectures and courses for school-teachers on vocational guidance and on the Binet-Simon tests.⁴⁵ Its approach to mental testing was far from mechanical; it treated the tests as a means to analysing the child's mind rather than as an end in themselves. Its most common complaint about its pupils was that they showed insufficient sensitivity in applying and interpreting the tests. One was criticised because 'his general attitude to the child tends to be a little wooden and artificial'; another because he was 'rather over-enthusiastic in his acceptance of intelligence test as only indication of potentialities'; and another because she had 'no idea how to approach the child'.⁴⁶

The eugenics movement provided psychology with both ideas and methods. The 'research project' which did most to establish the subject as a profession – the measurement of individual differences in ability – was eugenic in inspiration. 'Eugenics, the art of breeding better men, imperatively demands reliable measurement of human traits of body and mind, of their inter-relations, and of their modification by environmental factors.'⁴⁷ Eugenics also provided institutional support for the biological and mathematical disciplines upon which psychology

⁴⁴ NIIPP, 13/4, Committee on British revision of new Stanford-Binet Tests.

⁴⁵ The Institute took twenty-three students in 1930–1, seventeen in 1934–5, thirteen in 1935–6, and twenty-six in 1936–7.

⁴⁶ NIIPP, 13/1. Papers on course for teachers on vocational guidance and Binet-Simon tests 1930–39.

⁴⁷ Burt, 'Francis Galton and his Contribution to Psychology', *British Journal of Statistical Psychology* Vol. 15 (1962), pp. 39–40.

rested. It inspired the foundation of the first research institute devoted to biology and mathematics, the Galton Eugenics Laboratory in the University of London. Directed between 1907 and 1933 by Karl Pearson, it became the centre of biometrical research in England, pioneering a new style of scientific research, carried out by teams, organised by an institution, conducted by full-time workers, and financed by a combination of public, university and private funds,⁴⁸ and revolutionising the application of statistical techniques to voluminous data, particularly data about biological populations.⁴⁹ In 1901 Galton, Pearson and Weldon founded *Biometrika*, a journal devoted to the application of mathematics to biology; and from 1934 onwards, under the editorship of Sir Ronald Fisher, the *Annals of Eugenics* revitalised genetic theory.⁵⁰

Psychologists turned to eugenicists such as Karl Pearson, George Udny Yule and Ronald Fisher for instruction in statistical techniques. The Galton Laboratory provided a statistical training for students from a variety of biological sciences.⁵¹ 'I wonder if anything would induce you to take pity upon poor psychologists who are struggling with statistics', Spearman pleaded to Fisher.⁵² Ernest Jones was 'profoundly' impressed by Pearson's *The Grammar of Science* and went to see him about studying mathematics as an aid to psychology.⁵³ Burt put on record 'the deep debt that my research-students and I owed to Fisher and to his staff for their kindly but critical assistance throughout the period that we were members of the same foundation' (University College, London).⁵⁴ Raymond Cattell thanked Fisher for providing him with 'continual advice on statistical problems'.⁵⁵

The *Eugenics Review* publicised articles on academic psychology in a period when publishing openings were few. Burt published his first sustained argument on the inheritance of mental characteristics in the *Review* for 1912.⁵⁶ One of the first detailed considerations of Binet's mental tests, again by Burt, appeared in the *Review* for 1914. The use of intelligence tests in the recruitment of officers in the American army was first publicised in England in the *Review*. When Burt lectured in London in 1909 and 1910 to the Eugenics Society, he stayed with Spearman, a fellow eugenicist.⁵⁷ The Society was also responsible for the publication of one of

⁴⁸ *Ibid.*, pp. 104–6.

⁴⁹ Lyndsay Farrall, *The Origins and Growth of the English Eugenics Movement* (New York, 1985), pp. 108, 116.

⁵⁰ Burt, 'Francis Galton and his contribution to Psychology', p. 41 n 1, suggests how closely Burt followed these developments.

⁵¹ B. Norton, 'Karl Pearson and Statistics: The Social Origins of Scientific Innovation', *Social Studies of Science* Vol. 8 (1979), p. 4.

⁵² University of Liverpool, British Psychological Society Archives, Spearman Papers, Steel Cabinet 1, Boxfile V, Spearman to Fisher, 1/12/1928.

⁵³ *Ibid.*, Tapes and Transcripts 10, Dr Ernest Jones interviewed by J. Kenna, 7 August 1957, p. 7.

⁵⁴ Burt, 'Sir Ronald Fisher', *British Journal of Statistical Psychology* Vol. 15 (1962), p. 197.

⁵⁵ Cattell, *The Fight for Our National Intelligence* (1937), p. xvii.

⁵⁶ *Eugenics Review* Vol. 4, pp. 168–200.

⁵⁷ BPSA, Miscellaneous Material, Filing Cabinet 2, drawer 3, Boxfile 1. C. Burt, 'Meeting with Spearman, etc. in Oxford', p. 2.

the most controversial works of psychology of the inter-war period, Raymond Cattell's *The Fight for Our National Intelligence*. Written while Cattell was a Eugenics Society Research Fellow,⁵⁸ and embellished with introductions by such eugenic luminaries as Lord Horder, Leonard Darwin, and F. P. Armitage, it presented a catastrophic picture of a nation plunging towards disaster, its foundations undermined by a decline in the average intelligence of the population of one IQ point per decade. The book's language was highly intemperate – it suggested, for example, that the population was increasingly being recruited from 'sub-men'⁵⁹ – and it provoked sensational headlines in the press ('Ban Balmy Babies' was one of the most alliterative) and hostile reactions among the intelligentsia.⁶⁰ Leading eugenicists such as C. P. Blacker, the Society's General Secretary, and Julian Huxley had a sneaking sympathy for Cattell's critics, conceding that his sampling methods were inadequate, his language immoderate, and his conclusions far-fetched.⁶¹ When Cattell applied for further funds from the Society in 1949 to carry out a survey of intelligence in Leicester, C. P. Blacker, the Society's General Secretary, confessed that 'I am a little bit nervous of Cattell ... Cattell drew upon himself some vitriolic attacks from anti-eugenicists, particularly those located in those days, at the LSE. We do not want the same thing to happen again now. His book was not an entirely unmixed blessing to the Society.'⁶²

Psychologists in the education services

In 1969 Burt celebrated the growth of the school psychological services, arguing that 'few practical branches of a new science have expanded so rapidly'.⁶³ The Summerfield Report recorded that there were over 300 full-time educational psychologists in England and Wales and nearly 100 posts yet to be filled, and called for a substantial expansion of the profession in the near future.⁶⁴ In the twilight of his life Burt had been transformed from an isolated pioneer into a founder of a dynamic new profession.

Yet his appointment to the London County Council in 1913 was followed by a long hiatus in the development of the discipline. Little was done to recruit new

⁵⁸ There were ten candidates for the Fellowship in 1936, three from psychology, two from statistics, and one each from physiology, economics and anthropology.

⁵⁹ Cattell, *The Fight for Our National Intelligence*, p. 2.

⁶⁰ Richard A. Soloway, *Demography and Degeneration. Eugenics and the Declining Birthrate* (1990), pp. 215–16. Cattell did win one illustrious convert among the intelligentsia: W. B. Yeats. See David Bradshaw, 'The Eugenics Movement in the Thirties and the Emergence of *On the Boiler*', in Deirdre Toomey (ed.), *Yeats and Women* (1991), pp. 189–215, and John Carey, *The Intellectuals and the Masses. Pride and Prejudice among the Literary Intelligentsia 1880–1939* (1992), pp. 13–15.

⁶¹ Soloway, *Demography and Degeneration*, p. 215.

⁶² Wellcome Institute, Contemporary Medical Archives Centre, Eug./C. 62. C. P. Blacker to J. A. Fraser Roberts, 23 February 1949.

⁶³ Burt, 'Psychologists in the Education Services', *Bull. Br. Psych. Soc.* Vol. 22 (1969), p. 1a.

⁶⁴ Department of Education and Science, *Psychologists in Education Services* (HMSO, 1968) (Summerfield Report). For a summary of the main points of the report, see pp. xi–xix.

psychologists into the educational services until well into the twenties. The Board of Education was paralysed by lack of money: it had enough to do to preserve existing services without employing luxuries like psychologists. The Geddes Committee, which was prepared to recommend an increase in the size of classes and a freeze on secondary school expansion, could hardly be expected to tolerate expenditure on school psychologists.⁶⁵ Teacher training colleges had been offering elementary courses in psychology for some time, and officials felt that most teachers possessed enough expertise in the discipline to deal with all but the most esoteric problems.⁶⁶ The school doctors had managed to retain control over the area in which educational psychologists might be expected to speak with the most authority: the examination and certification of the mentally deficient. A number of officials in both 'M' Branch and 'E' Branch of the Board of Education had acquired a considerable expertise in both the theory and the practice of educational psychology, and they did not hesitate to question the arguments of the professionals wherever it seemed appropriate. Some of them may have hoped to avoid the cost of employing school psychologists by disseminating psychological information through such publications as the *Handbook of Suggestions for Teachers* (1927).⁶⁷ Many administrators preferred to leave the field of mental health to voluntary agencies: only when committed volunteers and professional enthusiasts had pioneered a discipline, they argued, should the state begin to support it.⁶⁸

Despite these obstacles, Local Education Authorities managed to appoint a handful of school psychologists from the late twenties onwards. Urged on by a growing body of experts, and confronted by mounting problems of discipline and instruction, some authorities looked more and more favourably on educational psychologists. Teachers were increasingly aware of the problem of maladjusted children – that is, of children whose academic achievements or social behaviour did not match up to their innate abilities – and they felt the need of help from psychological experts.⁶⁹ They realised that educational psychology was not simply concerned with testing intelligence, but that it embraced the problem of the child's adjustment to his environment. Several well-established voluntary agencies, notably the Home and School Council and the British Social Hygiene Council, helped to sharpen this focus on the child's adjustment to his environment,⁷⁰ persuading many teachers that their duties included the shaping of the child's emotions as well as the training of his mind.⁷¹ The child guidance movement,

⁶⁵ Brian Simon, *The Politics of Educational Reform 1920–1940* (1974), pp. 33–58.

⁶⁶ Ed 50/273, 'Psychologists in the Service of Local Education Authorities', Memorandum by J. Lumsden, 27 June 1938, p. 1.

⁶⁷ See, for example, Board of Education, *Handbook of Suggestions: For the Consideration of Teachers and Others Concerned in the Work of Public Elementary Schools* (1927), Appendix A, pp. 422–7.

⁶⁸ Ed 50/47, Letter from Gough to Trevelyan, 9 August 1925. Trevelyan to Gough, p. 1.

⁶⁹ Lumsden's Memorandum, pp. 1–2.

⁷⁰ *The Voluntary Mental Health Services. The Report of the Feversham Committee* (1939), pp. 147–8.

⁷¹ *Ibid.*, p. 175.

which reached Britain from the United States in 1927, built up a considerable momentum in the 1930s, and helped to popularise a psychological approach to the treatment of children's behavioural problems. Psychological expertise proved to be so popular with some magistrates – particularly those who had to deal with a lot of young delinquents – that demand exceeded supply.⁷²

The practice of relying on School Medical Officers to examine and certify children suspected of mental deficiency also came under increasing strain from the late twenties onwards. The Board was increasingly confronted with evidence of poor training in psychology among its doctors, and the CAMW persuaded it to approve of an extension of the course and the provision of a second course at the London School of Hygiene and Tropical Medicine. Dr Tredgold, the Chairman of the Medical Committee of the CAMW, wrote to the Board to explain the situation:

We have observed that during the last four or five years an increasingly large percentage of very inexperienced Medical Officers, with little or no knowledge of mental testing have attended the courses. They either do not know the standardised tests which are now generally in use, or, even if they have used them, their knowledge of the scoring of results of the tests is so limited that their findings may be, and often are, quite unreliable. In other instances they have themselves told us (and we have also observed it this year) that they are very much at sea in making the approach to the children whom they are about to test.⁷³

These doubts about the competence of the School Medical Officers reinforced appeals within the Board of Education for educational psychologists to be employed to advise on retarded children. In 1931, for example, Dr Ralph Crowley, a member of 'M' branch of the Board of Education who served on both the Wood Committee on mental deficiency and the Brock Committee on voluntary sterilisation, lent his support to educational psychology. 'A large Authority can hardly expect to tackle seriously the problem of its retarded children', he minuted, 'unless there is available someone who has made a more especial study of educational psychology than is likely to have fallen to the lot of a member of the teaching staff or of an officer of the Authority engaged in other types of work.'⁷⁴

The child guidance movement grew rapidly between the wars, drawing strength from a wide variety of traditions, indigenous and international.⁷⁵ The problem of

⁷² *Ibid.*, pp. 144–5. Cf. Ed 50/273, Henderson to Strong, 14 November 1935, on the problem of payment for psychological reports.

⁷³ Ed 50/267. Chairman Medical Committee to the Secretary, Medical Branch, Board of Education, 23 July 1936. ⁷⁴ Minute dated 1.9.31, quoted in Lumsden's memorandum, p. 2.

⁷⁵ On child guidance, see Gertrude Keir, 'A History of Child Guidance', *Brit. J. Educ. Psych.* Vol. 22 (1952), pp. 5–29; M. McCallum, 'Child Guidance in Scotland', *ibid.*, pp. 79–88; M. Bridgehead, *Pioneer Work with Maladjusted Children* (1971); Olive Sampson, *Child Guidance, its History, Provenance and Future* (British Psychological Society, Division of Education and Child Psychology; Occasional Papers Vol. 3, 1980); D. R. MacCalman, 'The Child Guidance Movement', *Journal of Mental Science* Vol. 85 (1939), pp. 356ff, 505ff; H. Wittmar, *Psychiatric Clinics for Children* (1940). For an up-to-date account see Deborah Thom, 'Wishes, Anxieties, Play and Gestures', in Roger Cooter (ed.), *In The Name of the Child. Health and Welfare, 1880–1940* (1992), pp. 200–20.

shell-shock victims had stimulated interest in psychological therapy, and the end of the Great War brought a rash of private initiatives in the field of mental health. In 1920 Dr Crichton Miller established an Institute of Medical Psychology (later renamed the Tavistock Clinic), with facilities for treating disturbed children, and in 1926 the Jewish Health Organisation started the East London Child Guidance Clinic, housed in the Jewish Hospital, Whitechapel, under the direction of Dr Emanuel Miller.⁷⁶ A grant from the Commonwealth Fund of New York helped to convert these scattered initiatives into a vital movement.

The child guidance movement was already well-established in the United States when the Great War broke out. In 1909 the Chicago Juvenile Psychopathic Institute was founded under Dr William Healy to provide psychiatric examinations of adolescents who came before the juvenile court. The clinic included a psychiatrist, a psychologist, a physician and (after 1917) a social worker; its aim was both to understand and, if possible, to prevent the development of juvenile misbehaviour. Under the impetus of the popular mental hygiene movement, child guidance began to spread throughout the country. In 1919 Thomas Salmon, the medical director of the National Committee on Mental Hygiene, managed to persuade the Commonwealth Fund that its campaign against juvenile delinquency needed to be based on the sciences of psychiatry and psychology. Between 1921 and 1940 the Fund devoted considerable financial resources to establishing community clinics devoted to the psychiatric study and treatment of disturbed children.⁷⁷ In particular, it responded warmly to an English appeal for financial support for clinics. In 1926 a representative of the Fund visited England to help set up a Child Guidance Council, and soon afterwards a group of English enthusiasts visited America as guests of the Fund to study American clinics. Twelve experienced social workers were also given a year's training in New York, again at the expense of the Fund. In 1928 the London Child Guidance Training Centre Clinic was set up in Islington, with William Moodie as its first Director and Lucy Fields as its first psychologist. The Commonwealth Fund agreed to finance the clinic for its first five years, on the assumption that, if the experiment was successful, the London County Council would then take it over. It immediately dealt with between 350 and 400 cases a year, including backward children, delinquents, and 'nervous' and 'unmanageable' children. The Child Guidance Council also conducted a vigorous propaganda campaign, intended to sell its aims, methods and achievements to public authorities and educationalists.⁷⁸

Following the American example, English clinics employed a team of experts, with each one making a specific contribution to the analysis and cure of the child's

⁷⁶ *The Health of the School Child. Annual Report of the Chief Medical Officer of the Board of Education for the Year 1934* (1935), p. 114. Burt, *Young Delinquent*, Appendix 2, pp. 617–627.

⁷⁷ Margo Horn, 'The Moral Message of Child Guidance 1925–1945', *Journal of Social History* Vol. 18, No. 1 (1984), p. 26; Burt, *Young Delinquent*, p. 617.

⁷⁸ *Feversham Report*, pp. 149–50; Keir, 'History of Child Guidance', pp. 23–4.

problems. Ideally, psychiatrists, psychologists, and social workers co-operated in studying a selected group of children in order to discover why they behaved abnormally; they then tried to modify their behaviour by uprooting its causes. But the clinics were not all of a piece: some emphasized educational, and others medical, problems, with the result that educational psychologists had different functions and different amounts of power in different child guidance teams.⁷⁹ The Psychological Department in Leicester might be taken as an example of a clinic which allowed educational psychologists the greatest opportunities to demonstrate their skills:

The psychologist's duties are mainly concerned with examination and treatment of backward children and difficult behaviour problems referred by teachers in the city schools. The work includes mental examinations and interviews with the children referred, interviews with parents and teachers, and, in some instances, arranging for the cases to be medically examined by the senior medical officer. Diagnostic reports are issued in every case and recommendations or treatment to be carried out in the school and the home. In rare cases of marked mental disturbance in children where prolonged psychiatric treatment seems desirable, arrangements are made in cooperation with the psychiatrist of the City Mental Hospital for examination and treatment of these children. The psychologist also visits the schools to give suggestions and helpful advice to teachers ...⁸⁰

Unfortunately for the struggling profession, most clinics failed to live up to the Leicester example. Clinics headed by psychologists turned out to be the exceptions rather than the rule.⁸¹ Furthermore, the relationship between psychologists and psychiatrists was tinged by tension, and even bitterness.⁸² The two groups fought over control of individual clinics and of the movement in general. Psychiatrists, who boasted many years of medical training, tended to look down on psychologists; psychologists often found psychiatrists unbearably arrogant and intolerably ignorant of child development. The Commonwealth Fund's grant played into the hands of psychiatrists and psychiatrically-trained social workers, who extended their control over the movement during the 1930s, sometimes reducing psychologists to little more than mental testers.⁸³

The psychologists' position was further weakened by the Board of Education's lack of funds. After 1930, the Board was only prepared to allow Local Education Authority the use of private or charitably endowed clinics if no public money was involved. When someone suggested that the Board should recognise the valuable preventive work of the clinics by sanctioning small contributions by authorities to

⁷⁹ *Feversham Report*, p. 153.

⁸⁰ *Ibid.*, p. 156.

⁸¹ Thom, 'Wishes, Anxieties, Play and Gestures', pp. 203-4.

⁸² See, for example, Symposium on Psychologists and Psychiatrists in the Child Guidance Service, *Brit. J. Educ. Psych.* Vols. 21 (1951) - 23 (1953). In particular, contributions by Kennedy, Moody and Burt.

⁸³ Robert I. Moody, 'A Conflict of Disciplines and Personalities', *Brit. J. Educ. Psych.* Vol. 22 (1952), p. 157; Burt, 'Psychologists in Education Services', p. 2; *Health of the School Child ... 1934*, p. 116.

clinics, the Permanent Secretary flatly refused. Only after 1935 was the Board prepared to recognise as grant-earning any expenditure an authority might incur by sending a child to a recognised child guidance clinic. Thereafter the Board was increasingly aware both of the demand from Local Education Authorities to extend the child guidance service and of the shortage of qualified psychologists, psychiatrists and social workers.⁸⁴ By 1937 there were about fifteen clinics in London, twenty in the provinces, and four in Wales, and all of them were faced with more cases than they could deal with.

Between 1930 and 1938, at least fifteen Local Education Authorities employed psychologists, sometimes on a part-time, sometimes on a full-time basis. They performed a variety of jobs, from advising on mental deficiency and maladjustment to helping with streaming, and they were employed under a variety of conditions. Some were lay members of the school medical services, some were 'organisers' and so members of the director of Education or Chief Education Officer's support staff, some had no official status at all.

Leicester led the way in appointing a psychologist to the Director of Education's support staff. In 1931 it recruited a Miss Tydeman to a full-time position, replacing her with Raymond Cattell when she left to get married. When Cattell secured a year's leave of absence in 1936 to do research for the Eugenics Society (which resulted in his polemic *The Fight for Our National Intelligence*), the authority replaced him with Dr K. M. Bridges. Bridges stayed on to help Cattell upon his return, and when he resigned to teach in America she took over his post and also secured the help of another psychologist as an assistant. Southend then followed this example, appointing a full-time psychologist in October 1936.⁸⁵ In 1935 the Central Association for Mental Welfare started off a scheme of loaning educational psychologists to needy authorities at a monthly fee of £45. The idea proved to be popular, with Jarrow, Tottenham, Swansea, Southend, and Somerset calling on the services of these part-time peripatetics. Southend, Jarrow and Swansea found these psychologists so useful that they went on to appoint their own full-time workers.⁸⁶

Most other educational psychologists belonged to the School Medical Service, under the direct control of the School Medical Officer. In 1935 the Board agreed to help to support a Child Guidance Clinic in Birmingham, with a staff which included a psychiatrist or a paediatrician, a social worker and a psychologist. The Birmingham experiment proved to be successful, and the Local Education Authorities of Bristol, Cardiff, Southampton, Swansea, Sheffield and Oxford followed its example (although Oxford failed to appoint a psychologist).⁸⁷ Both Birmingham and Nottingham authorities appointed psychologists under the Special Services Regulations but unattached to Child Guidance Clinics. In 1930 the Birmingham authority promoted a Miss Dove from a part-time to a full-time

⁸⁴ Sutherland, *Ability, Merit and Measurement*, pp. 94–5.

⁸⁵ Lumsden's Memorandum, p. 3; cf. *Feversham Report*, pp. 155–6.

⁸⁶ Lumsden's Memorandum, p. 4. ⁸⁷ *Ibid.*, p. 4.

post as an assistant in the Special Schools Department under the control of the Inspector of Special Schools. Her duties were similar to Burt's at the London County Council – she tested children suspected of mental deficiency, examined children already in special schools, and tested children in approved schools and remand homes – but for reasons of linguistic prejudice more than anything else, she was not called a 'psychologist'. In 1937 the Nottingham authority appointed a junior assistant psychologist to its school medical staff, mainly to help in selecting children for 'practical' classes in elementary schools and MD schools.⁸⁸

The precise duties of the school psychologists depended on whether they were 'organisers', employed under 'E' regulations, or lay officers of the School Medical Services, employed under Special Services Regulations. The organisers travelled from school to school, advising teachers on the treatment of the backward, maladjusted and delinquent, and offering vocational guidance; they might also be asked to make suggestions on the broader subject of school organisation.⁸⁹ The lay officers (with two exceptions) were part of the staff of Child Guidance Clinics: their main task was to give mental tests to the various types of children referred to the clinic, and then to report to the other members of the team – the psychiatrist and the social worker – on such issues as mental age, special abilities, and scholastic attainments; they were also expected to deal with children with learning difficulties caused by emotional problems.⁹⁰

In practice, of course, these artificial divisions frequently broke down; people employed under different regulations found themselves doing more or less the same job. A number of 'organisers' found themselves deeply involved with child guidance. In Leicester, both Raymond Cattell and his successor ran a clinic which, despite its lack of a psychiatrist, was recognised by the Child Guidance Council. Even psychologists supplied by the Central Association for Mental Welfare, which was primarily concerned with mental deficiency, found themselves giving advice to maladjusted children. In Swansea the psychologist was connected with a clinic, in Southend the psychologist was turned into a full-time worker with heavy responsibilities for the maladjusted. On the other hand, Child Guidance psychologists were also expected to influence school teaching in their local authorities, providing public lectures on child management, advising against unsuitable teaching methods, and distinguishing between backward and mal-adjusted children.⁹¹

This distinction between 'organisers' and 'lay officers' nevertheless managed to cause important administrative problems. The root causes of these were naturally financial: psychologists who were counted as members of the medical staff attracted a grant from the Board of 50 per cent, psychologists who were attached to the Director's staff were eligible for only 20 per cent.⁹² This anomaly provoked an

⁸⁸ *Ibid.*, pp. 5–6; *Health of the School Child ... 1934*, p. 115.

⁸⁹ Lumsden's Memorandum, pp. 7–8.

⁹⁰ *Ibid.*, pp. 12–13.

⁹¹ *Ibid.*, pp. 6–18.

⁹² *Ibid.*, p. 7.

extremely tedious debate between 'M' and 'E' branches over the psychologists' responsibilities.⁹³ Lumsden tried to solve the problem by suggesting that all psychologists should be attached to the medical staff and therefore eligible for a grant of 50 per cent; he objected to attempts to squeeze psychologists into 'E' branch under awkward heads such as 'organiser' and hoped that 'expert psychological work could be recognised as a new part of the Special Services dealing with the mental health (in the broadest sense) of the school child'. He suggested that there was a distinct parallel between psychologists and physical training instructors: both were employed under Special Services regulations and yet both were expected to watch over the organisation and teaching methods of schools.⁹⁴

But this argument provoked powerful opposition. Lumsden's critics pointed out that psychologists were expected to do work, such as grading normal children and selecting scholarship winners, which had nothing to do with the care of the dull or the maladjusted. How could the award of scholarships, the improvement of routine teaching methods, or the choice of careers be treated under the same legislation as the care of the sick?⁹⁵ Lumsden's sweeping suggestion was rapidly abandoned, and it was agreed instead that the Inspectorate should draw up a schedule of duties and the authority should choose which of them it wanted the psychologist to concentrate upon – and therefore the rate of support grant it was eligible to receive. For all their esoteric differences, all the participants in the debate did manage to agree on one thing: educational psychologists had now established a recognised place in the world of education.⁹⁶

The war helped to consolidate this position. Worried about the impact of evacuation on children's mental health, a number of officials and experts began to agitate for improved mental welfare provisions. Evelyn Fox, the Secretary of the Central Association for Mental Welfare's Mental Health Emergency Committee, wrote to the Secretary of the Board of Education in April 1939, pointing to the strain which modern warfare would impose on difficult adults and children and arguing for the provision of expert psychological advice throughout the country.⁹⁷ There is little doubt that her suggestions reflected a widespread need; evacuation exacerbated problems of maladjustment where they already existed and sometimes created problems where none had existed before.⁹⁸ Throughout the war the

⁹³ Sutherland, *Ability, Merit and Measurement*, p. 95.

⁹⁴ Lumsden's Memorandum, pp. 15–18.

⁹⁵ Ed 50/273. Debate on the rate of grant payable for the appointment of psychologists (with particular reference to the Somerset proposal).

⁹⁶ Lumsden's Memorandum, p. 15.

⁹⁷ Ed 50/273, Mental Health Emergency Committee, Evelyn Fox to Secretary of Board of Education, 19 April 1939; cf. Fox to Director of Education, 16 May 1939; Fox to Directors and Secretaries of Education, School Medical officers and Billetting Officers, September 1939; Note on Discussion of 12 October 1939 between Fox, Mackenzie, Maudslay, Glover and Strong.

⁹⁸ Ed 50/273 Parent's Institute to Education Officer, County Hall, 29 September 1939; cf. Interview Memorandum, 30 September 1939 on behaviour problems among evacuated children.

pressure on psychologists, social workers, and psychiatrists was intense; and as the war drew to a close a plethora of interest groups began to lobby for an increased supply of mental-health workers in the future.

The professional status of educational psychology

Educational psychology only managed to win a marginal position in English professional life. It was a relatively late starter – when the British Psychological Society was founded in 1901, the British Economic Association had been moving from success to success for eleven years⁹⁹ – and it lacked institutional support within the academic world. By 1940 there were only four full professorships of psychology in the whole of England. Facilities tended to be poor; Godfrey Thomson described the pre-war psychology laboratory at Cambridge as that ‘hovel in Mill Lane’.¹⁰⁰ The subject’s internal development was highly eccentric. In order to finance specialised sections and publications, the British Psychological Society opened its doors to anyone who was interested in the subject and willing to pay a membership fee, thereby snapping the normal link between professionalisation and exclusiveness. Leading psychologists remained unhappy about the quality of the people they managed to recruit; and the poor quality of many younger psychologists frustrated their attempts to turn the subject into a recognised profession.¹⁰¹

Many psychologists were angered by their low status, limited academic opportunities, and poor resources. Susan Isaacs complained that, although she had given up a certain amount of lucrative psychoanalytic work to run the department of child development at the Institute of Education, she was given little official recognition for her position. She felt that her salary from the Institute (£300) ‘was a good deal less than the earnings proper to my professional status in my other work’ and that her lack of a chair was detrimental to ‘the dignity of child psychology in this country’.¹⁰² She confessed that she felt highly embarrassed by the fact that she was constantly in touch with American academics who lacked her academic experience but nevertheless boasted full professorships.¹⁰³ The fact that the Institute lacked the funds to offer her a chair helped to persuade her to leave academia and return to full-time psychoanalytical practice.

Educational psychologists failed to win the respect of the scientific and medical establishments. A combination of academic hubris, intellectual scepticism and professional antagonism persuaded these élites to keep the psychologists out of their charmed circle. Psychology occupied only a lowly position in the scientific pecking order; and applied psychology in general, and educational psychology in

⁹⁹ Cf. A. W. Coates, ‘The Origins and Early Development of the Royal Economic Society’, *Economic Journal* Vol. 78 (1968), pp. 349–71. ¹⁰⁰ Thomson, *Education of an Englishman*, p. 82.

¹⁰¹ University of Liverpool Archives, Cyril Burt Papers, D 191/6, letter to his sister, 29 August 1942.

¹⁰² LIEA, Isaacs to Hamley, 8 May 1938. ¹⁰³ LIEA, Isaacs to Clarke, 7 December 1936.

particular, occupied only a lowly position in the pecking order within psychology.¹⁰⁴ 'High science', which achieved its most perfect form in Cambridge between the wars, was pure and theoretical, undertaken for intellectual rather than utilitarian ends; hard and experimental, with a bias towards the techniques and problems of the physical sciences and a marked aversion to speculation; and self-satisfied and inward looking.¹⁰⁵ Its leading practitioners lived their intellectual and personal lives within an environment defined by their subject, devoting themselves to their laboratories and drawing their friends from amongst their fellow workers.¹⁰⁶ They looked down on all those disciplines which failed to come up to their own exacting (and narrow) standards and disapproved of both the subject matter and practical associations of psychology.

In particular, educational psychologists suffered for their connections with individual children and with the practical process of education. They risked being associated with teachers, who had a notoriously low professional reputation. One index of their marginal position in the scientific community was their failure to win membership of the Royal Society.¹⁰⁷ Founded in 1660 'for improving natural knowledge', the Society had established itself as the summit of the world of scientific learning, numbering among its members the majority of the eminent practitioners of established disciplines and commanding the respect of the educated public. Yet psychologists managed to win only a foothold in the Society. As few as eight Fellows – Galton, Lloyd Morgan, Rivers, McDougall, Myers, Spearman, Richardson, and Bartlett – made major contributions to psychology; and the bulk of these earned their elections through their distinction in other fields.¹⁰⁸ Galton was elected for his contribution to geography, Spearman for his breakthroughs in statistics. Most of them were elected before the subject established an independent identity. As it turned itself into a distinct discipline the number of elections declined. After the Second World War, the only remaining psychologist in the Society was F. C. Bartlett; and his work was austere experimental, far removed from the messy world of education.¹⁰⁹ Although Burt was put up for election, he was soon blackballed, allegedly because he had written a popular textbook on the subnormal mind.

Psychology's low status in the pecking order is particularly clear when it is compared with another nascent human science, genetics. Genetics had few difficulties satisfying the scientific establishment, being pure, experimental and

¹⁰⁴ Liam Hudson, *The Cult of the Fact* (1972), p. 54.

¹⁰⁵ Gary Wersky, *The Visible College* (1978), p. 20.

¹⁰⁶ *Ibid.*, p. 25.

¹⁰⁷ For the standard history of the Society, see H. Lyons, *The Royal Society 1660–1940* (Cambridge, 1944). For psychologists in the Royal Society, see J. C. McKenna, 'Psychologists and the Royal Society', *Bull. Br. Psych. Soc.* pp. 10–15.

¹⁰⁸ For full obituaries of all these, see the *Proceedings of the Royal Society* for the relevant dates.

¹⁰⁹ McKenna, 'Psychologists and the Royal Society', pp. 10–14. for the Society's ignorance of Freud, whom they elected more by accident than design, see E. Jones, *Sigmund Freud: Life and Work* (1957), III, p. 220.

highly mathematical. The subject managed to recruit people who boasted intellectual and social pedigrees unknown to psychology.¹¹⁰ Julian Huxley was the grandson of T. H. Huxley; J. B. S. Haldane, the son of an Oxford professor, came top in his election to Eton; Lancelot Hogben won a major scholarship to Trinity College, Cambridge, a few days before his seventeenth birthday; Lionel Penrose was an Apostle. Leading geneticists had no difficulty in getting Fellowships of the Royal Society. Burt and his colleagues admired geneticists enormously; alas, the compliment was not returned. Haldane regarded psychology as the hope of a science rather than a science.¹¹¹ Penrose and Hogben went further, dismissing intelligence tests as a sham and psychometry as a pseudo-science.¹¹²

Several philosophers also looked down on the psychologists, dismissing their experimental approach to the problems of mental phenomena as flawed in conception and disastrous in execution. The Idealists, who dominated Oxford intellectual life in the last third of the nineteenth century, disagreed with the psychologists on almost every point. They distinguished sharply between the world of reality and the world of appearance, arguing that empirical psychologists were trapped in a world of appearances and that only philosophers had insight into reality. F. H. Bradley's metaphysics rested on the anti-scientific contention that 'the world, as given to us by experience and as constructed by science in its concepts, is but an illusory appearance of a deeper reality of which philosophy should strive to sound the depths by speculative methods'.¹¹³ T. H. Green urged his pupils to close up their Mill and Spencer and turn to Kant and Hegel. H. A. Pritchard and H. W. B. Joseph indulged in sharp shooting at psychology, treating it as a hotchpotch of loosely related inquiries, rather than a proper science. They ridiculed the psychologists' preoccupation with atomised individuals, insisting that men are enmeshed in their social settings. The weight of cultural traditions, the web of communal relations, the interplay of mind upon mind, these, they contended, were the proper subject of intellectual inquiry. R. G. Collingwood dismissed the subject in a couple of sentences: psychology 'regarded as a science of mind, is not a science. It is what "phrenology" was in the early nineteenth century and astrology and alchemy in the Middle Ages and the sixteenth century: the fashionable scientific fraud of the age.'¹¹⁴

Although the publication in 1903 of both Russell's *Principles of Mathematics* and Moore's *Refutation of Idealism* initiated a wholly opposed style of thought, most philosophers remained profoundly sceptical of the claims of the psychologists. Gilbert Ryle dismissed the discipline in *The Concept of Mind*. Wittgenstein's

¹¹⁰ G. P. Wells, 'Lancelot Hogben', *Biographical Memoirs of Fellows of the Royal Society* Vol. 24 (1978), p. 186.

¹¹¹ J. B. S. Haldane, 'Is Psychology a Science', *A Banned Broadcast and Other Essays* (1964), pp. 142-44.

¹¹² See below, pp. 263-70.

¹¹³ Alliot, *The Idealistic Reaction Against Science* (1914), p. 101.

¹¹⁴ Collingwood, *An Autobiography* (Oxford, 1939), p. 95.

Philosophical Investigations ended with a scathing attack on the subject, arguing that its techniques bore no relation to the problems which confronted it and that scientific progress would bring deeper confusion rather than intellectual advance. The impact of these arguments was considerable.¹¹⁵ Richard Crossman confessed that 'after the first fortnight of my education as an Oxford philosopher, I was able to demonstrate conclusively that psychology either didn't exist, or was a pseudo-science which oughtn't to exist, and both proofs were equally efficacious'.¹¹⁶ Yet philosophy occupied a central position in the academic hierarchy, controlling resources and commanding the respect of many of the ablest undergraduates. Liam Hudson, who read psychology and philosophy after the Second World War, recalled that the philosophers held sway in 'the plush heartland of Oxford', whereas the psychologists worked in a 'seedy villa' up the Banbury road, conscious of their low status and starved of academic resources.¹¹⁷

Again, the marginal position of the psychologists is reflected in their failure to establish themselves within the British Academy. Founded at the beginning of the century, the Academy tried to do for the humanities what the Royal Society did for the hard sciences, distributing recognition and honours and creating a network of contacts between eminent practitioners of related subjects. Yet only four psychologists were elected to fellowships of the Academy before the Second World War – James Ward, G. F. Stout, A. F. Shand and Cyril Burt – and the first three of these practised a distinctly antiquated version of the discipline. Burt was the only 'scientific' psychologist in the Academy, and, for the purposes of classification, he had to be squeezed into the 'Economics and Social Science' section. A pattern already noticed in the Royal Society was repeated in the Academy: as a distinct profession of psychology emerged, so the number of psychologists elected declined.

Many educational administrators had nothing but contempt for the subject. They felt that the attempt to organise teaching along scientific lines was either irrelevant or destructive, demeaning science and debasing education. For them education was an art rather than a science. They put their faith in the *ad hoc* methods of practising teachers rather than the *a priori* principles of theoretical scientists. When John Dover Wilson went to tell Chambers, the Second Secretary of the Board of Education, that he was leaving His Majesty's Inspectorate to take up a post at King's College, London, he found his superior sitting at an empty desk staring abstractedly into space:

'I've come to say good-bye,' I said.

'Oh, where are you off to?'

'London University.'

¹¹⁵ Passmore, *A Hundred Years of Philosophy* (1966 edn), pp. 523–4.

¹¹⁶ Crossman, 'Speech of Welcome to the Members of the 19th International Congress of Psychology', *Bull. Br. Psych. Soc.* Vol. 22 (1969), p. 261, cols. 1–2.

¹¹⁷ Hudson, *Cult of the Fact*, p. 39.

The structure and status of a profession

‘London University; humph. English I suppose?’

‘No’, I answered, hoping to impress him, ‘Education.’

At this he almost leapt from his chair, all lethargy gone. ‘Education’, he snorted.

‘A disgusting subject.’¹¹⁸

No doubt most full-time teachers shared Chambers’s prejudices. T. C. Worsley discovered that ‘theories about education were the most suspect luggage any public school master could carry’;¹¹⁹ and no theories were more suspect than psychological theories. When a young master at Marlborough made the mistake of mentioning psychology to his headmaster, the headmaster walked disdainfully over to his bookcase, extracted a volume called *Psychology* dated 1885, read out a turgid and implausible sentence, slammed the book back into the shelf, and exclaimed ‘that’s psychology for you!’¹²⁰

Local educational authorities treated mental measurement with a good deal of scepticism, taking what they wanted from it and ignoring the rest. Their élitism was aristocratic rather than meritocratic, and they continued to put their faith in examinations which were designed to test learning as well as ability and in interviews which were intended to detect ‘character’ and ‘tone’. If they used the new techniques at all, they treated them as servants rather than as masters, adapting them to suit existing arrangements rather than allowing them to transform the system of selection.¹²¹ As a general rule, the more elevated the educational institution, the less attention it paid to IQ tests, preferring to rely instead on established techniques and institutional wisdom. In sharp contrast to America, the universities largely ignored the new technology.

Large sections of the educated public remained sceptical about psychology. It was associated with mesmerism, phrenology, and even witch-doctoring, and continued to possess an ‘aura of sex, licentiousness and promiscuity’. Psychology was associated with Freud; Freud was associated with sex; and the result was educated scorn and popular mirth. ‘I vividly remember one occasion’, writes Eysenck, ‘not so very many years ago, when the Vice Chancellor of one of our main universities, on seeing that on the occasion of a celebration dinner his wife had been placed next to the Professor of Psychology at the table, hurriedly changed the cards round, explaining that it would not be quite the proper thing for a lady to sit next to a psychologist.’¹²² T. H. Pear recalled that at ‘dinner parties it was tempting to pretend that one knew little about Freud: otherwise the excellent meal would be neither appreciated nor digested’.¹²³ Even educated commentators continued to confuse psychologists with psychiatrists and psychoanalysts.

¹¹⁸ John Dover Wilson, *Milestones on the Dover Road* (1969), p. 93.

¹¹⁹ T. C. Worsley, *Flannelled Fool. A Slice of Life in the Thirties* (1967), p. 20.

¹²⁰ T. C. Worsley, *Barbarians and Philistines. Democracy and the Public Schools* (1940), p. 140.

¹²¹ Sutherland, *Ability, Merit and Measurement*, pp. 283–91.

¹²² Eysenck, *Sense and Nonsense in Psychology* (1957), p. 11.

¹²³ BPSA, Tapes and Transcripts, 16a, T. H. Pear, p. 12.

The experience of marginality had a decisive impact on the subject's development. It persuaded status-hungry psychologists to model themselves on a succession of established professions, notably doctors and research scientists; ensured that English psychology lagged behind American – and even Scottish – psychology; and forced psychologists to develop the practical side of their discipline at the expense of the theoretical.

Educational psychologists lacked an agreed professional identity. They modelled themselves variously on educationalists, medical doctors, experimental scientists and theoretical statisticians. As educationalists, they tried to combine teaching with research, drawing their scientific problems from the classroom and, usually with undue haste, applying their solutions to the practical business of teaching. As 'doctors of the mind', they focused on problems such as subnormality and maladjustment and developed techniques of clinical treatment. As experimental scientists, they carried out large-scale experiments in schools and subjected representative samples of the school population to analysis. As theoretical statisticians, they developed elaborate mathematical techniques to process the evidence they had amassed, usually from intelligence tests.

These contrasting approaches occupied different positions in the internal pecking order of educational psychology, with the experimental and statistical models at the top, the medical model in the middle, and the educational model at the bottom.¹²⁴ W. H. Winch, who pioneered an approach to the subject based on specific educational problems and indifferent to pure theory, was passed over for the London County Council's post as applied psychologist, which may have originally been created for him, in favour of a man with a background in academic research. Psychologists were acutely conscious that their regular contact with the messy world of children and teachers reduced their status in the eyes of their scientific colleagues. In order to compensate for this loss of face, and to demonstrate that their scientific credentials were genuine, they tended to make a show of their competence as statisticians.¹²⁵ As they moved up the professional hierarchy, they tended to abandon their contacts with children and teachers and transform themselves into pure academics.

Thanks to the hostility of the intellectual establishment, English psychology eventually fell behind its international rivals. England had entered the race with a long head start. Galton did much to turn the study of the human mind from a branch of philosophy into a branch of natural science. In 1873 Ribot, a French psychologist, pointed to England as the country which 'has done most for psychology'.¹²⁶ But institutional inertia and intellectual disdain turned the history of English psychology into an obstacle race. Writing to F. C. Bartlett, Gary Boring lamented the fate of English psychology in the run up to the Great War:

¹²⁴ Cf. Hudson, *Cult of the Fact*, pp. 54–5. For an example of the practical implications of this hierarchy, see Sutherland and Sharp, "The First Official Psychologist in the Wurrld", pp. 181–95.

¹²⁵ Hudson, *Cult of the Fact*, p. 55.

¹²⁶ T. Ribot, *English Psychology* (1873).

The structure and status of a profession

In the same period Britain was almost nowhere. Bain, Ward, Stout were not in the right tradition. Spearman did not win respect. Myers did, but he was isolated. England did not get laboratories and chairs. Oxford's psychology was a joke to the American experimentalists ... We felt simply that the British were backward ... There seemed to be nothing more to scientific psychology than Cambridge and what one found in the *British Journal*. It was all right, but it was utterly out of proportion to the stature of the nation. So I think the Americans did not take Great Britain very seriously in psychology.¹²⁷

No wonder English psychologists were hypnotised by the United States. Psychology rapidly established a secure position within the buoyant American university system. By 1912 any large American university would have considered its facilities insufficient without a psychology laboratory of some sort.¹²⁸ By 1917, seventy-four universities and colleges supported psychological laboratories and twenty-one academic journals published articles on the subject.¹²⁹ Educational psychology won a recognised place in this new academic empire, with its own professorships, research appointments and specialist journals, concentrating on educational problems, children's mental development, and intelligence testing. By 1912, eighty-three American cities had recognised psychological clinics,¹³⁰ and between 1912 and 1922 almost sixty educational research bureaus were founded. In 1930 nine out of the twelve largest American cities had their own research bureaus.¹³¹

The Americans were particularly keen on intelligence testing.¹³² Henry Goddard published the first American revision of Binet's intelligence scale shortly before Binet's death; Edmund Huey, who had worked with Binet in Paris, encouraged Lewis Terman to revise the scale specifically for use with American school children, and the resulting tests, the Stanford-Binet tests, rapidly became standard references for American psychologists.¹³³ Schools acted as an eager market for standardised attainment tests as well as intelligence tests. In 1917 more than 200 achievement tests, dealing with everything from geography to handwriting, were available for use in both primary and secondary schools.¹³⁴ The mass testing of American army recruits in 1917 and 1918 provided a dramatic public display of the

¹²⁷ G. Boring, *Psychologist at Large*, pp. 96–7.

¹²⁸ Christian A. Ruckmich, 'The History and Status of Psychology in the United States', *Amer. J. Psych.* Vol. 23, No. 4 (October, 1912), p. 518.

¹²⁹ Thomas M. Canfield, 'The Professionalisation of American Psychology 1870–1917', *Journal of the History of the Behavioural Sciences* Vol. 9 (January 1973), pp. 66–75.

¹³⁰ Daniel P. Resnick, 'History of Educational Testing', in Alexandra K. Wigdor and Wendell R. Garner (eds.), *Ability Testing: Uses, Consequences and Controversies* (National Research Council, Committee on Ability Testing, Washington DC, 1982), p. 177.

¹³¹ *Ibid.*, p. 178.

¹³² On American intelligence testing, see Resnick, 'History of Educational Testing'. See also, Clarence J. Karier, 'Testing for Order and Control in the Corporate Liberal State', in Ned Block and Gerald Dworkin (eds.), *The IQ Controversy* (1977), pp. 339–73, and Gould, *The Mismeasure of Man* (1981).

¹³³ *Ibid.*, p. 177.

¹³⁴ *Ibid.*, p. 181.

possibilities of group intelligence tests. America at that time had no standing army, and the allocation of the 1.7 million recruits to their appropriate military positions posed an overwhelming administrative challenge. Robert Yerkes, the President of the American Psychological Association, offered to help, the War Office made \$1 million available for classification, and within two weeks a team of psychologists had produced the Alpha and Beta group tests to sort out the recruits.¹³⁵ The result was 'probably the greatest piece of mental engineering that has ever been attempted in this country'.¹³⁶ By the time the war ended, almost 300 psychologists had been involved in military testing, and most of them left the army to look for jobs in schools.¹³⁷ The schools were more than willing to be used as laboratories for the new technology. In 1923, for example, group tests for 7- to 13-year-olds sold more than half a million copies. A survey of all American cities with populations over 10,000 (600 in all) carried out by the US Bureau of Education in 1925 revealed that 64 per cent of the cities used the tests for grouping elementary school children, 56 per cent for junior highs, and 41 per cent for the high school.¹³⁸

This enthusiasm for psychological testing resulted from the size of the school population, the astonishing heterogeneity of its members, and decentralised structure of the educational system.¹³⁹ Unlike the English school population, the American one expanded rapidly in this period. In 1870 there were about 500 (mostly private) high schools in America, with about 80,000 students; by 1910 there were 10,000 (mostly public) high schools, catering for 900,000 students.¹⁴⁰ Demographic expansion, caused by both natural population growth and large-scale immigration, combined with an increased demand for higher education, imposed an enormous burden on the established school system. The composition of the school population, drawn from a vast array of cultural and racial backgrounds, put a premium on the production of objective tests, capable of classifying them into manageable groups. Furthermore, the structure of the educational system was highly complex, with enormous variations between states and municipal authorities, and educators and school reformers clamoured for a system of national standardised tests in order to compare children's performances across states and among different municipal school systems. Lacking a body of school inspectors, a regularly defined curriculum, and an established system of entrance examinations, Americans looked to the new tests to impose educational standards, monitor the performance of different schools, and distribute limited but valuable educational resources.¹⁴¹

¹³⁵ Clarence S. Yoakum and Robert M. Yerkes, *Mental Tests in the American Army* (1920), esp. pp. viii, 2, 3, 12, 17; Daniel J. Kevles, 'Testing the Army's Intelligence: Psychologists and the Military in World War 1', *Journal of American History* Vol. 4 (1968), pp. 565-81; Gould, *Mismeasure of Man*, pp. 192-233.

¹³⁶ Yoakum and Yerkes, *Mental Tests in the American Army*, p. 184.

¹³⁷ Resnick, 'History of Educational Testing', p. 183.

¹³⁸ *Ibid.*, p. 184.

¹³⁹ See, for example, Lawrence Cremin, *Transformation of the School: Progressivism in American Education, 1876-1957* (New York, 1964).

¹⁴⁰ Resnick, 'History of Educational Testing', p. 187.

¹⁴¹ *Ibid.*, pp. 177-8.

English psychologists were acutely conscious of the success of their American counterparts. 'In America alone', Ballard felt, 'have educational tests received the attention they deserve.'¹⁴² He argued (with considerable exaggeration) that, as a result of the Army tests, 'an epidemic of mental testing broke out all over the States' and that 'the testers were counted by the thousand; and in the realm of education, by the million'.¹⁴³ In 1922 he observed that 'the American nation is now so firmly convinced of the predictive value of group tests of intelligence that it is rapidly extending their use to nearly every department of life; especially to education'.¹⁴⁴ He felt incensed by the fact that 'the British press refers to mental tests as though they were new things invented by Americans', and pointed to the distinguished part played by British psychologists, particularly Cyril Burt, in the development of the tests.¹⁴⁵ To the pressing question, 'why is it that America has been moving so rapidly in the matter of mental tests while England has almost stood still' he felt that the answer was simple: 'speaking generally, Americans believe in psychology whereas Englishmen do not'.¹⁴⁶

A little more surprisingly perhaps, Scotland took more readily to the new discipline than England. Psychologists found positions in university departments and in teacher training colleges. Aberdeen incorporated a rather old-fashioned type of psychology in its philosophy syllabus from 1860 onwards, when Alexander Bain (1818–1903) was elected to the new chair of logic. In 1896 it set up the Anderson lectureship in comparative psychology, encouraging influential work on sensation, memory, and child and abnormal psychology. Edinburgh established the George Combe laboratory in 1906 and founded a chair of psychology in 1931. It also supported the widely influential Moray House Teacher Training College. Glasgow maintained a continuous tradition in the subject from 1907 onwards. William Boyd (1874–1962) was head of the department of education in the university from 1907–1946 and did much to introduce mental tests and child guidance to prospective teachers; R. R. Rusk, one of the first postgraduate students at the Cambridge laboratory, was lecturer at the Jordanhill Training College; and D. Kennedy-Fraser played a vital part in setting up the local school psychological service in 1923. In 1917 and 1918 a Bachelor of Education degree, with a heavy psychological component, was established at the four Scottish universities.¹⁴⁷ In 1925 Godfrey Thomson took up the chair of education at Edinburgh, combining with it the Principalship of Moray House Training College. He found himself in charge of a College with 700 full-time students and a staff of 35 lecturers, and he did his best to turn it into a school of advanced educational research.¹⁴⁸ His tests were taken up by more and more English educational authorities in the 1920s,

¹⁴² Ballard, *Mental Tests*, p. 20.

¹⁴³ Ballard, *The New Examiner*, p. 109.

¹⁴⁴ Ballard, *Group Tests of Intelligence*, p. 4.

¹⁴⁵ Ballard, *Mental Tests*, pp. 29 and 27.

¹⁴⁶ *Ibid.*, p. 46.

¹⁴⁷ Hearnshaw, *A Short History*, p. 256; Sutherland, *Ability, Merit and Measurement*, pp. 128–9.

¹⁴⁸ W. B. Inglis, 'Edinburgh and Moray House', in Thomson, *Education of an Englishman*, p. 117.

particularly in the North, and after 1930 they began to become 'really big business'.¹⁴⁹

Inspired by Thomson's meritocratic vision, and provided with ample institutional and financial support from Edinburgh University and from the sale of the tests, Moray House continued to supply local education authorities with outstandingly thorough advice on the theory and practice of mental measurement. The surviving Moray House Papers give the impression that Thomson and his colleagues dealt with every inquiry and query which they received with assiduous care and commendable clarity. Their service was also remarkably cheap.¹⁵⁰

The Scottish Council for Research in Education provided support for educational research, psychological and otherwise, on a scale which was almost inconceivable south of the border.¹⁵¹ Founded in 1930, under the directorship of Robert Rusk, it published a series of monographs, many of them distinguished, and issued the *Scottish Educational Journal*, which was widely read by ambitious teachers.¹⁵² It initiated long-term investigations of pupils' progress and set out to test vague generalisations against hard evidence.¹⁵³ In particular, with the assistance of Godfrey Thomson, it supported a series of large-scale investigations into the intelligence of Scottish schoolchildren. In 1932 it tested, for the first time anywhere on a national scale, all the pupils born at a particular time, in this case in 1921. All pupils aged eleven in the public schools, in the private schools (with a few negligible exceptions) and in public institutions, were included.¹⁵⁴ Between 1935 and 1937 it followed up this test by applying individual tests to all children born on 1 February, 1 May, 1 August and 1 November 1926, giving a total sample of 874.¹⁵⁵ In 1945 it began to repeat the first mass test of Scottish schoolchildren in order to test the popular hypothesis that the differential birth-rate was leading to a decline in national intelligence.

As a result of all this activity, Scottish psychologists and educationalists had a major influence on England. Scottish universities in general, and Edinburgh in particular, played a leading part in disseminating information about educational psychology and mental testing to English academics and education authorities. English psychologists looked to the work of the Scottish Council for Research in Education, in particular to their surveys of national intelligence, for information against which to test their arguments and for a model for future work in England.

¹⁴⁹ Sutherland, *Ability, Merit and Measurement*, p. 194. For a detailed discussion of the Moray House Tests and their reception by English education authorities, see pp. 191–224.

¹⁵⁰ Sutherland, *Ability, Merit and Measurement*, p. 213. For a reproduction of the County of Lancashire Education Committee report on the use of intelligence tests, 1934 (from Moray House Papers Vol. 3), see *Ibid.*, pp. 219–23.

¹⁵¹ The Scottish Council for Research in Education (SCRE), Publ. 24 (1945).

¹⁵² For a list of the twenty-four monographs published by the Council between 1930 and 1945, see *ibid.*, Appendix 2, pp. 43–5.

¹⁵³ *Ibid.*, pp. 36–7.

¹⁵⁴ *The Intelligence of Scottish Children. A National Survey of an Age-Group*, SCRE, Publ. 5 (1933).

¹⁵⁵ A. M. Macmeeken, *The Intelligence of a Representative Group of Scottish Children*, SCRE, Publ. 15 (1939).

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Scotland helped to provide staff for the expanding new specialism of educational psychology in England. The Scots were conscious of their national pre-eminence and jealous of the distinction of their local universities. 'It was said at one time', remarked R. W. Pickford in 1973, 'that the British education system would fall down but for Glasgow graduates who held key positions all over the British Isles and indeed all over the world'.¹⁵⁶

¹⁵⁶ BPSA, Tapes and Transcripts, 21a, interview with R. W. Pickford, p. 25.

Mental measurement and the meritocratic ideal

The idea that the psychometricians were reactionary in their politics and traditionalist in their educational thinking has now become an orthodoxy. Brian Simon has presented them as cultural dodos, devoted to a class-divisive system of selection, ignorant of the ‘rumblings of an approaching technological revolution’ and ‘wasteful of the potential’¹ of the nation’s children. Stephen Jay Gould has dismissed the entire factor analytical tradition in intelligence testing as a statistical sham, a device for dressing up social inequality as biological inequality.² Liam Hudson has accused psychometricians of providing ‘ammunition for all those people – racists, political reactionaries, élitists – who are preoccupied with the belief that some of us are inherently inferior to others’,³ while Leon Kamin has claimed at length that ‘the IQ test has served as an instrument of oppression against the poor – dressed in the trappings of science, rather than politics’.⁴ In exposing Burt’s supposed misdemeanours, Oliver Gillie gave widespread publicity to these arguments, accusing Burt of believing in the innate superiority of white middle-class males and blaming him for ‘cheating if not victimizing a generation of students’.⁵ There can be no doubt that his claim struck a responsive note: lay opinion had turned against intelligence testing.⁶ Though the rhetoric varies, the essential case remains the same: the mental testers were social conservatives, defenders both of capitalism and hierarchy, intent on restricting educational opportunities, and willing to do so at whatever cost to children and social progress.

This interpretation lacks both logical force and historical feeling. Its guiding assumption – that hereditarians are natural conservatives while environmentalists

¹ B. Simon, *Intelligence, Psychology and Education* (1971), esp. pp. 9–11.

² Stephen Jay Gould, *The Mismeasure of Man* (1981), esp. pp. 234–321. For a technical definition of ‘factor analysis’, see glossary.

³ Liam Hudson’s foreword to Leon Kamin, *The Science and Politics of IQ* (1977 edn), p. 11.

⁴ *Ibid.*, pp. 15–16. This argument has even been applied to Australian education; see David McCallum, *The Social Production of Merit. Education, Psychology and Politics in Australia 1900–1950* (1990), esp. pp. 125–41.

⁵ O. Gillie, ‘Crucial Data was Faked by Eminent Psychologist’, *The Sunday Times*, 24 October 1976; ‘Sir Cyril Burt and the great IQ fraud’, *New Statesman*, (24 November 1978), pp. 688–694.

⁶ J. Harwood, ‘Nature, Nurture and Politics: A Critique of Conventional Wisdom’, in J. Smith and D. Hamilton (eds.), *The Meritocratic Intellect* (Aberdeen, 1980), p. 119.

are habitual progressives – is simply incompatible with the evidence.⁷ J. B. S. Haldane, an active member of the British Communist Party and an editor of the *Daily Worker*, believed firmly in the biological inequality of man:⁸ Lord Percy of Newcastle, the Conservative President of the Board of Education under Baldwin, felt that those psychologists who held that children inherited fixed IQs had fallen ‘easy victims to the Calvinistic nightmare of predestination’.⁹ The argument repeats the characteristic fallacies of the Whig interpretation of history, ignoring intricacies of circumstance and context, sacrificing understanding for moral outrage, and mistaking consequences for intentions. If we approach the inter-war period without this set of contemporary assumptions, a very different pattern emerges. The inter-war educational psychologists were meritocrats rather than conservatives and reformers rather than reactionaries. They found their most committed supporters on the left and their most stubborn opponents on the right. They maintained that intelligence testing would open up opportunities and guarantee social justice, and combined a belief in IQ testing with a commitment to a general programme of social reform: the raising of the school-leaving age, the expansion of the welfare state, improved scientific education, and a progressive and child-centred approach to teaching.

The origins and implications of the meritocratic ideal

They might well have summed up their main intellectual interests in just two words: measurement and merit. Their enthusiasm for mental testing was overwhelming. Ballard likened it to drug taking and proclaimed himself an addict.¹⁰ Burt boasted that ‘no realm of psychology has been so rich in results’.¹¹ Spearman suggested that tests ‘proffer such a potent aid to life that their renunciation would be suicidal’.¹² They advanced a wide variety of claims on their behalf: that they transformed examinations from a subjective lottery into an exact science; that they were precise, objective and efficient; that they measured inborn ability rather than acquired learning; and that, for the first time, they opened up the internal landscape of children’s minds to scientific examination.¹³ In the words of

⁷ For a more detailed presentation of some of the evidence on this point, see Harwood, ‘Nature, Nurture and Politics: A Critique of Conventional Wisdom’. The conventional wisdom on this subject is itself open to historical and sociological interpretation, see Harwood, ‘The Race-Intelligence Controversy: A Sociological Approach’, *Social Studies of Science* Vol. 6, Nos. 3 & 4 (1976), pp. 369–94. For a history of the debate before the Second World War, see N. Patore, *The Nature–Nurture Controversy* (New York, 1949).

⁸ J. B. S. Haldane, *The Inequality of Man and Other Essays* (1932).

⁹ Percy, *Some Memories* (1958), p. 106. ¹⁰ Ballard, *Things I Cannot Forget* (1937), p. 202.

¹¹ Burt, ‘Intelligence Tests’, *The Listener*, Wednesday, 1 October 1930, p. 513, col. a.

¹² C. Spearman and L. Wynn Jones, *Human Ability: A Continuation of ‘The Abilities of Man’* (1950), p. 2.

¹³ See for example, Ballard, *The New Examiner* (1923), pp. 7, 9, 130, 118; *Group Tests of Intelligence* (1922), pp. v, 214; Burt, ‘Educational Tests’, *The Listener*, May 1930, p. 798, cols. a–b; ‘The Mind of the Child’, *ibid.*, October 1930, p. 513, cols. a–b.

the Board of Education's Consultative Committee *Report on Psychological Tests of Educable Capacity*, if properly applied and evaluated they afford a more objective, more systematic, and more trustworthy means of discovering the existence of inborn intelligence and educable capacity in pupils than the ordinary written and oral examinations.¹⁴ What had started out as a technique for spotting the mentally deficient was rapidly turned into a system for ranking the entire school population. Ballard appropriately compared Binet with Saul, the son of Kish, who went forth to look for his father's asses but found a new kingdom.¹⁵

This kingdom was a strictly meritocratic one. The psychometrists found their political inspiration in the concept of merit.¹⁶ Michael Young's formula for meritocracy – $\text{IQ plus Effort} = \text{Merit}$ – is still the most elegant one.¹⁷ The concept embodies a revolt against patronage and particularism and a plea for individual justice, demanding that everyone should be judged according to their natural worth. A society based on merit makes room for personal initiative and mobility, allocates social positions according to measured individual ability, and breaks down the bonds of patronage and tradition.

The concept of merit was first given political importance by the 'liberal intellectual aristocracy' or 'educated bourgeoisie' – a powerful connection of families who owed their preeminence to intellect and education and who hoped to advance their social position by abolishing patronage and opening educational and administrative positions to men of talent.¹⁸ A simple list of a few of their surnames – Huxley, Darwin, Butler, Sidgwick, Wedgewood, Keynes – should be enough to convey something of their significance. They used the concept in their prolonged campaign to permeate and refashion aristocratic Whig institutions. The history of the word is thus inseparable from the political history of this status group. The group traced its origins to three religious stocks: the Clapham sect, the Quakers, and the Unitarians. They all shared a faith in philanthropy as the fruit and evidence of the work of grace in the individual heart, and they were welded together by their common participation in social reform movements, such as the emancipation of the slaves, the reform of the prisons, and the spread of adult literacy.

The intellectual aristocracy found its most articulate spokesman in the doyen of Whig historians, Thomas Babington Macaulay. Convinced that men differed in their inborn 'talents' and 'diligence', he tried to reform the system of selection into the Indian Civil Service by abolishing patronage and introducing competitive

¹⁴ Board of Education. *Report on Psychological Tests of Educable Capacity* (1924), p. 64.

¹⁵ Burt, 'Intelligence Tests', p. 849 b.

¹⁶ For a brilliant analysis of the history and significance of this term, see Keith Hope, *The Political Conception of Merit* (to be published by Russell Sage). I owe a great debt to this work.

¹⁷ Michael Young, *The Rise of the Meritocracy 1870–2033* (Harmondsworth, 1961 edn).

¹⁸ Noel Annan, 'The Intellectual Aristocracy', in J. H. Plumb (ed.), *Studies in Social History* (1955), pp. 241–87. See also Annan, *Leslie Stephen: His Thought and Character in Relation to His Time* (1951) and K. W. Back, 'Clapham to Bloomsbury: Life Course Analysis of an Intellectual Aristocracy', *Biography* Vol. 5 (1982), pp. 28–52.

examinations to select the able.¹⁹ Macaulay distinguished between 'ability' and 'mere learning', suggesting that 'the object of the examiners should be rather to test the candidate's powers of mind than to ascertain the extent of his metaphysical reading',²⁰ and argued that examinations could accurately predict 'what men will prove to be in life', since the qualities required for professional success were precisely those tested in the examination room. He felt that the subject of the examination was irrelevant: the man with the most general ability would always triumph. 'If, instead of learning Greek we learned the Cherokee', he mused, 'the man who understood the Cherokee best, who made the most correct and melodious Cherokee verses, who comprehended most accurately the effect of the Cherokee particles, would generally be a superior man to him who was destitute of these accomplishments.'²¹ Anyone who could do best what all the ablest and most ambitious of his contemporaries were trying to do well was guaranteed success; and his peculiar powers of mind, when properly trained and directed, might do notable service to the state.²² He argued that examinations were highly successful tests of moral character. 'Early superiority in science and literature generally indicates the existence of some qualities which are securities against vice – industry, self-denial, a taste for pleasures not sensual, a laudable desire of honourable distinction, a still more laudable desire to obtain the approbation of friends and relations.'²³ He also employed his talents as an historian and rhetorician to persuade the establishment that his reforms were in keeping with tradition, transmuting the aristocratic concept of honour into the democratic concept of merit.²⁴

Under the influence of these arguments, Sir Stafford Northcote and Sir Charles Trevelyan presented an eloquent case for the meritocratic reform of the permanent civil service. They argued that patronage and job-security attracted dull, lazy, and feeble-bodied recruits into the profession:

Those whose abilities do not warrant an expectation that they will succeed in the open professions, where they must encounter the competition of their contemporaries, and those whom indolence of temperament, or physical infirmities unfit for active exertions, are placed in the Civil Service, where they may obtain an honourable livelihood with little labour, and with no risk ...²⁵

¹⁹ Keith Hope, *The Political Conception of Merit*, emphasises Macaulay's role in the development of the meritocratic ideal. See also Gillian Sutherland, *Ability, Merit and Measurement. Mental Testing and English Education* (Oxford, 1984), pp. 97–111.

²⁰ *Macaulay Report on the Indian Civil Service*, November, Signed by T. B. Macaulay, Lord Ashburton, Henry Melvill, Benjamin Jowett, John George Shaw Lefevre. As reprinted in *Report of the Committee on the Civil Service, 1966–68* (Cmnd. 3638, chairman Lord Fulton), Vol. 1, Appendix B, p. 122. Macaulay had been reiterating these arguments since at least the 1830s.

²¹ 'Government of India. Speech Delivered in House of Commons on 10th July 1833', *The Works of Lord Macaulay* (1898), XI, pp. 572–3. ²² *Macaulay Report*, p. 123. ²³ *Ibid.*, p. 127.

²⁴ Hope, *The Political Conception of Merit*, pp. 34–158.

²⁵ *The Northcote–Trevelyan Report on the Organisation of the Permanent Civil Service*, 23 November. As reprinted in *Fulton Report*, p. 108. Their picture of the existing system was, of course, exaggerated. Several departments had already instituted examinations and promotion by merit. See 'Competitive

In the open professions, they noted, 'the able and energetic rise to the top the dull and inefficient remain at the bottom. In the public establishments, on the contrary, the general rule is that all rise together.'²⁶ Their solution to the problem was to borrow the principle of open competition from the other professions, admitting candidates on the basis of merit and promoting them on the basis of achievement.²⁷

They hoped to select recruits by examination, and insisted that the examinations should be as open as possible, designed 'to test the intelligence, as well as the mere attainments, of the candidates'.²⁸ 'The great advantage to be expected from the examinations', they argued, 'would be that they elicit young men of general ability.'²⁹ George Birdwood's prediction in 1872 that this would produce a world in which men were 'tested for the public service by means of positive Chinese puzzles' and in which schoolchildren throughout the country would be trained in solving these puzzles proved to be remarkably accurate.³⁰ For this equation between intelligence, general ability, and merit, and this insistence on unfettered competition as the best means of testing for merit, was to be the basis of English intelligence testing.

Why were these reformers so enthusiastic about open competition? They hoped that it would improve the public service, replacing the dull and idle with the able and energetic.³¹ Patronage had allowed the aristocracy to use the public service as a foundling hospital for the waifs and strays of their families: for 'the idle and useless, the fool of the family, the consumptive, the hypochondriac, those who have a tendency to insanity' and for their bastards. Competition, on the other hand, might promote the rule of a Platonic aristocracy of talent, securing 'for the public service those who are, in a true sense aristocrats, the sons of gentlemen, or those who by force of cultivation, good training and good society have acquired the feelings and habits of gentlemen'.³² These 'natural gentlemen', it seems, included 'well-educated young men who depend for their advancement upon their own exertions, and not upon their wealth and connections' and 'well-educated poor men' who are 'notoriously those who throw themselves into their work with the greatest energy and perseverance'.³³

Examination and the Civil Service', *The Quarterly Review* Vol. 133, No. 265 (1872), p. 243 and Edward Hughes, 'Civil Service Reform 1853-5', *History* Vol. 27 (June 1942), pp. 55-7.

²⁶ *The Northcote-Trevelyan Report*, p. 109.

²⁷ *Ibid.*, p. 111.

²⁸ *Ibid.*, p. 112.

²⁹ *Ibid.*, p. 114.

³⁰ George C. M. Birdwood, *Competition and the Indian Civil Service* (1872), p. 17. 'For my part', he argued, 'I would give a boy very heavy marks for an illustrious father' (p. 16).

³¹ See, for example, Trevelyan's *Thoughts on Patronage* (17 January 1854). Reprinted in Edward Hughes, 'Sir Charles Trevelyan and Civil Service Reform 1853-5', *English Historical Review* Vol. 64 (January 1949), p. 69.

³² Sir Charles Trevelyan's reply to *Remarks by Capt. H. H. O'Brien, R. A., on Sir Stafford Northcote's and Sir Charles Trevelyan's Report Upon the Reorganisation of the Civil Service*. As reprinted in Hughes, 'Sir Charles Trevelyan and Civil Service Reform', p. 72 col. b; Trevelyan to Delane (editor of *The Times*). *ibid.*, p. 85; J. Donald Kingsley, *Representative Bureaucracy. An Interpretation of the British Civil Service* (Yellow Springs, Ohio, 1944), p. 69.

³³ Cf. Trevelyan, *The Purchase System in the British Army* (2nd edn 1867), pp. 2-3.

Schooled in *laissez-faire* principles, they reasoned that competition would elicit exertion and ensure efficiency.³⁴ They regarded competition as an instrument of moral reform, hoping that it would promote the virtues of self-reliance, just as patronage had encouraged the 'moral disease' of dependence.³⁵ By transforming administrative offices from freeholds, bestowed by patronage, into trusts, awarded for merit, competition would ensure that 'the Government and the Governing class would cease to be on the side of corruption',³⁶ and would set an example to the people. J. S. Mill looked forward to 'the great and salutary moral revolution, descending to the minds of almost the lowest classes, which would follow the knowledge that Government (to people in general the most trusted exponent of the ways of the world) would henceforth bestow its gifts according to merit, and not to favour'.³⁷ ('The world we live in', Sir James Stephen objected, 'is not, I think, half moralised enough for the acceptance of a scheme of such stern morality as this.'³⁸) They also hoped that it would advance their campaign against 'private interests' and in favour of the professionalisation of the public service. The 'hangers-on' of the aristocracy and the party in power would be replaced by trained professionals.

As if all this was not enough, the reformers also hoped that open competition would reinvigorate English education. By abolishing one of the most valued resources of the idle – patronage – and by multiplying the rewards to be earned by scholastic success, it would encourage parents to send their children to school and the children, once there, to persevere with their studies. Macaulay felt that an annual competition for forty places in the Indian Civil Service – every one of which 'is nothing less than an honourable social position, and a comfortable independence for life' – would galvanise the British universities.³⁹ His opinion was enthusiastically endorsed by a group of university reformers, notably Benjamin Jowett, Frederick Temple, Mark Pattison, A. P. Stanley and Disraeli's 'wild man of the Cloister', Goldwin Smith.⁴⁰ The universities had already started to abolish inconvenient restrictions and to open appointments to individual merit, as measured by competitive examinations;⁴¹ and the results had been spectacular.⁴²

³⁴ Trevelyan's obsession with prizes was such that, during the Irish famine, he wanted to give them to crews who caught the most fish or stayed out longest at night. Jennifer Hart, 'Sir Charles Trevelyan at the Treasury', *English Historical Review* Vol. 75 (January 1960), p. 101.

³⁵ Cf. Trevelyan's letter of 15 January. Quoted in Hart, 'Sir Charles Trevelyan at the Treasury', p. 99. However, Trevelyan was himself a nepotist, thinking that his own exertions justified the appointment of his relations and connections. See *ibid.*, pp. 97–8.

³⁶ Trevelyan, *Thoughts on Patronage* Hughes, 'Sir Charles Trevelyan and Civil Service Reform', p. 70.

³⁷ John Stuart Mill, *Reform of the Civil Service, Essays on Politics and Society, Collected Works of John Stuart Mill* Vol. 18 (Toronto, 1977), p. 207. Originally printed in 'Papers Relating to the Re-organisation of the Civil Service', PP 1854–55, 20, pp. 92–8. For the circumstances surrounding Mill's paper, see the textual introduction, p. lxxx.

³⁸ Quoted in Hughes, 'Civil Service Reform 1853–5', p. 68. ³⁹ *Macaulay Report*, p. 120.

⁴⁰ On Temple and merit, see Simon Green, 'Archbishop Frederick Temple on Meritocracy, Liberal Education and the Idea of a Clerisy', in Michael Bentley (ed.), *Public and Private Doctrine. Essays in British History presented to Maurice Cowling* (Cambridge, 1993), pp. 149–67.

⁴¹ John Roach, *Public Examinations in England 1850–1900* (1971), pp. 20–1.

⁴² *Oxford University Commission. Report of Her Majesty's Commissioners Appointed to Inquire into the*

The reformers used the Royal Commissions into Oxford and Cambridge, established by Lord John Russell in 1850, to reiterate the case for open competition. The Oxford Commission lamented that only 22 of the university's 542 Fellowships were open to general competition: the rest were restricted to candidates from particular districts, schools, or families.⁴³ These restrictions, it argued, damaged both learning and teaching, diminished incentives to effort, and populated the colleges with dullards. (The term 'founder', derived from 'founders-kin', was commonly used to mean 'fool'.⁴⁴) 'The effect of these restrictions', Temple argued, 'is most mischievous. Men who are naturally well fitted to be country Clergymen are bribed, because they are born in some parish in Rutland, to remain in Oxford as Fellows, until they are not only unfit for that, but for everything else.'⁴⁵ Hayward Cox put the point equally bluntly:

They crowd the colleges with inferior men, often without either the power or the inclination to promote the interests of education, withdraw many who might be useful in their appropriate spheres, hold out incentives to indolence, selfishness and self-indulgence, and engage persons in the work of instruction who are without zeal in the pursuit.⁴⁶

The restrictions had proved to be so disastrous because they treated educational opportunities as charitable gifts, to be scattered around particular neighbourhoods, rather than as just rewards, to be offered to those who had proved, through their superior intelligence and outstanding diligence, that they were capable of making good use of them. As Simon Green has put it, 'the system subsidised presumed poverty, not actual talent. It benefited imagined communities, not real individuals.'⁴⁷ The Commission insisted that restrictions should be abolished and Fellowships opened 'to merit, and to merit only'.⁴⁸ From this single reform, it

State, Discipline, Studies, and Revenues of the University and Colleges of Oxford (1852), p. 152. Christ Church did not even acknowledge the Commission's request for information.

⁴³ *Ibid.*, p. 149. The open fellowships were at Balliol and Oriel. On the Commission see, in particular, E. G. W. Bill, *University Reform in Nineteenth-Century Oxford. A Study of Henry Halford Vaughan 1811-1885* (1973), pp. 88-116 and A. J. Engel, *From Clergyman to Don. The Rise of the Academic Profession in Nineteenth-Century Oxford* (1983), pp. 33-43. The report was mainly the work of A. P. Stanley.

⁴⁴ Edwin Chadwick, *A Lecture on the Economical, Social, Educational and Political Importance of Open Competition for Admission to the Public Service* (1857), p. 31.

⁴⁵ *Oxford University Commission, Report*, p. 149. See also Goldwin Smith, *Oxford Essays* (1858), p. 275. For some amusing vignettes of the men who dominated Oxford under the system of closed Fellowships, see Mark Pattison, *Memoirs* (1885), pp. 217-18.

⁴⁶ Edwin Chadwick, *A Lecture on ... Open Competition*, p. 149.

⁴⁷ Simon Green, 'Archbishop Frederick Temple on meritocracy, liberal education and the idea of a clerisy', in Michael Bentley (ed.), *Public and Private Doctrine. Essays in British History Presented to Maurice Cowling* (Cambridge 1992), p. 156.

⁴⁸ *Oxford University Commission, Report*, p. 152. For evidence in favour of competition from within the university, see *Oxford University Commission, Evidence*: N. W. Senior, p. 17; Jowett, pp. 30-40; Mark Pattison, p. 44; H. H. Vaughan, p. 90; Hayward Cox, p. 97; Frederick Temple, pp. 123-34; Henry Wall, p. 150; R. Congreve, p. 153; A. H. Clough, p. 214. For evidence in favour of restrictions, see E. A. Freeman, p. 141, and also *Report and Evidence Upon The Recommendations of Her Majesty's Commissioners For inquiring Into The State of the University of Oxford Presented to the*

argued, all other reforms would naturally follow. 'The Fellows are so completely the governing body of the University, that, if no other change were made than to throw all the Fellowships open, and secure that the elections were honest, all other reforms would follow spontaneously.'⁴⁹

The Cambridge Commission found less to complain about. The majority of College Fellowships had already been thrown open to free competition. 'A student, however friendless and unknown, provided he have the requisite qualifications', the Commission argued, 'is as sure of obtaining his Fellowship as another of better family or wealthier connections.'⁵⁰ It argued simply that this well-established principle should be universalised; that all Fellowships and Scholarships should be 'brought under the one good rule of unfettered and open competition'.⁵¹

The educational reformers hoped that the Macaulay and Trevelyan initiatives would at once improve the universities and tighten their links with the administration. Jowett was a particularly vigorous advocate of competition,⁵² and his proposals for the civil service examinations were formally bound with the Northcote-Trevelyan Report when it was presented to parliament. The headmasters of Harrow, Westminster, Marlborough and King Edward's School, Birmingham, also voiced their support. As Lord Robert Cecil, the future Lord Salisbury, noted in 1856, open competition was 'from beginning to end, a schoolmasters' scheme'.⁵³

Gladstone was undisturbed by the 'schoolmasters' scheme'. He was confident that a competitive examination which emphasised classics and mathematics would favour the great public schools and colleges and their natural clients, the aristocracy:

I do not hesitate to say [he wrote to Lord John Russell in January 1854] that one of the great recommendations of the change in my eyes would be its tendency to strengthen and multiply the ties between the higher classes and the possession of

Board of Heads of Houses and Proctors (Oxford, 1853), pp. 94–5. Henry Wall warned that 'the evil would not be cured, but rather aggravated, by simply destroying the limits of eligibility. The power of election should not be allowed to be in the hands of a few senior members of a society, else you would be but increasing their sphere of patronage. Statutes and wills are not the only hindrances to the benefits of a foundation being bestowed according to merit.' *Oxford University Commission. Evidence*, p. 150.

⁴⁹ *Oxford University Commission. Report*, p. 149. The Commission is quoting from Frederick Temple's evidence.

⁵⁰ *Cambridge University Commission. Report of Her Majesty's Commissioners Appointed to Inquire into the State, Discipline, Studies, and Revenues of the University and Colleges of Cambridge* (1852), p. 156. See also p. 202.

⁵¹ *Ibid.*, p. 202. But see Sheldon Rothblatt, *The Revolution of the Dons. Cambridge and Society in Victorian England* (1968), p. 75.

⁵² E. V. Quinn and J. M. Prest, *Dear Miss Nightingale. A Selection of Benjamin Jowett's Letters 1860–1893* (Oxford, 1987), pp. x–xi.

⁵³ Quoted in Hughes 'Civil Service Reform', p. 62. The academic bias of the examinations also aroused the opposition of radical reformers, notably Edwin Chadwick. See R. A. Lewis, 'Edwin Chadwick and the Administrative Reform Movement 1854–6', *University of Birmingham Historical Journal* Vol. 2 (1949–50), pp. 186–7.

administrative power. As a member for Oxford, I look forward eagerly to its operation. There, happily, we are not without some lights of experience to throw upon this part of the subject. The objection which I always hear there from persons who wish to retain restrictions upon elections is this: 'If you leave them to examination, Eton, Harrow, Rugby, and the other public schools will carry *everything*.' I have a strong impression that the aristocracy of this country are even superior in natural gifts, on the average, to the mass: but it is plain that with their acquired advantages, their *insensible* education, irrespective of book-learning, they have an immense superiority.⁵⁴

In the short term, of course, he was right. Poor boys who had once found their way to Oxford on closed scholarships were unable to survive in open competition with the products of the élite public schools.⁵⁵ But in the long term, as the 'schoolmasters' scheme' gained its own dynamic and a scholarship ladder, regulated by examinations, was constructed, the aristocracy was forced into competition with a wider section of the population.⁵⁶ Educational success could never be as certain a guarantee of aristocratic power as patronage and nepotism.

Several reformers wanted to broaden the base of the universities as well as to remove restrictions on appointments. Inspired by S. T. Coleridge's notion of a 'clerisy' – an endowed intelligentsia scattered throughout the country and dedicated to preserving high civilisation in an era of mass politics⁵⁷ – and convinced that 'at present the benefits of the higher education are only given to an infinitesimal fraction of the talent of the nation',⁵⁸ they hoped that the Universities would become national institutions. They looked forward with Mark Pattison to 'a system by which the university would strike its roots freely into the subsoil of society, and draw from it new elements of life, and sustenance of mental and moral power.'⁵⁹ From the 1850s onwards the universities began to extend the competitive principle to middle-class schools, establishing university-controlled public examinations in order to raise teaching standards, excite youthful ambitions, counteract indolence, and forge a bond between Oxbridge and the middle classes.⁶⁰ Both the Oxford Delegates and the Cambridge Syndicates treated examining as an almost missionary activity, hoping that it would attract to the universities a more able, numerous and educated body of candidates.⁶¹ At the same time, the university extension

⁵⁴ Quoted in Hughes, 'Civil Service Reform', p. 63. J. S. Mill made a similar point; see his *Reform of the Civil Service*, p. 209. Many subsequent historians of university and civil service reform have also echoed Gladstone's judgement. See, for example, Hart, 'Sir Charles Trevelyan at the Treasury', p. 110.

⁵⁵ *Royal Commission on Oxford and Cambridge Universities. Report* [Cmnd 1588] (1922), p. 24.

⁵⁶ *Ibid.*, p. 132; Rothblatt, *Revolution of the Dons*, pp. 46–7, 75–86.

⁵⁷ Christopher Kent, *Brains and Numbers: Elitism, Comptism and Democracy in Mid-Victorian England* (Toronto, 1978), pp. 3–52.

⁵⁸ Jowett quoted in J. M. Prest (ed.), *Jowett's Correspondence on Education with Earl Russell in A Supplement to the Balliol College Record 1965* (1965), p. 8.

⁵⁹ *Oxford University Commission* (1852), p. 36. See also Jowett's comments in Evidence, pp. 32–3, and John Sparrow, *Mark Pattison and the Idea of a University* (1967), pp. 94–6.

⁶⁰ Hughes, 'Civil Service Reform', p. 55.

⁶¹ *Ibid.*, pp. 139–40.

movement brought advanced teaching to a vast number of people 'who might otherwise have sought it in vain from a living teacher',⁶² increasing the number of examination candidates, attracting recruits to the universities, and stimulating a widespread desire for the improvement of advanced education.

Under the combined pressure of academic opinion and public demand, policy makers began to build an educational ladder intended to take the exceptionally able but financially impoverished boy from the elementary school to the university and the professions.⁶³ The Taunton Commissioners (1864-7) accepted the existing class-bound stratification of English education – it would have been very remarkable if they had not done so – but argued that no educational system would be complete 'unless it were possible for boys of exceptional talent to rise to the highest education which the country could supply'.⁶⁴ They pointed out that the grammar schools had traditionally performed this function:

One great service, which till a very late period was rendered to this country by the grammar schools, was that so many boys of more than ordinary capacity found in them, what they could hardly have found elsewhere, the means of rising to eminence in all professions, and especially in literature.⁶⁵

They looked forward to an educational system unified by 'some connecting thread pervading education of every grade'⁶⁶ and capable of providing 'real ability' with its 'proper opening'.⁶⁷ In order to encourage mobility, they hoped that a system of exhibitions would be established 'open to merit, and to merit only, and, if possible, under such regulations as to make it tolerably certain that talent, wherever it was, would be discovered and cherished and enabled to obtain whatever cultivation it required'.⁶⁸ They suggested that all exhibitions should be open to rich and poor alike, awarded as prizes rather than charitable gifts. 'The freer the competition the better', they pointed out. 'Whenever a privilege is to be given as a prize, restrictions are a grievous evil. They damage the value of the prize far more than they benefit those who are thus protected in the competition.'⁶⁹ They argued that 'open competition is above partiality, whether personal, social or political; it marks by natural selection those who can profit by an education higher than the rudiments; it puts the free scholar in a place of honour instead of a place of reproach; it stimulates the education without and leavens the mass within; it encourages parents, masters, and scholars.'⁷⁰ To the objection that open competition would favour richer boys who could pay for preparatory instruction,

⁶² *Report of the Royal Commission on Secondary Education* (Bryce), PP 1895, 43 (Cmnd. 7862), Vol. 1, p. 12.

⁶³ On the scholarship ladder see also John Roach, *Public Examinations in England*, pp. 229-56 and Sutherland, *Ability, Merit and Measurement*, pp. 101-11.

⁶⁴ *Report of the Schools Inquiry Commission* (Taunton), PP 1867-8, 28, *Volume 1. General Report*, p. 27.

⁶⁵ *Ibid.*, p. 92. ⁶⁶ *Ibid.*, p. 27. They meant by this the universal teaching of Latin.

⁶⁷ *Ibid.*, p. 95. ⁶⁸ *Ibid.*, p. 96.

⁶⁹ *Ibid.*, p. 595. Cf. *Oxford University Commission* (1852), p. 40.

⁷⁰ *Report of the Schools Inquiry Commission. Vol. 1.*, p. 158.

they replied that 'the victory would really depend, as it ought to depend, on natural talent, in which there is no reason to think the poor boy would be deficient, and on industry, in which he would have every inducement to be superior'.⁷¹

The Bryce Commissioners (1893–5) advocated further measures 'to enable children of scanty means and exceptional ability to prolong their education'.⁷² They hoped that a generous supply of scholarships would provide 'steps in that educational ladder by means of which boys of rare capacity may pass from elementary schools to the universities'.⁷³ They took into account the complaint that the established scholarship system 'discerns, advances and rewards not capacity as such but attainments; and that, as attainments in the earlier years of life largely depend on opportunities and advantages which cost money, students of real promise may be excluded by early poverty from the benefit of endowments upon which they have a just claim'.⁷⁴ They hoped to overcome this problem by ensuring that youths were elected to awards '*propter spem* rather than *propter rem*, for promise of general ability rather than for precocity of special attainment'.⁷⁵ The examination system should thus be designed to test the 'general intelligence' of the pupils.⁷⁶

The Taunton and Bryce Commissions advocated what has come to be called 'sponsored social mobility'.⁷⁷ They hoped that educational authorities would identify able but impoverished children when young; send them to local grammar schools, where their minds could be trained and their manners polished; and then guide them into the universities and professions. The system they established was incomplete and rudimentary,⁷⁸ but it did allow a few 'boys of exceptional talent to rise to the highest education which the country could supply'. Ernest Barker's career was an almost perfect example of sponsored mobility. Born into a large and impoverished family – his mother had worked in a cotton mill and his father was a farm and quarry labourer – he won a scholarship to Manchester Grammar School; attracted the enthusiasm of his teachers, one of whom taught him Greek without charge during vacations; supplemented his scholarship money with prizes won in open competition; and finally went up to Balliol in 1893 with an £80 foundation scholarship and a £45 leaving exhibition from Manchester. In the

⁷¹ *Ibid.*, p. 597.

⁷² *Report of the Royal Commission of Secondary Education* (Bryce), p. 167. On the next page the report refers to 'children of merit.' ⁷³ *Ibid.*, p. 171. Cf. p. 300. ⁷⁴ *Ibid.*, p. 221.

⁷⁵ *Ibid.*, p. 224.

⁷⁶ *Ibid.*, p. 305.

⁷⁷ Ralph H. Turner, 'Modes of Social Ascent through Education', in Reinhard Bendix and Seymour Martin Lipset, *Class, Status, and Power. Social Stratification in Comparative Perspective* (1966 edn), pp. 449–58. Under sponsored mobility 'the élite or their agents, who are best qualified to judge merit, call those individuals to élite status who have the appropriate qualities. Individuals do not win or seize élite status, but mobility is rather a process of sponsored induction into the élite following selection' (p. 451).

⁷⁸ For an up-to-date analysis of inequalities in educational opportunity, geographical as well as social, see W. E. Marsden, *Unequal Educational Provision in England and Wales. The Nineteenth-Century Roots* (1987).

process, he found himself wrenched away from his family and 'attached to another centre'; when he returned home it was as a stranger, 'with far-away interests, far-away friends, and a separate way of life.'⁷⁹

In the late nineteenth century and the early twentieth, the case in favour of such mobility was increasingly argued in terms of national expediency and social darwinism: to survive, the nation needed to mobilise its human resources. The national efficiency movement enthused over examinations and educational mobility.⁸⁰ Karl Pearson warned that 'you cannot get a strong and effective nation if many of its stomachs are half fed and many of its brains untrained';⁸¹ and Sidney Webb argued that 'it is in the classrooms ... that the future battles of the Empire for commercial prosperity are being already lost'.⁸² Sir Robert Morant hoped that meritocratic selection would counteract the debilitating and anarchic influence of democracy:

The more we develop our society on democratic lines *without* this scrupulous safeguarding of the 'guidance of brains' in each and every sphere of national life the more surely will the democratic State be beaten in the long run, in the international struggle for existence, conquered from without by the force of the concentrated directing brain power of competing nations, shattered from within by the centrifugal forces of her own peoples' unrestrained individualism, and disintegrated utterly by the blind impulses of mere numerical majorities.⁸³

Individual justice had become an instrument of national efficiency and upper-class charity had been transformed into political expediency.

Meritocratic mobility also offered a means of reconciling élitism with democracy. The MacDonnell Commission (1914) on the Civil Service argued that, if the Civil Service was to fulfill its democratic obligation of recruiting candidates from every class and locality without compromising standards, then the educational system needed to be improved.⁸⁴ 'It is not by lowering the educational standard of the highest ranks of the civil service', the Commission argued, 'but only by enabling the clever sons of poor parents to benefit by University training, and thereby enter the Civil Service, that the interests of democracy and of the public service can and ought to be reconciled.'⁸⁵ The scholarship machinery needed to be extended and co-ordinated so that all able children were spotted in the elementary schools, recruited into the secondary schools, and, if successful, sent to university;⁸⁶ the

⁷⁹ Ernest Barker, *Age and Youth. Memories of Three Universities and Father of the Man* (1953), p. 296.

⁸⁰ P. J. Hartog, *Examinations and their Relation to Culture and Efficiency* (1918), esp. p. 3.

⁸¹ Karl Pearson, *National Life from the Standpoint of Science* (1905), p. 54.

⁸² Sidney Webb, 'Lord Rosebery's Escape From Houndsditch', *Nineteenth Century and After* No. 295 (September 1901), pp. 375–85.

⁸³ Quoted in Bernard M. Allen, *Sir Robert Morant. A Great Public Servant* (1934), p. 126. Morant's statement was made in 1898.

⁸⁴ *Royal Commission on the Civil Service. (MacDonnell) Fourth Report of the Commissioners.* (Cmd. 7338) (1914), p. 30, para 7.

⁸⁵ *Ibid.*, p. 39, para 42.

⁸⁶ *Ibid.*, p. 29, para 7 and p. 86, para 100. The Report argued that the Scottish educational system was more effective than the English.

State as Employer and Examiner needed to co-operate more closely with the State as Educator.⁸⁷

Once again administrators and educationalists were thinking along the same lines. The Bryce Commission and the 1902 Education Act both stimulated the provision of scholarships. In 1895 there were fewer than 2,500 Local Education Authority scholarships tenable at secondary schools; in 1900 the number had doubled and in 1906 it had more than doubled again (and if we include scholarships restricted to intended teachers, more than quadrupled).⁸⁸ In 1907 the Board of Education set up financial incentives for secondary schools to offer 25 per cent of their places free-of-charge to elementary school children:⁸⁹ a haphazard collection of scholarships had finally been organised into a system and infused with a national purpose.⁹⁰ The 1918 Education Act pushed the school door open wider still, compelling Local Education Authorities to ensure that children and young persons 'shall not be debarred from receiving the benefits of any form of education by which they are capable of profiting through inability to pay fees'.⁹¹ In 1920 the Departmental Committee on Scholarships and Free Places argued that the number of free places should be increased to 40 per cent.⁹² It insisted that scholarship examinations should aim 'as far as possible to test capacity and promise rather than attainments';⁹³ and argued that all eleven-year-old elementary school children should be required to take the scholarship examination, since 'the country cannot afford to miss intelligent children'.⁹⁴

Educational policy-makers were thus confronted with an urgent problem: how was ability distributed within the school population? Fortunately, a sophisticated solution to this question had already been developed.

Social mobility in the meritocracy

In his Huxley lecture of 1901 Francis Galton suggested that social classes possessed different levels of 'civic worth', or natural ability, with professionals and employers at the top, the respectable working class bunched around the mean, and criminals and paupers at the bottom.⁹⁵ Social class was thus a biological phenomenon and followed a normal or Gaussian curve of distribution.⁹⁶ Even social mobility could be explained according to this model. Galton suggested that regression to the mean

⁸⁷ *Ibid.*, p. 30 para, 7.

⁸⁸ *Report of the Departmental Committee on Scholarships, Free Places and Maintenance Allowances* (Hilton Young), PP 1920, 15, Cmnd 968, p. 3, para. 8.

⁹⁰ *Ibid.*, p. 4, para. 11.

⁹¹ *Ibid.*, p. 8, para. 26.

⁸⁹ *Ibid.*, pp. 3–4, para. 10.

⁹² *Ibid.*, p. 34, para. 101.

⁹³ *Ibid.*, p. 19, para. 63. Cf. p. 21, para. 67.

⁹⁴ *Ibid.*, p. 24, para. 75.

⁹⁵ Francis Galton, 'The Possible Improvement of the Human Breed', reprinted in Galton, *Essays in Eugenics* (1909).

⁹⁶ For a discussion of the role of the normal curve in sociobiological thought, see V. Hilts, 'Statistics and Social Science' in R. Giere and S. Westfall (eds.), *Foundations of Scientific Method in the Nineteenth Century* (Bloomington, 1973). For Galton's 'reverence' for the normal curve, see Galton, *Natural Inheritance* (1889), p. 66. But cf. Burt, 'Is Intelligence Distributed Normally?', *British Journal of Statistical Psychology* Vol. 16 (1963), pp. 175–90.

could both explain mobility and set strict limits on it. The children of the gifted would seldom be as talented as their parents, and must expect to sink in the occupational hierarchy in consequence. Yet substantial promotion from the manual classes would be so rare as to constitute a statistical freak.⁹⁷ This was very much a view of society from the professional upper middle class. The overall social structure was accepted as a reflection of the inflexible laws of nature. The classes were ranked in terms of their possession of professional qualities, such as intelligence and zeal, with the paupers and thieves lumped together in the bottom of the statistical range. But emphasis was placed on competition for membership of the élite and circulation of élites was accepted as both natural and desirable.

In Galton's formulation, this argument was riddled with contradictions. But Spearman's work on general intelligence and Fisher's reworking of Mendel's theory solved some of its more evident problems' giving it a period of renewed vitality. Spearman replaced Galton's ill-defined notion of 'natural ability' with the concept of 'general intelligence', pervading all mental acts and present in different people to different degrees.⁹⁸ He thus claimed to have demolished the argument presented by many anti-eugenicists that different kinds of ability conflict with one another.⁹⁹ Fisher clarified Galton's assumptions about regression in his path-breaking paper of 1918 on 'The Correlation between Relatives on the Supposition of Mendelian Inheritance', in which he demonstrated that a multifactorial Mendelian model could account for the existence of normally distributed characteristics and for regression between relatives in respect to such characteristics and in which he also suggested ways of distinguishing between environmental and hereditary components in observed variance.¹⁰⁰

Burt's work on occupation and ability was a sophisticated synthesis of Spearman and Fisher, in which a modified version of Galton's vision of English society was preserved. Civic worth had become IQ; regression had become a Mendelian process; and social mobility within a stratified occupational hierarchy had become the product of the working of genetic laws. A degree of social mobility was the product of biological laws; but the same laws put strict limits on the amount of mobility, preventing any general egalitarian reconstruction of English society.¹⁰¹

⁹⁷ Galton, 'The Possible Improvement of the Human Breed', *Essays in Eugenics*, p. 14.

⁹⁸ Spearman, '"General Intelligence" Objectively Determined and Measured' *Amer. J. Psych* Vol. 15 (1904).

⁹⁹ Spearman, 'The Measurement of Intelligence', *Eugenics Review* Vol. 6 (1914–15); Bernard Norton, 'Charles Spearman and the General Factor in Intelligence: Genesis and Interpretation in the Light of sociopersonal considerations', *Journal of the History of the Behavioural Sciences* Vol. 15 (1979), pp. 142–54.

¹⁰⁰ R. A. Fisher, 'The Correlation between Relatives on the Supposition of Mendelian Inheritance', *Transactions of the Royal Society of Edinburgh*, Vol. 52 (1918), pp. 399–433. For Fisher's opposition to the environmentalist hypothesis, see Norton, 'Fisher and the Neo-Darwinian Synthesis', in E. G. Forbes (ed.), *The Human Implications of Scientific Advance* (Edinburgh, 1978).

¹⁰¹ Norton, 'Psychologists and Class', in Charles Webster (ed.), *Biology, Medicine and Society* (Cambridge, 1981), pp. 307–14.

Bernard Norton has commented on the 'mixture of radicalism and conservatism' in Burt's theory and warned against writing off the Burtians as straightforward agents of the ruling class, but he concludes by stressing the reactionary elements in these ideas.¹⁰² Yet if we approach the subject from an inter-war perspective then it is the radical rather than the conservative aspects of this model which catch our attention. Burt emphasised the more subversive elements in the Galtonian model and, compared with such figures as Pearson, Fisher and Heron, was clearly on the left of the hereditarian camp. Galton and Pearson certainly presented a rather complacent picture of English society as seen from the established professional strata, yet the Burtians reinterpreted their model from a rather more marginal and radical position.

Burt believed firmly that occupation and ability were closely linked: inequality owed much more to biology than to environment. But he stressed that this link was only approximate: English society was still an imperfect realisation of the meritocratic ideal. In 1961, he argued that only 55 per cent of the population could be regarded as correctly placed if intelligence were the only criterion of allocation (though he suggested that other psychological factors might explain some of this discrepancy): nearly 23 per cent were in a class too high, and, with a perfect scheme of vocational guidance ought to be moved down, while 22 per cent were in a class too low, and ought to be moved up. In the lowest class of all – the unskilled workers – some of the brightest members were more intelligent than the dullest members of the 'lower professional class', resulting in a considerable waste of human resources.¹⁰³ He condemned the formation of closed self-preserving social classes and advocated a high degree of social mobility. In order to preserve the fit between aptitude and occupation, a wholesale process of reallocation must go on in every generation. Mendelian genetics, as contrasted with Galton's theory of blended inheritance, had thrown a heavy emphasis on the role of chance.¹⁰⁴

If the intervention of chance made the future of any individual member of a social group uncertain, then the logic of statistics equally made a general process of social mobility unavoidable. Over time, the families which occupied each social stratum would change almost entirely. Since the correlation between the intelligence of fathers and sons is only about 0.50, then the mean intelligence of the children belonging to each class will exhibit a marked regression towards the mean of the population as a whole, and the intelligence of the children within each class will vary over a far wider range than that of their fathers. The average intelligence of the children in the higher groups falls almost half-way to the general mean and that of the children in the lower groups rises in a similar proportion, and at the same time there is a marked tendency for bright children to be born to dull parents at the bottom of the social scale and for dull children to be born to intelligent parents at

¹⁰² *Ibid.*, pp. 290, 313–14.

¹⁰³ Burt, 'Intelligence and Social Mobility', *British Journal of Statistical Psychology* Vol. 14 (1961), p. 12.

¹⁰⁴ Burt, 'Intelligence and Social Mobility', pp. 12–23.

the top. Without social mobility the differences between the class means would virtually vanish in about five generations. An overall mobility of 22 per cent is necessary if the IQ distribution by class is to remain constant.

Burt's assumption that there was a high but imperfect correlation between occupation and ability was shared by almost all educational psychologists between the wars. Thomson (at least in his more popular writings) agreed that innate intelligence was distributed along a normal curve;¹⁰⁵ that inheritance operated according to Mendelian laws;¹⁰⁶ and that 'those classes which have the higher standard of living are clearly very likely to include a greater number of individuals who biologically and genetically are superior, for those who possess any superiority of this sort will, not inevitably, but certainly to some extent, tend to climb into those classes'.¹⁰⁷ Isaacs argued that intelligence is fixed by biology and is largely independent of chance and opportunity. 'If one wants to be a really intelligent person', she suggested, 'it is far more important to choose one's parents well than one's schoolmasters'.¹⁰⁸ She felt that 'this is now such familiar ground that it is hardly necessary to adduce evidence or authorities'.¹⁰⁹ International evidence indicated that this was a typical feature of industrial societies and not a peculiarity of the English.

But the fit between intelligence and reward was still far from perfect, and the psychometrists put their faith in mental tests to redress the balance. Ballard admitted that mental tests are dangerous because they are 'vital and forceful and efficient'¹¹⁰ and suggested that their natural opponent was not the liberal but 'the Tory politician – the man who, according to Carlyle, believes in the doctrine of standing still; for he would foresee the possibility of an aristocracy of talent supplanting the aristocracy of wealth and position'.¹¹¹ Spearman and Wynn Jones boasted that the success of intelligence tests was 'amazing, or even alarming' as they 'threaten to exercise an immediate revolutionary influence upon daily life'.¹¹² Cattell recalled that his interest in psychology resulted from his refusal to put his faith in traditional social values and his 'determination to bestow loyalties and service only upon personally tested and logically defensible institutions'.¹¹³

They tended to regard the intelligence test as a sword of educational justice, capable of separating innate ability from social training and ensuring that scholarships went to the deserving rather than to the privileged. They held the

¹⁰⁵ Thomson, *Instinct, Intelligence and Character: An Educational Psychology* (1924), p. 179.

¹⁰⁶ *Ibid.*, pp. 21–25; *A Modern Philosophy of Education* (1929), p. 133.

¹⁰⁷ *A Modern Philosophy of Education*, p. 167. Cf. p. 153.

¹⁰⁸ S. Isaacs, *The Children We Teach: Seven to Eleven Years* (1932), p. 43. Cf. pp. 25, 28–9.

¹⁰⁹ S. Isaacs, *Intellectual Growth in Young Children* (1938 edn), p. 59 n 1.

¹¹⁰ Ballard, *The New Examiner* (1923), p. 7. Cf. p. 5.

¹¹¹ *Ibid.*, p. 126.

¹¹² Spearman and L. Wynn Jones, *Human Ability: A Continuation of the 'Abilities of Man'* (1950), p. 1.

¹¹³ Cattell, *Psychology and Social Progress: Mankind and Destiny from the Standpoint of a Scientist* (1933), p. 9.

gifted, from whatever social class, to be the 'nation's most valuable asset', and hoped that everything possible could be done to discover and nurture them. In particular, they set out to rescue intelligent working-class children, handicapped in school by cultural poverty in the home, and to provide them with a secure ladder up the social system. Winch felt that 'it is sheer national waste to allow either the capable child to linger too long in the school of the lowest grade or to present to inferior children intellectual "pabulum" of a kind which they cannot digest'.¹¹⁴ He hoped that, instead of being put on the Procrustean bed of a uniform educational system, children would be classified into classes and schools according to their innate ability.¹¹⁵ Thomson spoke even more eloquently about his meritocratic mission. He regarded the task of spotting intelligent children who might otherwise be overlooked as his ruling passion.¹¹⁶ His participation in the Northumberland tests of 1921 and 1922 was inspired by the belief that a large number of able children in remote rural areas were being overlooked by the scholarship examination because of poor schooling and low expectations. He tested 17,000 children with group tests and then travelled around the county giving individual Binet tests to children who had performed well.¹¹⁷ 'Those Northumberland tests of mine', he later recalled, 'were beginning of a lifelong task, which I have felt bound to preserve for the sake of intelligent children.'¹¹⁸ He felt that his efforts had been rewarded when he received a letter from someone who had profited from this meritocratic machinery: 'you will not remember my name [it went] but I was one of the boys tested in 1921. I have several times thought of writing to you but have not found courage to do so till now, when I have just won the gold medal at the end of my medical course and I felt you would like to know.'¹¹⁹ This letter, rather than subsequent speculations about the role of psychologists as agents of the ruling class, seems to convey the spirit of the mental testing movement in this period.

The psychometrists did not hold identical beliefs. If they were united by their commitment to meritocracy, they often disagreed about what meritocracy implied. They argued about a number of central issues – about the closeness of fit between ability and income, and about the emphasis to be placed on provision for the élite and for the backward. It is possible to distinguish a number of distinct positions within the psychometric camp. The biometricians, led by Karl Pearson and based at the Galton Laboratory in University College, London, emphasised inheritance almost to the exclusion of environment and expressed scepticism about the need for a public scholarship system.¹²⁰ Within the Galtonian tradition, Burt's work can

¹¹⁴ Winch, *Problems in Education* (1900), p. 65.

¹¹⁵ *Ibid.*, pp. 63–5.

¹¹⁶ Thomson, *The Education of an Englishman* (Edinburgh 1969), p. 101.

¹¹⁷ 'Godfrey Thomson', in G. Boring *et al.* (eds.), *A History of Psychology in Autobiography* (Clarke University, 1968 edn), Vol. 4, pp. 220–1.

¹¹⁸ Boring *et al.* (eds.), *History of Psychology*, Vol. 4, p. 286.

¹¹⁹ *Ibid.*, p. 285.

¹²⁰ K. Pearson, *Nature and Nurture* (1906).

partly be interpreted as an attempt to undermine such an extreme position; and he later emphasised his disagreement, arguing that 'it seems a little unfair to saddle the psychologists of the present day with the exaggerated views and social prejudices of the pioneers of fifty years ago'.¹²¹ Raymond Cattell presented the case for a high correlation between intelligence and occupation in rather more intemperate terms than any of his contemporaries. He suggested that different races as well as different classes possessed varying levels of innate intelligence;¹²² that the unemployed were on average of much lower mental ability than the employed, so that the solution of unemployment was a psychological rather than an economic problem; and that psychologists could devise tests 'to indicate those who, in a newspaper-ridden community, might safely be given the vote'.¹²³ In contrast to Pearson and Cattell, Thomson drew much more radical conclusions from his meritocratic presuppositions. He thought in terms of different kinds of ability rather than of different levels of intelligence and advocated a ramifying hierarchy of merit rather than a one-dimensional scale.¹²⁴ He urged that all children should be educated within a single post-primary school, large enough to provide different courses for different abilities and interests. Only then, he thought, could the facts of biological inequality be reconciled with the demands of democracy and social solidarity.¹²⁵

The contrast between Thomson and Burt is particularly intriguing. Burt believed in a single hierarchy of merit: innate general cognitive ability might be measured in a test and represented by a single number. He supported educational separatism and concerned himself in the recruitment of the gifted into a relatively closed élite. As he grew older, he became increasingly concerned with the natural foundations of social inequality. Thomson, on the other hand, questioned the existence of general intelligence, advocated comprehensive schooling, and picked out scholarship children for personal rather than sociological reasons. Some of these differences may be explained by their personal backgrounds. Thomson came from a working-class background and owed his education to a succession of state scholarships. He spent his life in northern England and Scotland and failed to form any close links with the English élite. Burt was born into the professional middle classes and educated at public school and Oxford. He spent most of his adult life in London and exercised a considerable influence over both the Board of Education and the Board of Control. It is also possible to discern beneath such personal differences a contrast between the Scottish and English meritocratic traditions: Scottish meritocracy tended to be relatively open, whereas English meritocracy emphasised exclusiveness.¹²⁶ Although he was born in England, and even entitled

¹²¹ Burt and Howard, 'Heredity and Intelligence: A Reply to Criticisms', *British Journal of Statistical Psychology* Vol. 10, Part 1 (May 1957), p. 41.

¹²² Cattell, *The Fight for Our National Intelligence* (1937), pp. 25, 47. ¹²³ *Ibid.*, pp. 69–70.

¹²⁴ Brown and Thomson, *The Essentials of Mental Measurement* (Cambridge, 1921).

¹²⁵ Thomson, *A Modern Philosophy of Education* (1929), p. 278.

¹²⁶ Hope, *The Political Conception of Merit: A Charter for Education* (Woodrow Wilson International Centre for Scholars), p. 8.

his autobiography *The Education of an Englishman*, Thomson's approach to education had a distinctively Scottish flavour. (Jennie Lee, who studied under him for a teacher-training qualification, noted that he had 'a rather high opinion of Scottish standards of education'.¹²⁷) Just as Macaulay's reforms of the Indian Civil Service took their inspiration from the ideas of the Scottish enlightenment, but gave them a characteristically English tone in practice, so Thomson's educational ideas were made to serve the demands of a selective educational system in England. He may have advocated comprehensive schooling in theory; but in practice the Moray House tests were the most widely used intelligence tests in the 11-plus examination.

The meritocratic tradition in socialist thought

Before the Second World War the meritocratic ideal found its most vigorous supporters on the left and its most committed opponents on the right. For much of its history the Labour Party has been much more interested in upward mobility than in equality of outcome. The meritocratic ideal provided socialists with a powerful indictment of the old order and a plausible blueprint for the new. Merit implied a host of criticisms of the established system – that it is nepotistic and corrupt, that it rewards the rich rather than the able and the idle rather than the energetic, and that it wastes the talents of the poor – and provided an attractive answer to the question which all radicals who wish to be taken seriously must ponder: if our current masters are to be replaced who should we choose to rule?¹²⁸

This enthusiasm for meritocracy drew on three important traditions in British left-wing thought. The first was the Enlightenment commitment to the rule of reason. Like the *philosophes*, many British socialists were captivated by the vision of a rational, planned and scientific society, dominated by an educated élite, planned according to rational principles and devoted to the conquest of nature and the perfection of man. They instinctively supported reason against superstition, freedom against intolerance, opportunity against ascription. They wanted to see the hereditary ruling-class replaced by a meritocracy of administrators and experts.¹²⁹

The second was the radical hostility to the *ancien régime* of landed wealth, administrative corruption and religious intolerance. The radicals loathed the idle rich even more than they despised the idle poor. Quoting their favourite biblical text 'if any man would not work, neither should he eat', they dismissed the upper-classes as social parasites and disastrous role models. They railed against aristocratic government – or, as they termed it, 'the thing' – regarding it as a 'a gigantic

¹²⁷ Jennie Lee, *To-morrow is a New Day* (1939), p. 79.

¹²⁸ On the élitist tradition in socialist educational thinking, cf. Gary McCulloch, *Philosophers and Kings* (Cambridge, 1991), pp. 98–118.

¹²⁹ Cf. David Caute, *The Fellow-Travellers. A Postscript to the Enlightenment* (1973), pp. 250–66.

system of out-relief for the aristocracy', a dodge intended to support the luxuries of the rich at the expense of the labours of the poor. They loathed jobbery because it rewarded sycophancy, tolerated incompetence, and institutionalised inefficiency.¹³⁰

The third was the Nonconformist belief in the spiritual elect. Nonconformism, which exercised a decisive influence over many leading socialists, had highly élitist implications. Its theology divided the world into the saved and the damned, implying that the saved should rule in this world before abiding in the next, and its day-to-day organisation, with its panoply of spiritual leaders and study groups, provided a practical training in leadership.

The meritocratic ideal also served a number of important practical functions for the left. Firstly, it provided a compelling justification for expanding state power. *Laissez-faire* liberals had traditionally argued that the state is inherently inefficient – that it cossets self-serving producers, institutionalises free-loading, and exploits or ignores consumers – and they had no shortages of examples to support their prejudices. The eighteenth-century state, they pointed out, was a system of outdoor relief for its employees rather than a mechanism for the efficient provision of services.¹³¹ Socialists countered such radical prejudices by arguing that meritocratic selection would transform the state into a highly efficient mechanism, staffed by the able and dedicated to the common good; an odious parasite would become an indispensable servant. 'Make the passing of a sufficient examination an indispensable preliminary to entering the executive', Sidney Webb argued, 'make the executive responsible to the government and the government responsible to the people; and the State departments will be provided with all the guarantees for integrity and efficiency that private money-hunting pretends to.'¹³² The idea of merit allowed the left to appropriate the virtues of capitalism – notably competition and efficiency – whilst discarding its vices.

Secondly, it attracted both working-and middle-class support. To exercise power the Labour Party needed to appeal to both manual workers and radical intellectuals. The working class provided numbers and organisation; the middle class furnished ideas and expertise. The meritocratic idea helped to hold a potentially fissile alliance together: both radical intellectuals and working-class autodidacts could agree that careers should be open to the talented and that power should be held by a benevolent élite. The Party emphasised the identity of interests of workers by hand and by brain, insisting that the middle classes would benefit as

¹³⁰ Willard Wolfe, *From Radicalism to Socialism. Men and Ideas in the Formation of Fabian Socialist Doctrines 1881–1889* (1975), p. 9. For a latterday assertion of this creed, see A. J. P. Taylor, 'The Thing', *The Twentieth Century* Vol. 162, No. 968 (October 1957), esp. pp. 294–6.

¹³¹ Willard Wolfe, *From Radicalism to Socialism* (1975), esp. pp. 9, 203. For an interesting statement of this position by an historian who owed perhaps more to radicalism than to socialism, see Taylor, 'The Thing', p. 296.

¹³² Sidney Webb, 'The Basis of Socialism. Historic', in G. Bernard Shaw (ed.), *Fabian Essays in Socialism* (1889), p. 182.

much as the working classes from the expansion of state power. Power would be transferred from the rich and well-connected to the able and hard-working; and the planned society would demand an army of scientists and administrators.¹³³

The Webbs were archetypical socialist meritocrats. They wanted to create a society dominated by the state, ruled by bureaucrats, guided by science and bent on efficiency. Power was to be transferred not to the masses but to an élite of the able, the expert and the organised – that is to people very much like themselves. (Sidney had risen into the upper civil service through outstanding success in examinations; Beatrice regarded herself as ‘the cleverest member of one of the cleverest families in the cleverest class of the cleverest nation in the world’.¹³⁴) Beatrice Webb outlined their philosophy in her diary entry in December 1894:

we have little faith in the ‘average sensual man’; we do not believe that he can do much more than describe his grievances, we do not think that he can prescribe the remedies ... We wish to introduce into politics the professional expert, to extend the sphere of government by adding to its enormous advantages of wholesale and compulsory management, the advantage of the most skilled entrepreneur.¹³⁵

They denounced capitalism because it rewarded people not according to their merits but by virtue of their parentage. The idle and frivolous flourished while the able and studious starved. By setting an example of unearned advantage, and by divorcing merit from reward, the rich emasculated their offspring, who took after them, and corrupted the poor, who looked up to them.¹³⁶

They hoped that merit would increasingly become the main – indeed the sole – criterion of social mobility. The able would rise, the dull would sink, and an élite selected by merit and distinguished by achievement would gradually supplant a ruling class sustained by inherited wealth and advanced by family connections. They had no doubt that if this meritocratic revolution failed England was doomed: the government would blunder from confusion to confusion, the civil service would vacillate and mismanage, the industrialists would lose their markets, the Empire would either disintegrate or fall intact to the Germans, and the population would sink into poverty, drunkenness and squalor.

The Webbs insisted that the education system had a central part to play in identifying, training and advancing talent. They wanted to ‘rescue talented poverty

¹³³ See, for example *A Socialist Great Britain. A Declaration of Policy by the Conference of the British Labour Party* (1940), p. 146.

¹³⁴ Bertrand Russell, *Autobiography, 1872–1914* (1967), Vol. 1, p. 107.

¹³⁵ Norman and Jeanne MacKenzie (eds.), *The Diary of Beatrice Webb. Volume 2 1892–1905* (1983), p. 63 (28 December 1894). Indeed ‘little faith’ is a mild statement of their prejudices. Elsewhere they described the working class as defective in brain-power and devoid of moral sense. See *ibid.*, p. 84 (12 November), p. 169 (31 January). In their dotage, the Webbs became convinced that the Soviet Union was an ideal meritocracy. See Sidney and Beatrice Webb, *Soviet Communism. A New Civilisation?* (1935), I, p. 339.

¹³⁶ See, for example, Sidney and Beatrice Webb, *The Decay of Capitalist Civilisation* (1923), pp. 18, 20–1, 30–2.

from the shop or plough' and channel it, by way of a scholarship ladder, leading from the gutter to the universities, into the national élite.¹³⁷ The state should provide a 'national minimum' of education, so that every child, dull or clever, rich or poor, received the education requisite for the full development of his faculties. Thereafter, children ought to be educated according to their varying faculties and diverging tastes.¹³⁸ They were particularly interested in the education of the most intelligent, arguing that public investment in the education of the able would come back to the community in the future multiplied a hundredfold.¹³⁹

This meant that the educational system needed to be rigorously selective. Free places and scholarships, entrance examinations and judicious selection all needed to be used to allocate children to the kind and grade of schooling which their attainments and idiosyncrasies required. Sidney Webb had no time for what was later to be called the comprehensive school. 'What we have learnt, gradually and slowly', he reflected, 'is that nothing worthy of the name of a national system of education can be built up out of schools of a single undifferentiated type, however numerous and however excellent they may be.'¹⁴⁰ He regarded the common school as the equivalent of a wholesale product, and quipped that 'so infinitely varied is our individuality that, in matters of social provision as in tailoring, the wholesale supply, when we come more narrowly to scrutinize it, can be nothing better than a series of misfits'.¹⁴¹ The common school needed to be divided into a number of specialised schools, each more accurately fitting the needs of a particular section of the child population.

Sidney tried to give life to his vision in the schools of London. He wanted to provide London with 'the greatest capacity-catching machine the world has ever yet seen' – to select able children from the lower strata and promote them to their appropriate social positions. He particularly admired the Board of Education's pupil-teacher scheme, which provided 800 working-class children a year with an avenue to the university:

These 2000 scholarships provide for the cleverest children of the London wage-earners a more genuinely accessible ladder than is open to the corresponding class in any American, French, or German city. Scholarships take the very pick of London's young people to the technical college and the university.¹⁴²

The Webbs hoped that London University would stand at the summit of the London educational system – a reward for success and a spur to effort.¹⁴³ London (and particularly the London School of Economics) would provide what Oxbridge

¹³⁷ S. Webb, 'The Education Muddle and the Way Out', in Brennan (ed.), *Education for National Efficiency*, p. 86.

¹³⁸ *Ibid.*, p. 104. See also Sidney and Beatrice Webb, *Problems of Modern Industry* (1920), pp. xxx–xxxi.

¹³⁹ *Ibid.*, p. 29.

¹⁴⁰ S. Webb, 'Secondary Education', in Brennan (ed.), *Education for National Efficiency*, p. 132.

¹⁴¹ *Ibid.*, p. 132. ¹⁴² *Ibid.*, p. 116. See also his 'Secondary Education', *ibid.*, p. 136.

¹⁴³ Norman and Jeanne MacKenzie (eds.), *The Diary of Beatrice Webb. Volume 2 1892–1905*, p. 273 (14 March 1903).

was clearly failing to provide: a modern and scientific education for the new meritocracy.¹⁴⁴ The university would sink a ladder of opportunity down into the very depths of the London population:

Wisely organised and adequately endowed, it must dive deep down through every stratum of its seven millions of constituents, selecting by the test of personal ambition and endurance, of talent and 'grit', for all the brain-working professions and for scientific research, every capable recruit that London rears. Hence it must stand ready to enroll in its undergraduate ranks not hundreds a year but thousands.¹⁴⁵

The first generation of public school socialists tended to be equally susceptible to élitism.¹⁴⁶ But for them what the working class needed was the guidance not a cadre of experts but of a coterie of gentlemanly rebels. The likes of Hugh Dalton thought that their special gift to the Labour Party was intelligence. They alone could transform a collection of 'nitwits and boozers' into a natural party of government. In 1918 Hugh Dalton predicted that, 'Four years hence Labour ought to poll a tremendous vote, and meanwhile win a lot of bye-elections. What is chiefly needed is (1) improved organisation in the constituencies, (2) an influx of brains and middle-class non-crank membership.'¹⁴⁷ They believed that many social problems resulted from muddled thinking and advocated brisk action from above. Douglas Jay expressed this attitude perfectly in his pamphlet *The Socialist Case*. 'In the case of nutrition and health, just as in the case of education, the gentleman in Whitehall really does know better what is good for people than the people know themselves.'¹⁴⁸

Such élitist ideas were also popular among the left-leaning literary intelligentsia. H. G. Wells recalled that many Fabians 'talked of oligarchies, toryisms and benevolent autocracies'.¹⁴⁹ Grant Allen argued that one of the great benefits of

¹⁴⁴ S. Webb, 'London University. Policy and Forecast', in Brennan (ed.), *Education for National Efficiency*, p. 160. Beatrice was equally contemptuous of the prevalent ideal of the 'educated Englishman'. See Norman and Jeanne MacKenzie (eds.), *The Diary of Beatrice Webb. Volume 2 1892-1905*, p. 279 (29 April 1903).

¹⁴⁵ S. Webb, 'London University. Policy and Forecast', in Brennan (ed.), *Education for National Efficiency*, p. 142.

¹⁴⁶ Hugh Dalton went to Eton and King's College, Cambridge; Clement Attlee to Haileybury and University College, Oxford; Richard Crossman, Stafford Cripps, Douglas Jay and Hugh Gaitskill to Winchester and New College, Oxford. On the Wykehamists, see A. F. Thompson, 'Winchester and the Labour Party: Three "Gentlemanly Rebels"', in Roger Custace (ed.), *Winchester College, Sixth-Centenary Essays* (Oxford, 1982).

¹⁴⁷ Quoted in Ben Pimlott, *Hugh Dalton* (1985), p. 112. Middle-class candidates were particularly sought after if they were willing to contribute towards election expenses. Twenty years later, however, Dalton complained that the Labour Party had too many intellectuals – or, as he dubbed them, 'semi-crocks, diabetics and undersized Semites'. *Ibid.*, p. 251.

¹⁴⁸ Douglas Jay, *The Socialist Case* (Harmondsworth, 1947), p. 258.

¹⁴⁹ *Experiment in Autobiography. Discoveries and Conclusions of a Very Ordinary Brain (since 1866)* Vol. 1 (1934), p. 248. Wells also noted that middle-class socialists shared the snobberies of their class: their personal conduct belied their professed egalitarianism. In *The New Machiavelli* he noted: 'Directly any of us young socialists of Trinity found ourselves in immediate contact with servants or cadgers or gyps or bedders or plumbers or navvies or cabmen or railway porters we became unconsciously and unthinkingly aristocrats' (p. 83).

socialism was that it would enable 'big men to show their natural bigness, unshadowed by the artificial inflation of little ones'.¹⁵⁰ George Bernard Shaw felt that 'the overthrow of the aristocrat has created the necessity for the Superman'.¹⁵¹ In *A Modern Utopia* (1905) H. G. Wells envisaged a world state ruled by the Samurai – a sort of Platonic élite in Japanese dress.¹⁵² Even in his more consciously prescriptive writing he argued for the rule of an international élite of the super talented.¹⁵³ In *The New Machiavelli* he argued that the prime task of education was to select and train the intellectual élite:

The prime essential in a progressive civilisation was the establishment of a more effective selective process for the privilege of higher education, and the very highest educational opportunity for the educable. We were too apt to patronise scholarship winners, as though a scholarship was toffee given as a reward for virtue. It wasn't any reward at all; it was an invitation to capacity.¹⁵⁴

Between the wars Victor Gollancz preached that the masses needed the leadership of a high-minded élite which took public school prefects as its model and the vulgarity of capitalism as its theme.¹⁵⁵ He charged the Left Book Club, founded in 1936 and wound up in 1948, with popularising his vision of socialist leadership.¹⁵⁶

This sense of superiority was not confined to middle-class socialists. The tradition of self-help and self-education, which flourished in nineteenth- and early-twentieth-century England, gave working-class socialism a markedly meritocratic tone. Working-class autodidacts were often intellectual élitists (Ramsay MacDonald noted that 'their intellectual level is higher than that of many learned university coteries, and incomparably higher than that of wealthy manufacturers' families'¹⁵⁷) who enjoyed a complicated relationship with their fellow workers.¹⁵⁸ Their passion for books estranged them from their communities, but at the same

¹⁵⁰ Grant Allen, 'Natural Inequality', in E. Carpenter (ed.), *Forecasts of the Coming Century* (1897), pp. 123–4.

¹⁵¹ Bernard Shaw, *Man and Superman* (1903; Harmondsworth, 1983), p. 248. The quotation is taken from the *The Revolutionist's Handbook*, a pamphlet which is purportedly written by one of the play's characters but which expresses many of Shaw's own opinions.

¹⁵² For his admiration of Plato's *Republic*, see *A Modern Utopia*, p. 178.

¹⁵³ *Experiment in Autobiography* Vol. 2, p. 750. For a fuller exposition of his élite theory, see *Democracy Under Revision* (1927). Wells was as able a critic as he was an exponent of this tradition of thought. See Anthony West, 'H. G. Wells', in Stephen Spender, Irving Kristol and Melvin J. Lasky (eds.), *Encounters. An Anthology from the First Ten Years of Encounter Magazine* (New York, 1963), pp. 362–75.

¹⁵⁴ Wells, *The New Machiavelli*, p. 215.

¹⁵⁵ Victor Gollancz, *My Dear Timothy. An Autobiographical Letter to his Grandson* (1952), p. 25 and *More for Timothy. Being the Second Installment of an Autobiographical Letter to his Grandson* (1953), p. 144. On Gollancz, cf. McCulloch, *Philosophers and Kings*, pp. 108–14.

¹⁵⁶ This was a repeated theme in Victor Gollancz's editorials. See, for example, 'The Left Book Club and the Crisis', *Left News* Vol. 24 (April 1938); 'The Club's Duty in the Future', *ibid.*, Vol. 24 (October 1938); 'Professional Citizens', *ibid.*, Vol. 58 (April 1941).

¹⁵⁷ J. Ramsay MacDonald, *A Policy for the Labour Party* (1920), p. 112.

¹⁵⁸ Stuart Macintyre, *A Proletarian Science. Marxism in Britain 1917–1933* (Cambridge, 1980), p. 72; David Vincent, *Bread, Knowledge and Freedom. A Study of Nineteenth-Century Working Class Autobiography* (1981), pp. 131, 162.

time their facility with words and knowledge of facts turned them into natural spokesmen when it came to negotiations.¹⁵⁹ They had little doubt that they formed a natural ruling class – ‘better fitted to do their duty than any Levite class that had hitherto appeared to claim a monopoly of governing capacity’.¹⁶⁰

Many leading working-class politicians were self-conscious meritocrats. Walter Citrine was proud of his intellectual abilities and contemptuous of his more convivial colleagues. As far as he was concerned most miners were little more than mental defectives.¹⁶¹ Beatrice Webb admired his self-discipline (‘altogether a hygienic puritan in his daily life’¹⁶²) and his unrivalled position in the Labour movement:

Citrine is, today, the autocrat of the British trade union movement. His General Council, made up of dull-witted trade union officials, some sodden with drink, whom he at once manipulates and despises, has no policy of its own, and the Trade Union Congress seems equally subservient.¹⁶³

Ernest Bevin believed above all in upward mobility for the able – that is for people like himself. ‘If I believed the development of socialism meant the absolute crushing of liberty’, he told some American correspondents in 1947, ‘then I would plump for liberty, because the advance of human development depends entirely on the right to think, to speak and to use reason, and allow what I call the upsurge to come from the bottom to reach the top.’¹⁶⁴

Herbert Morrison was convinced that socialism meant the triumph of meritocracy over privilege and inefficiency. The new middle class and the old working class would combine together to create ‘a well-ordered, well-run society in which neither accident of birth nor occupation determines the status of the individual, but only the efficiency of his contribution to the social whole’.¹⁶⁵ Aneurin Bevan held himself aloof from his fellow mining MPs¹⁶⁶ and insisted that he was a natural aristocrat endowed with peculiar gifts of intellect and imagination. ‘I’m not a proletarian or an intellectual’, he once told Richard Crossman. ‘I am an aristocrat.’¹⁶⁷ He supported his claims with references to the Uruguayan philosopher Jose Enrique Rodo, the author of *Ariel* and *The Motives of Proteus*.¹⁶⁸ In unbuttoned mood after dinner he would regale his friends with passages such as the following:

¹⁵⁹ Vincent, *Bread, Knowledge and Freedom*, pp. 133, 176.

¹⁶⁰ J. Ramsay Macdonald, *A Policy for the Labour Party* (1920), pp. 112–13.

¹⁶¹ *Ibid.*, p. 127.

¹⁶² Norman and Jean Mackenzie (eds.), *The Diary of Beatrice Webb. Volume 4*, p. 126 (28 July 1927).

¹⁶³ Norman and Jean Mackenzie (eds.), *The Diary of Beatrice Webb. Volume 4*, p. 126 (28 July 1927); *ibid.*, p. 333 (25 June).

¹⁶⁴ Alan Bullock, *Ernest Bevin. Foreign Secretary 1945–1951* (1983), p. 92.

¹⁶⁵ Quoted in Bernard Donoughue and G. W. Jones, *Herbert Morrison. Portrait of a Politician* (1973). Quoted in *ibid.* Donoughue and Jones’s assertion that his father, a policeman, was lower middle class is questionable. Policemen might better be described as members of the uniformed working-class. ¹⁶⁶ John Campbell, *Nye Bevan and the Mirage of British Socialism* (1987), p. 63.

¹⁶⁷ *Ibid.*, p. 303.

¹⁶⁸ *Ibid.*, p. 67.

The duty of a State consists in seeing that all its members are so placed as to be able to seek without favour their own *best*; in so arranging things as to bring to light each human superiority, wherever it exists. In such wise, after the initial equality, inequality when it comes, will be justified; for it will be sanctioned either by the mysterious powers of nature or the deserving merit of volition.¹⁶⁹

Bevan hardly needed to turn to obscure Uruguayan philosophers to find arguments for natural inequality and educational mobility. Many home-grown social theorists argued that men are naturally unequal and that society ought to do its utmost to encourage upward mobility. Bertrand Russell felt that the average level of intelligence among the professional classes was higher than that of most other classes.¹⁷⁰ J. B. S. Haldane, a leading member of the British Communist Party and an editor of the *Daily Worker*, dismissed 'the curious dogma of the equality of man',¹⁷¹ 'we are not born equal, far from it. The best community is that which contains the fewest square pegs in round holes, bricklayers who might have been musicians, company directors who, by their own abilities, would never have risen above the rank of clerk.'¹⁷² He was quite willing to entertain the idea that class and intelligence were highly correlated. Haldane was an enthusiastic supporter of selective education: 'when children of all grades of ability are combined in one class, the intelligent merely learn to be lazy while the stupid are hopelessly discouraged'.¹⁷³ His sympathies lay with gifted children and he felt that in education 'the most important experiment, to my mind, would be to start a school whose membership was confined to really intelligent children. Such children could easily reach the standards of the average university graduate at 18.'¹⁷⁴

At the same time, many socialists argued that Britain was failing to exploit its potential human resources. Its antiquated social structure and antediluvian cultural attitudes were preventing it from mobilising the abilities of its population. In particular, the educational system was a highly inefficient 'capacity-catching machine'. In *Social Progress and Educational Waste* (1926), Kenneth Lindsay demonstrated that Britain was squandering perhaps its most valuable resource – the talents of its population.¹⁷⁵

The opposition to the meritocratic ideal

Lindsay was right to be worried. English society was both unmeritocratic in its structure and anti-meritocratic in its most characteristic values. Social position

¹⁶⁹ Quoted in *ibid.*, p 68.

¹⁷⁰ B. Russell, *Marriage and Morals* (1929), pp. 261–2.

¹⁷¹ Haldane, 'The Inequality of Man', in *The Inequality of Man and Other Essays* (1932), p. 12.

¹⁷² Haldane, 'Biology and Statesmanship', in Haldane and Barker, *Biology in Everyday Life* (1933), p. 117.

¹⁷³ Haldane, 'The Inequality of Man', p. 21.

¹⁷⁴ *Ibid.*, p. 22.

¹⁷⁵ Kenneth Lindsay, *Social Progress and Educational Waste: Being a Study of the 'Free Place' and Scholarship Systems* (1926).

depended overwhelmingly on the accident of birth rather than the logic of merit. 'Upper England' consisted of a combination of long-established aristocratic houses and *nouveau riche* commercial families, who all displayed a marked tendency to inter-marry and send their children to the major public schools. Of course, the upper classes were only too happy to delegate some of the more arduous bits of administration to scholarship boys, distinguished by their skill in passing examinations and appetite for hard work.¹⁷⁶ But these would-be meritocrats were only too aware that they held their positions on the sufferance of their social superiors. Cabinet ministers, lesser politicians and rank-and-file Members of Parliament were recruited in the main from the rentier, and the business and the professional classes. Between 1868 and 1955 nearly half of them were born into the upper class and educated at exclusive public schools and Oxbridge.¹⁷⁷ To the untutored eye, members of the British élite were all but interchangeable. Arriving in Britain from Australia, David Low confessed to feeling rather like the British Tommy in China who could not tell whether he had seen one Chinaman a hundred times or a hundred Chinamen once.¹⁷⁸

The upper echelons of the political system were socially even more exclusive than the lower ones. The thoroughbred aristocracy continued to exercise enormous influence in the higher reaches of politics, with Bonar Law's cabinet including eight aristocrats, both Baldwin's cabinets including nine, and Chamberlain's cabinet including eight.¹⁷⁹ Clearly, Trollope's dictum that 'land gives so much more than rent. It gives position and influence and political power, to say nothing about the game'¹⁸⁰ continued to apply to twentieth-century political life. Aristocratic birth brought several advantages to anyone who wanted a career in politics: the ethos of their homes and schools, the connections of their families, the deference of their fellow-politicians, and, above all, an early start in public life. On average, MPs from aristocratic or gentry families made it into parliament a decade before their more lowly-born competitors. Lord Winterton, an Irish peer, was even elected while still an undergraduate at Oxford.¹⁸¹

The Conservative Party made few concessions to the meritocratic spirit in selecting its parliamentary candidates. As late as 1938, Simon Haxey calculated that

¹⁷⁶ For a rather different interpretation, emphasising the openness of British society and questioning the idea that Britain possessed an anti-Industrial culture, see Harold Perkin, *The Rise of Professional Society. England since 1880* (1989), pp. 258–66 and W. D. Rubinstein, *Capitalism, Culture and Decline in Britain 1750–1990* (1993). I hope I make my reasons clear in what follows for disagreeing with Rubinstein and Perkin and siding with an older school of political arithmeticians.

¹⁷⁷ W. L. Guttsman, *The British Political Elite* (1968), pp. 329–30.

¹⁷⁸ David Low, *Low's Autobiography* (1956), p. 120.

¹⁷⁹ For full details of the class backgrounds and university education of Cabinet Ministers, 1868–1955, see Guttsman, *British Political Elite*, p. 156.

¹⁸⁰ Cited in *ibid.*, p. 127.

¹⁸¹ David Cannadine, *The Decline and Fall of the British Aristocracy* (1990), pp. 185, 211. The evidence in this book can be used to support a thesis rather different from the one which the author tries to advance: namely, that the remarkable thing about the British aristocracy is how much power and wealth it managed to preserve.

145 Conservative MPs could be linked in a 'continuous chain of family relationships.' To all intents and purposes, the country was still run by a cousinhood.¹⁸² A number of Conservative politicians had considerable private fortunes. Of the forty-three MPs who died between 1931 and 1938 and whose wealth is known, five left between £10,000 and £20,000; fourteen between £20,000 and £100,000 and fourteen more than £100,000.¹⁸³ The Party made few concessions to scholarship winners. Only seven officers of the party between 1914 and 1960, out of a total of fifty-eight, were educated in grammar schools.¹⁸⁴ The Party in parliament was probably more progressive than the Party in the country. Between the wars constituency parties made frequent and vocal pleas for the restoration of the powers of the House of Lords.¹⁸⁵

The Labour Party was a much more meritocratic institution, drawing much of its impetus from working-class autodidacts and middle-class intellectuals. But between the wars it also attracted some prominent aristocrats: the second Earl Russell; Noel and C. R. Buxton; Oswald Mosley; Lord de la Warr, Lord Parmoor, Arthur Ponsonby, C. P. Trevelyan; and, in the 1930s, Stafford Cripps, the younger son of Lord Parmoor, and Frank Pakenham, heir to the Irish earldom of Longford.¹⁸⁶ Three members of MacDonald's first cabinet and two members of his second were from aristocratic backgrounds.¹⁸⁷

The vast majority of the members of the administrative, legal, clerical and business élites were also recruited from 'upper England'. Mobility from the top to the bottom of the social system was extremely limited. Open competition may have been formally introduced by Order in Council in 1870, but there was a long gap before specific departments began to accept the scheme. The Home Office accepted the competitive principle in 1873, but did not recruit its first competitive entrant until 1880. The Treasury accepted the principle five years later, but recruited few competitive entrants over the next twenty years.¹⁸⁸ The Board of Education held out against open competition until 1919.¹⁸⁹

Even after the competitive principle had been institutionalised, the system was heavily weighted towards the sons of the traditional middle classes.¹⁹⁰ The home civil service recruited the overwhelming majority of its members from the public-school-educated upper middle classes. Before the First World War, only 6 per cent of the entrants to junior posts were educated at state grammar schools and before the Second World War only just under 29 per cent. In the highest ranks of the civil service the position of the traditional middle-classes was even more secure. In 1950 nearly two-thirds of the permanent secretaries or deputy secretaries of government

¹⁸² Cannadine, *British Aristocracy*, p. 188. Nine cabinet ministers were related to each other.

¹⁸³ *Ibid.*, p. 297.

¹⁸⁴ *Ibid.*, pp. 294–5.

¹⁸⁵ Stuart Ball, *Baldwin and the Conservative Party. The Crisis of 1929–31* (1988), p. 213.

¹⁸⁶ Cannadine, *British Aristocracy*, pp. 539–43.

¹⁸⁷ *Ibid.*, p. 187.

¹⁸⁸ *Ibid.*, pp. 240–4.

¹⁸⁹ Gail L. Savage, 'Social Class and Social Policy. The Civil Service and Secondary Education in England during the Interwar Period', *Journal of Contemporary History* Vol. 18, No. 2 (April 1983), pp. 261–80.

¹⁹⁰ See Guttsman, *British Political Elite*, pp. 330–337.

departments had been educated either at boarding schools or in independent day schools. Upper-class domination was challenged last and affected least in the Foreign Office. Until 1918 entrants to the diplomatic service had to guarantee a private income of at least £400 a year for their first two years – and had to be personally acquainted with the Secretary of State into the bargain. Between the wars only nine state-educated candidates secured places in the Foreign Office.¹⁹¹ Almost a third of all successful candidates were Old Etonians. The colonial service retained straightforward patronage until 1931, and then introduced a system not of competitive examinations but of competitive interviews. Needless to say, a public school education was not a handicap in these interviews.¹⁹² Although the legal world had traditionally offered some opportunities for the talented, it recruited the bulk of its members from a very narrow group. Among those who entered Lincoln's Inn between 1886 and 1913 almost none came from working-class backgrounds, while for the 1920s the percentage remained negligible. Of all entrants, 1.8 per cent were the sons of skilled wage-earners, 84 per cent had an upper or middle class background, and 15 per cent belonged to an intermediate stratum of salaried workers and small employers.¹⁹³ Social connections affected matters spiritual as well as matters temporal. In 1928, fifty-two out of fifty-six bishops were public school products.

The business and managerial world probably became even less meritocratic between the wars. Although mobility from the shop floor to the management had been relatively common during the period of industrialisation, it became increasingly rare in the period of industrial maturity. Among the men in charge of the big industrial corporations and the large banks and commercial institutions of the City of London, 'new men' were possibly even rarer than among the political leadership. Lord Nuffield was one of the few industrialists in this period to found and build up a large industrial concern as a result of his own merits. In general, the upper management was drawn from the families of the wealthy. Among managers in Manchester in the 1950s the average income of men of middle-class descent was £2,253, while that of the sons of manual workers was only £1,280.¹⁹⁴

A number of powerful anti-meritocratic values and arguments helped to reinforce such a social structure. The two most important components of the meritocratic philosophy – admiration for intelligence and belief in effort – were often despised by the English cultural élite. The public school tradition valued soundness of character above quality of intelligence, and many masters regarded high intelligence as incompatible with institutional loyalty.¹⁹⁵ At Eton Cyril

¹⁹¹ 'The Reform of the Foreign Service', *The Journal of Adult Education* Vol. 14, No. 3 (March 1942), p. 123.

¹⁹² Rupert Wilkinson, *The Prefects. British Leadership and the Public School Tradition. A Comparative Study in the Making of Rulers* (1964), p. 11.

¹⁹³ Guttman, *British Political Elite*, pp. 335–7.

¹⁹⁴ *Ibid.*, pp. 355–6.

¹⁹⁵ Wilkinson, *The Prefects*, p. 83.

Connolly felt that 'Intelligence was a deformity which must be concealed; a public school taught one to conceal it as a good tailor hides a paunch or a hump'.¹⁹⁶ A contemporary of Hugh Gaitskell's felt it worth remarking that at Winchester 'intellect was not despised as at Rugby or Harrow. You could reach the top of the school and be respected if you had a good brain, even if you couldn't lift a cricket bat off the ground.'¹⁹⁷ Effort was regarded as bad form; those who wanted to be popular had to work hard at appearing to do nothing. Balliol, which led the way in the meritocratic reform of the universities, produced a cult of 'effortless superiority'. Namier felt that opposition to strenuous effort was one of the most characteristic features of English intellectual culture. 'We prefer to make it appear as if our ideas came to us casually – like the Empire – in a fit of absence of mind.'¹⁹⁸ In celebrating the fact that he belonged to an ennobled family, Evelyn Waugh habitually added that he regretted that his forebears had been elevated for doing something useful. Many of his fellow-countrymen shared his prejudices – albeit in a more muted form. The English status system ranked occupations in inverse relation to their immediate utility. The landed élite and the professions stood at the top, manual labourers at the bottom. Within the middle class those who worked in the learned professions enjoyed a higher status than those whose work involved them in making things or – still worse – making money.

Suspicion of 'mere cleverness' and admiration for unthinking determination was deeply rooted in the national culture, and was shared by the upper and lower classes alike.¹⁹⁹ As George Orwell pointed out, 'millions of English people willingly accept as their national emblem the bulldog, an animal noted for its obstinacy, ugliness and impenetrable stupidity. They have a remarkable readiness to admit that foreigners are more "clever" than themselves, and yet they feel that it would be an outrage against the laws of God and Nature for England to be ruled by foreigners.'²⁰⁰ The notion of a dull ruling and an able servant class seems to have been perfectly in keeping with English habits of mind. Much of the humour in P. G. Wodehouse's work depends upon the relationship between an idle and stupid aristocrat and an able and devoted servant.

The educational system both reflected and reinforced this unmeritocratic social structure. Even after the Great War many educationalists continued to regard 'elementary' and 'secondary' education not as successive stages in a single process but as distinct tracks in a stratified educational system, the first providing basic instruction for the manual classes and the second, entered after a period of

¹⁹⁶ Cyril Connolly, *Enemies of Promise and Other Essays* (New York, 1960), p. 221. See also Bertrand Russell, *Education and the Social Order* (1932), p. 81.

¹⁹⁷ J. P. O'Donnell quoted in Philip M. Williams, *Hugh Gaitskell, A Political Biography* (1979), p. 9.

¹⁹⁸ Lewis Namier, *England in the Age of the American Revolution* (1961 edn), p. 14.

¹⁹⁹ Violet Bonham Carter, 'Childhood and Education', in Ernest Barker (ed.), *The Character of England* (1947), p. 225.

²⁰⁰ Sonia Orwell and Ian Angus (eds.), *The Collected Essays, Journalism and Letters of George Orwell. Vol. 3. As I Please 1943–45* (1968), p. 6.

cramming in preparatory schools, training the middle and upper classes for the professions.²⁰¹ Granted, attempts had already been made to build ladders between the two levels. But the ladders were few and the climbing hard.²⁰² In 1937 Carr-Saunders and Caradog-Jones went even further, insisting that 'the educational ladder is an ideal rather than a fact'.²⁰³ In 1935 only 75,281, or 11.4 per cent of the total of school leavers, left elementary school for secondary school,²⁰⁴ despite the fact that a secondary-school education was an almost indispensable step on the ladder to the better paid vocations.²⁰⁵ The prevalence of early leaving among working-class children ensured that the numbers who continued their education between fourteen and seventeen were even smaller. Only 6.4 per cent of the total of those leaving grant-earning secondary schools in England between 1931 and 1934 found their way into university, so that on average about 0.4 per cent of elementary pupils arrived at a university.²⁰⁶ At every stage of the educational process, then, a large number of children were eliminated because of their class backgrounds rather than their intellectual abilities.

Climbing such a narrow ladder imposed a heavy emotional strain on the ambitious. Caradog-Jones was shocked to find how difficult life was for scholarship boys in the Liverpool of the early 1930s: 'The educational ladder, therefore, is not so broad as is commonly supposed, nor is it so easily climbed. A child requires unusual ability and will-power to study for examinations under the cramped conditions which prevail in many working-class homes.'²⁰⁷ Goronwy Rees recalled that it was not uncommon in his Cardiff grammar school for boys to be broken by the 'fierce competition for the few scholarships available'. The failed scholarship boy was a familiar figure of his childhood. Where ladders did exist, they did not always operate according to meritocratic principles. Rees found that the only secure way to gain both admission and the necessary financial resources from Oxford and Cambridge was not intellectual promise but skill at rugby football.²⁰⁸ One discipline, geography, was widely regarded (at least in Oxbridge) as a means for providing non-academic athletes with university places.²⁰⁹

On the other hand, the public schools continued to send the majority of their pupils into the ancient universities, the army, and the professions; the children of the rich not only inherited their parents' wealth but also received an education which enabled them to earn large incomes in their own right, sometimes regardless of their intellectual abilities. Indeed, Eton, Winchester and Harrow sometimes seemed to operate as conspiracies rather than educational establishments, pulling

²⁰¹ Sutherland, *Ability, Merit and Measurement*, p. 101.

²⁰² Quoted in *ibid.*, p. 111.

²⁰³ A. M. Carr-Saunders and D. Caradog-Jones, *A Survey of the Social Structure of England and Wales* (2nd edn, 1937), p. 123.

²⁰⁴ *Ibid.*, pp. 119–20.

²⁰⁵ *Ibid.*, p. 121.

²⁰⁶ *Ibid.*, p. 122.

²⁰⁷ D. Caradog-Jones (ed.), *The Social Survey of Merseyside*. (3 (1934), p. 187.)

²⁰⁸ Goronwy Rees, *A Chapter of Accidents* (1972), p. 40.

²⁰⁹ T. C. Worsley, *Flannelled Fool. A Slice of Life in the Thirties* (1967), p. 41.

strings to protect and promote their products.²¹⁰ 'When the call came to me to form a government', Stanley Baldwin confessed in 1926, 'my first thought was that it should be a government of which Harrow should not be ashamed. I remembered how in previous governments there had been four or, perhaps five Harrovians, and I determined to have six.'²¹¹

The psychometrists hoped to change the nature of the English élite as well as to improve the mechanisms of élite recruitment. They wanted to shift the balance of power away from aristocrats and amateurs towards industrialists and experts. Not surprisingly, they encountered powerful opposition. They were confronted by a habit of economic behaviour which was suspicious of change, reluctant to innovate, and energetic only in the maintenance of stability, and by a middle-class mentality which was deferential to the aristocracy, nostalgic about rural England and suspicious of science and technology.²¹²

The English professions had a semi-aristocratic aura.²¹³ Having 'strangled the aristocracy', E. M. Forster observed, the middle class was still 'haunted by the ghost of its victim'.²¹⁴ England continued to be afflicted by the same curse as it had been in the mid-Victorian period: 'the obstinate determination of the middle-classes to make their sons what they call gentlemen. So we are overrun by clergyman without livings; lawyers without briefs; physicians without patients; authors without readers; clerks soliciting employment, who might have thriven, and been above the world, as bakers, watchmakers, or innkeepers.'²¹⁵ One of the most important and puzzling features of industrial England is that 'in a money making age opinion was, on the whole, more deferential to birth than money', and 'in a mobile and progressive society, most regard was had to the element which represented immobility, tradition, and the past'.²¹⁶ Even during the Second World War, Orwell found that 'middle-class people are really graded according to their degree of resemblance to the aristocracy'.²¹⁷

Many intellectuals preferred to put their trust in landed aristocrats rather than in businessmen or scholarship winners. They relished hierarchy and stability and deprecated enterprise and initiative.²¹⁸ They repeatedly invoked the spirit of the Middle Ages, when, they argued, men had been united to each other, and all

²¹⁰ Guttsman, *British Political Elite*, p. 384. On the public school monopoly of Oxbridge, see also Rees, *Chapter of Accidents*, pp. 63-4.

²¹¹ Stanley Baldwin, 'Harrow', *On England and Other Addresses* (1926), p. 267. Baldwin's loyalty to his old school only went so far. He sent his own sons to Eton.

²¹² Martin J. Wiener, *English Culture and the Decline of the Industrial Spirit 1850-1980* (Cambridge, 1981), p. 154 and *passim*.

²¹³ See in particular *Report of the Schools Inquiry Commission* (Taunton), PP 1867-8, 28, Volume 6, 'Matthew Arnold Report', p. 626.

²¹⁴ E. M. Forster, 'Mrs. Miniver', in *Two Cheers for Democracy* (1951), p. 306.

²¹⁵ G. O. Trevelyan (ed.), *Life and Letters of Lord Macaulay* (1878 edn), I, p. 339.

²¹⁶ G. M. Young, *Victorian England: Portrait of an Age* (1960 edn), p. 85.

²¹⁷ Orwell and Angus (eds.), *Collected Essays*, p. 20.

²¹⁸ Ernest Barker, *Universities in Great Britain. Their Position and their Problems* (1931), p. 81.

mankind had been united to God, by mutual obligations derived from a common end. Right-wing and left-wing thinkers were equally hostile to social mobility and economic efficiency. Tories celebrated deference and hierarchy. Harold Macmillan, for example, hoped for the renewal of 'that organic conception of society which was the distinct contribution of medieval thought' to replace 'individualism and *laissez-faire*'.²¹⁹ Oswald Mosley idealised feudal society, with its studied hierarchy and reciprocal obligations, and loathed *laissez-faire* capitalism, with its plutocrats, press lords and proletarians.²²⁰ William Morris wanted to replace large-scale organisations with small communes and the division of labour with voluntary association,²²¹ an arrangement which would render an old-style 'aristocracy of intellect' redundant.²²² R. H. Tawney deprecated the competition and inequalities of the opportunity society.²²³ G. D. H. Cole surprised his student, Hugh Gaitskell, by admitting that he hated liberals more than Tories and confessing to an admiration for the English aristocracy.²²⁴ Macdonald possessed an 'intense and abiding sense of the picturesque and a deep love of the ordered and the ancient and the hierarchical'.

Most intellectuals assumed that the career of moneymaking, industry, business or profits was a despicable way of life, pursued only by the stupid and unimaginative: businessmen were figures of fun or objects of scorn.²²⁵ Harold Nicolson felt that 'the intelligence of the ordinary Leicester businessman' was 'subnormal'. C. P. Snow made one of his characters voice the popular convictions that 'successful business is devastatingly uninteresting'.²²⁶ 'How I hate that man' was C. S. Lewis's tart comment on Lord Nuffield, his city's major employer and one of his university's most generous benefactors.²²⁷ Goronwy Rees noted that his public school friends at New College regarded business a poor fourth to politics, administration or law, since it still had something of its old, ugly, connotation of *trade* and was not really a proper occupation for a gentleman.²²⁸ Almost everyone blamed industry for polluting the countryside, debasing the culture and shattering their peace and quiet.²²⁹

²¹⁹ Quoted in Wiener, *English Culture*, p. 109. ²²⁰ Cannadine, *British Aristocracy*, pp. 548–9.

²²¹ See also Edward Carpenter, *Desirable Mansions* (1883). Quoted in Henry Pelling (ed.), *The Challenge of Socialism* (1954), p. 123.

²²² William Morris, *News From Nowhere or An Epoch at Rest. Being some Chapters from a Utopian Romance* (1891), p. 99.

²²³ 'British Socialism Today', R. H. Tawney, *The Radical Tradition* (Harmondsworth, 1966) p. 187. He acknowledged the practical problems with this scheme, calling it a 'state of super-blessedness'.

²²⁴ Hugh Gaitskell, 'At Oxford in the Twenties', in Asa Briggs and John Saville (eds.), *Essays in Labour History* (1960), p. 12. Cf. Margaret Cole, *The Life of G. D. H. Cole* (1971), p. 264.

²²⁵ Neil McKendrick, 'General Introduction. The Enemies of Technology and the Self-Made Man', in Roy Church, *Herbert Austin. The British Motor Car Industry to 1941* (1979), pp. xii, xxi.

²²⁶ Quoted in Wiener, *English Culture*, p. 131, p. 198 n. 13.

²²⁷ Quoted in Neil McKendrick, 'General Introduction' to R. J. Overy, *William Morris, Viscount Nuffield* (1976), p. xl.

²²⁸ Rees, *Chapter of Accidents*, p. 81.

²²⁹ A. J. Balfour, *Decadence* (Henry Sidgwick Memorial Lecture) (Cambridge, 1908), pp. 49–56 provides a superb dissection of this attitude.

Such attitudes were reinforced by the élite section of the English educational system. English education was founded on the 'worship of inutility': the status of an academic discipline varied inversely with its practical utility. Classics was admired because it was useless, engineering despised because it was useful.²³⁰ Both the public and the grammar schools emphasised the humanities rather than the sciences, character rather than intellect, and gentlemanly rather than practical education; their ideal products 'owned no land, but... felt that they were landowners in the sight of God and kept up a semi-aristocratic outlook by going into the professions and the fighting services rather than into trade'.²³¹ Practical subjects automatically aroused mirth.

He gets degrees in making jam
At Liverpool and Birmingham

went a popular Oxford rhyme in 1914.

Although they expanded and modernised their syllabuses in the late Victorian and Edwardian periods, the public schools and universities continued to provide a narrowly literary education. The public schools offered little instruction in science, and not much more in modern languages or modern history.²³² Recalling his schooldays at Winchester Richard Crossman remarked:

in this schoolboy oligarchy, scholarship meant mastery of two dead languages; history ended with the fall of Rome; English had to be assimilated outside the classroom; French was taught by classics masters proudly 'using the English pronunciation'; and science (two hours a week for most of us) was despised as the occupation of lab-boys.²³³

Schoolmasters determined to steer their most able pupils into non-scientific disciplines – and schoolchildren were more than willing to conform with their prejudices. School authorities and boys alike tended to look down on the natural sciences, convinced that they were contaminated by their connections with the world of practical production and devoid of the grace and rigour of the classics and the modern humanities. The ancient universities refused to use their huge endowments for the advancement of science. In 1900 only 12 out of 250 Oxford Fellowships were in the sciences. Only 10 out of 21 Oxford colleges offered Scholarships in science. Until 1920 all would-be Oxford students, including scientists, had to master Greek in order to matriculate. The scientists who survived this obstacle course were often treated with contempt. 'The close corporation of intellectual Oxford does not include the scientist', boasted W. J. K. Diplock

²³⁰ F. W. Farrar, 'Public School Education', *Fortnightly Review* Vol. 3 (March 1868), pp. 239–40.

²³¹ George Orwell, *The Road to Wigan Pier* (Harmondsworth, 1962 edn), p. 108.

²³² Evelyn Waugh, *A Little Learning* (Harmondsworth, 1983 edn), p. 140.

²³³ R. H. S. Crossman, 'The Wykehamist – "Monty" Rendall', *The Charm of Politics and Other Essays in Political Criticism* (1958), p. 116.

(himself a renegade chemist) in 1929.²³⁴ Invited to dinner by the Warden of All Souls, and finding himself sitting next to the Warden's wife, Mrs Pember, Professor Lindeman expressed his anxieties about Oxford science. 'You need not worry', she assured him, 'a man who has got a First in Greats could get up science in a fortnight.'²³⁵

This institutionalised disdain for vocations left many students confused and aimless. T. C. Worsley recalled that 'no don, no brother, no parent had put it into my head to ask myself what I intended to do with my life'.²³⁶ He had a friend who was a schoolmaster and so decided – to his great regret – to become one himself. Many undergraduates looked down on 'useful employment' and nurtured romantic illusions about their futures careers. Douglas Jay recalls that in Oxford in the twenties "'careerism" was regarded as an unforgivable sin' and that 'almost all the ambitious intellectuals around me, apart from those few bent on a special profession, were determined to become novelists or poets'.²³⁷ The psychometrists would certainly have agreed with Goronwy Rees' verdict on the typical products of this educational tradition, the future members of the nation's élite: 'they had been well-taught at school and what they understood they understood very well; what they did not understand included almost everything which would change the world in their life time'.²³⁸

Intelligent conservatives consequently felt that psychometry represented a threat to the social order. On all issues of substance Burkean conservatism and hereditarian psychology took up opposite positions. The psychologists dealt with the atomised individual: conservatives emphasised organic unity. The psychologists presented intellectual development as a natural process: conservatives put their faith in training and instruction.²³⁹ The psychologists believed in social mobility and rational allocation of individuals to social positions through scientific tests: conservatives believed in social stability and hereditary classes.

T. S. Eliot argued that 'an educational system which would automatically sort out everyone according to his native capacities' would 'disorganise society and debase education'.²⁴⁰ In a passage which went to the heart of the meritocratic ideal, he argued that:

Equalisation of opportunity ... and democratisation of education, are in danger of becoming uncriticised dogmas. They can come to imply, as an ultimate, a complete mobility of society – and an atomised society ... It is to think of the individual in isolation, apart from family and from local milieux, as having certain intellectual and

²³⁴ W. J. K. Diplock, *Isis or The Future of Oxford* (1929), p. 32.

²³⁵ R. Harrod, *The Prof. A Personal Memoir of Lord Chermwell* (1959), p. 53.

²³⁶ Worsley, *Flannelled Fool*, p. 11.

²³⁷ Douglas Jay, *Change and Fortune. A Political Record* (1980), p. 26. Partly as a result of his academic failure, Churchill was an exception to this rule. Cf. Winston S. Churchill, *My Early Life. A Roving Commission* (1949 edn), p. 38.

²³⁸ Rees, *Chapter of Accidents*, p. 80.

²³⁹ Michael Oakeshott, 'A Place of Learning', in Timothy Fuller (ed.), *Michael Oakeshott on Education* (1989), p. 28.

²⁴⁰ T. S. Eliot, *Notes Towards the Definition of Culture* (1948; 1979 edn), p. 101.

sensitive capacities to be nurtured and developed to their full extent; and of a system of education as a vast calculating machine which would automatically sort out each generation afresh according to a culture-index of each child.²⁴¹

For him the psychologists were liberals and progressives who wanted to break the bonds of class and tradition and create a society of mobile, atomised, and rational individuals. (Edward Welbourne, Master of Emmanuel College, Cambridge, was blunter: when Liam Hudson informed him that he was interested in intelligence tests, Welbourne replied 'Huh. Devices invented by Jews for the advancement of Jews'.²⁴²) Lord Percy of Newcastle recognised the intimate connection between mental testing and progressive education, confessing that he felt sympathy with the outburst of a bachelor professor after listening to this view being propounded by a candidate for a lectureship in education: 'nonsense, nonsense; a child ought to be brought up to *expect unhappiness*'.²⁴³

At the same time, R. H. Tawney, the doyen of socialist educationalists, was an enthusiastic admirer of Cyril Burt and his colleagues. Tawney felt that his moral conviction that 'the intrusion into educational organisation of the vulgarities of the class system is an irrelevance as mischievous in effect as it is odious in conception'²⁴⁴ was supported in practice by 'the evidence resulting from the development of more exact measurements of intelligence than could be applied till recently'.²⁴⁵ Confronted by the conservative argument that there is no point in providing education for the ineducable, he pointed out that educational investigations had exposed 'the immense mass, not only of average talent – and average talent is worth cultivating – but of exceptional talent, which is sterilised for lack of educational opportunities'.²⁴⁶ In particular, he pointed to the 1917 survey of the distribution of educational abilities of London school children produced by 'Mr. Burt, the distinguished psychologist employed by the London County Council'.²⁴⁷

Tawney had no time for the 'romantic illusion that individuals do not differ in natural capacity'.²⁴⁸ He argued that society ought to be stratified on the basis of the innate abilities, rather than the financial fortunes or family connections, of its members. He insisted that capitalist society in general – and British society in particular – was failing to make the most of the abilities of its population.²⁴⁹ By choosing its élite not from the population as a whole but from the small circle of families – perhaps 3 per cent of the nation – who could afford to pay public school fees, Britain sacrificed national efficiency to social snobbery.

²⁴¹ Eliot, 'Education in a Christian Society', in *The Idea of a Christian Society and Other Writings* (1939; 1982 edn with an introduction by David Edwards), p. 146.

²⁴² Liam Hudson, *The Cult of the Fact* (1976), p. 47. On Welbourne's theological and political views, see Maurice Cowling, *Religion and Public Doctrine in Modern England* (Cambridge, 1980), pp. 60–72.

²⁴³ Percy, *Some Memories*, p. 105.

²⁴⁴ R. H. Tawney (ed.), *Secondary Education for All* (1922), p. 64.

²⁴⁵ *Ibid.*, p. 66.

²⁴⁶ *Ibid.*, p. 66.

²⁴⁷ *Ibid.*, p. 67.

²⁴⁸ BLPS, R. H. Tawney Papers, 17/6, *The Finance and Economics of Public Education* (Cambridge, February–May 1935), p. 5.

²⁴⁹ This is well expressed in *The Acquisitive Society* (New York, 1920), pp. 33–51.

Measuring the mind

He argued that socialists should do everything possible to encourage the easy movement of ability to the types of education best calculated to cultivate it, and an easy movement, again, from educational institutions to occupational positions.²⁵⁰ Such movement would both invigorate society and fulfill misplaced individuals.

If individual frustration is to be avoided and the work of the world to be effectively done it is essential that there must be a sufficient measure of social mobility to ensure that ability moves to the tasks for which it is best fitted, and that positions are occupied not by those to whom, for reasons of birth or economic circumstances they are most easily available, but by those best qualified to fill them.

For him 'equality of educational provision is not identity of educational provision, and it is important that there should be the greatest possible diversity of type among secondary schools'.²⁵¹ He suggested that the best way to secure such mobility was first to raise the general level of primary education provided for all and second to organise 'different forms of post primary education varying in type, but equal in quality'.²⁵² He felt that different levels of ability required for their full development different degrees of cultivation and that different occupations required different periods of preparation; and he stressed the value for the prosperity of the community and the satisfaction of the individual in allowing capacity to rise, unimpeded by irrelevances of class and income, to its appropriate position in the social hierarchy.²⁵³ Granted, Tawney revised his educational arguments during the period of post-war reconstruction and declared himself a supporter of a common post-primary school;²⁵⁴ yet between the wars Labour's key thinker on education was an unreconstructed Burtian.

²⁵⁰ R. H. Tawney, 'The Problem of the Public Schools', *The Radical Tradition* (Harmondsworth, 1964), p. 66.

²⁵¹ R. H. Tawney (ed.), *Secondary Education for all*, p. 66.

²⁵² BLPS, R. H. Tawney papers, 17/6, Typescript of Lecture on the Finance and Economics of Public Education (Cambridge, February–May, 1935) 11, p.23.

²⁵³ BLPS, R. H. Tawney Papers, 17/3, The Finance and Economics of Education, p. 18.

²⁵⁴ BLPS, R. H. Tawney Papers, 23/1, Education and Post-War Reconstruction (a draft of a pamphlet which he never completed), p. 8.

The psychometric perspective

The meritocratic philosophy drew its strength from a cluster of related beliefs, fervently held by almost all these psychologists: their passion for evolutionary theory, their faith in scientific method, their commitment to national efficiency, engineered by scientific selection, social mobility, and eugenic reform, and their support for the expansion of state education and the extension of the social services.

The world view of mental measurement

The psychometrists rested their social arguments on the intellectual foundations of the biological sciences.¹ They habitually interpreted social phenomena through biological categories, more or less ignoring alternative sociological and environmental interpretations. They insisted on regarding the human population as a collection of individuals endowed by nature with differing biological qualities and, for them, the most important and interesting of these qualities was 'intelligence'. Their professional training tended to emphasise the importance of biology, since psychology was at that time in the process of shaking off its links with philosophy and establishing itself as a reputable science. In so far as they encountered any rigorous intellectual opposition to their interests in the early part of the century, it tended to come from philosophers and metaphysicians rather than from sociologists: Burt's tutor, for example, warned him that it was heresy to experiment on the human soul.² They consequently acquired the habit of regarding all opposition to their 'scientific' arguments as inspired by political bigotry or religious obscurantism. They derived considerable pleasure from mocking people who were disturbed by the application of scientific theory to the human mind. Thomson, for example, illustrated his lectures with a solid model in wood with graduated slopes intersected by planes cut at various angles, and 'with a contradicting glint in his eye he would say "this is the model of the human soul"'.³

¹ On Burt's indifference to sociological arguments, see L. S. Hearnshaw, *Cyril Burt, Psychologist* (1979), pp. 21–2. ² Burt, 'Experiments', *The Listener*, 11 June 1930, p. 1028, col. a.

³ Godfrey Thomson, *The Education of an Englishman, An Autobiography* (Edinburgh, 1969), p. 1; 'An Autobiographical Sketch', *Occupational Psychology* Vol. 23, No. 1 (January 1949), p. 9.

They had enormous respect for Darwinian theory. Burt's father, who was 'an ardent Darwinian' and 'a firm believer in heredity', inspired him with ideas which were to haunt him throughout his life. Thomson thought that the publication of *Origin of the Species* (1859) was 'perhaps the greatest event in the nineteenth century' and, towards the beginning of an introductory text book on educational psychology, remarked that Darwinian theory 'is so fundamental to all thinking today that it is essential that we should first grasp it'.⁴ No powerful secular alternative was available to them. Darwin's influence was pervasive. The biological and political sciences existed in a symbiotic relationship; and sociology did not aspire to the apparent isolation, sophistication, and independence of the modern discipline.⁵ R. H. Tawney, who possessed a unique expertise in history, sociology and economics, agreed that 'at bottom, education is conditioned by biological facts, and infliction of much needless misery would have been avoided by a recognition of that truism'.⁶ Even during the 1930s Richard Titmuss complained that 'it is held by many sociologists that intelligence is inherited', and broke new ground by emphasising the environmental influences on poor intellectual performance.⁷

The psychometrists consequently regarded their commitment to meritocratic reform as a rational deduction from the facts of science rather than an overtly political stance. Indeed, they frequently denied that they had any political position whatsoever, presenting themselves as dispassionate human scientists besieged by political zealots. Burt concluded his contribution to the openly polemical *Black Papers on Education* with the remark that, if the imperfections of English education were to be remedied, then 'the remedies were to be ascertained, not by armchair deductions from the theories of politicians or social reformers, but by constant trial and error, guided, supervised, and tested by scientific research'.⁸

Though Burt's attitude may seem naïve today, it was quite typical of his generation. The inter-war educational psychologists displayed an almost unqualified enthusiasm for scientific research. They regarded science as an embodiment of certain and objective knowledge, respected professional scientists as the guardians of man's highest interests, and looked forward to the solution of social problems through the application of scientific method. Social problems, they felt, resulted not from irreconcilable conflicts of interest but from ignorance of science. Their model of scientific method was based on the hard, quantitative sciences, and they made numerous attempts to bring rigour and objectivity to their

⁴ Thomson, *Instinct, Intelligence and Character* (1924), p. 19.

⁵ See, for example, Julian Huxley, 'Biology and Sociology', *Essays of a Biologist* (1923), pp. 67–101 and esp. pp. 67 and 75. On the belated development of sociology as an independent discipline, see Geoffrey Hawthorn, *Enlightenment and Despair. A History of Social Theory* (Cambridge, 1987); Wolf Lepenies, *Between Literature and Science: The Rise of Sociology* (Cambridge, 1988), pp. 93–195; Perry Anderson, *English Questions* (1992), pp. 56–60.

⁶ BLPS, R. H. Tawney Papers, 17/3, *The Finance and Economics of Public Education* (Cambridge Feb–May 1935), p. 12.

⁷ R. M. Titmuss, *Poverty and Population: A Factual Study of Contemporary Social Waste* (1938), p. 39.

⁸ C. B. Cox and A. E. Dyson (eds.), *The Black Papers on Education* (1971), p. 62.

subject.⁹ 'We must supply to human and mental problems the same kind of research methods, the same kind of scientific industry, the same kind of intense team work, and the same amount of time and money, that we have spent in research on problems of the physical and material world', enthused Burt.¹⁰ They combined frustration with the current state and reception of psychology with almost messianic hopes for its future. Cattell felt that 'this Cinderella of the sciences is destined to work transformations in human life – penetrating even to the creation of ideals – which will dwarf those wrought by the older sciences',¹¹ for it was upon 'the secret of the fragile brain' which all human progress depended.¹² They hoped to turn education into a thoroughly scientific process. They found educationalists 'warring fractiously among themselves, reasoning upon insufficient premises, swept from side to side by fads and fashions, or stranded on the sterile rocks of conservative tradition'¹³ and offered them a method which could resolve their differences, increase their efficiency, and bring them into line with other professional experts.

In so far as the psychometrists possessed any explicit political commitments, they were to the quest for national efficiency. They felt an unquestioned loyalty to the national community; sensed that Britain's material and human resources were dwindling; and determined to do what they could to restore the nation's power. In this they were typical of their generation. The Edwardian quest for national efficiency continued to influence opinion well into the 1920s and 1930s. Major Leonard Darwin asserted in 1926 that England as a whole was slowly and steadily deteriorating with respect to its citizens' average inborn qualities, and would be incapable of fighting another major war,¹⁴ while the Wood Committee (1929) accepted that mental deficiency had doubled within the last twenty years.

The quest for national efficiency frequently provided the immediate inspiration for their work, exciting their interest in mental measurement and shaping the kind of research which they undertook. Burt's first research project was designed to test Galton's hypothesis that the mental and physical qualities of the British population were on the decline. He was convinced that, if national efficiency was to be achieved, 'we should know our resources in mind-power as accurately as we do in man-power, iron or coal'.¹⁵ His research on the distribution of educational abilities in London in 1917, for example, was inspired by the belief that 'to take the place of the ability that has been lost to the community, we have to discover the best methods of detecting fresh supplies of ability and the best means of training and utilising it to the utmost of which it is capable'.¹⁶ Cattell was determined to put

⁹ Cf. Gillian Sutherland, 'Measuring Intelligence: English Local Education Authorities and Mental Testing 1919–1939', in Charles Webster (ed.), *Biology, Medicine and Society 1840–1940* (Cambridge, 1989), p. 315.

¹⁰ University College, London, L. S. Penrose Papers.

¹¹ Cattell, *Your Mind and Mine* (1934), pp. 265–6.

¹² *Ibid.*, p. 10.

¹³ *Ibid.*, p. 29.

¹⁴ L. Darwin, *The Need for Eugenic Reform* (1926).

¹⁵ Burt, *Intelligence and Fertility* (Eugenics Society Occasional Papers No. 2, 1946), p. 33.

¹⁶ Burt, *The Distribution and Relations of Educational Abilities* (1917), p. 79.

psychology to the service of national regeneration.¹⁷ As a young socialist, he turned from chemistry to psychology because a lecture given by Burt inspired him with 'a feeling that only there was there a radical solution to our social problems'.¹⁸ His somewhat intemperate book, *The Fight for our National Intelligence* (1937), suggested that only a programme of eugenic reform could avert disaster.¹⁹ Differential fertility was reducing the national IQ by 1 per cent a decade, enough to ensure that half the population would consist of mental defectives by 2237.²⁰ Thomson's interest in mental testing was inspired more by a concern to do justice to intelligent children ignored by conventional scholastic tests than by an overt commitment to national efficiency. But his more abstract educational philosophy was based on the belief that the fate of civilisations depended on their capacity to mobilise their human resources. Society had progressed because intelligence – the capacity to think out a variety of courses of action and envisage their consequences – had enabled man to conquer his physical environment and develop scientific knowledge. If the complex structure of contemporary society was to be preserved, and the destructive forces of irrationality to be defeated, then all the available resources of intelligence needed to be discovered and exploited.²¹

The psychometrists supported the scientific management of British society, advocating an extension of the power of bureaucrats and the professionals, the planned allocation of human resources, and the therapeutic adjustment of delinquents to their proper social roles. Sceptical of the efficiency of the market economy, and contemptuous of the ability of amateurs, they gave enthusiastic support to the expansion of state control. Cattell even went so far as to advocate government by elected scientists,²² but in this he found no open supporters. In general, they were content to put their faith in mental tests as a rational calculus for allocating people to the occupations appropriate to their innate capacities. Burt wanted psychologists to direct children not only to the appropriate schools, but also the most fitting jobs: 'it is the duty of the community, first, to ascertain what is the mental level of each individual child; then to give him the education most appropriate to his level; and lastly, before it leaves him, to guide him into the career for which his measure of intelligence has marked him out'.²³ He suggested that

¹⁷ Cattell, *Psychology and Social Progress: Mankind and Destiny from the Standpoint of a Scientist* (1933), p. 8.

¹⁸ University of Liverpool, Archives of the British Psychological Society, Tapes and transcripts, Filing Cabinet 1, drawer 2, Prof. R. B. Cattell interviewed by F. W. Warburton, summer 1961, p. 1.

¹⁹ Cattell, *The Fight for Our National Intelligence* (1937).

²⁰ On the controversy inspired by this argument, see Soloway, *Demography and Degeneration: Eugenics and the Declining Birth Rate in Twentieth-Century Britain* (1990), pp. 215–6.

²¹ Thomson, *Intelligence and Civilisation* (Ludwig Mond Lecture) (Edinburgh 1936). For a general outline of Thomson's philosophy of education, see P. E. Vernon, 'The Contributions to Education of Sir Godfrey Thomson', *British Journal of Educational Studies* Vol. 10 (1961–2), pp. 123–37.

²² Cattell, *Psychology and Social Progress* (1933), pp. 332–9.

²³ Burt, 'The Mental Differences between Individuals', *Presidential Address to Section J of the British Association for the Advancement of Science* (1923), p. 215.

selection should be made on the basis of a table of IQs, with higher professional slots reserved for people with IQs over 150 and casual labouring jobs going to people with IQs between 50 and 70.²⁴

Like many contemporary social thinkers, the psychologists were pessimistic about *laissez-faire* capitalism, convinced that it was riven by recurrent crisis and determined to use the might and wisdom of the state to save it from self-destruction. But they added a new element to these all too familiar arguments. The crisis of capitalist reproduction, they argued, was a biological as well as an economic crisis.²⁵ The more intelligent citizens were restricting their fertility more effectively than their less intelligent fellows, thus undermining the efficiency of the nation and threatening the survival of the economic system. The only solution was to extend the power of the state, allowing it to intervene in people's private lives, as well as in the private sector of the economy, and thereby ensuring the most efficient possible use of the nation's biological resources.

For psychometrists, quality mattered much more than quantity. They put their faith in a tiny genetic élite of individuals with an IQ of over 150, believing that able individuals could inspire revolutionary social progress,²⁶ and argued that everything possible should be done to discover and educate gifted children. The search for the gifted needed to be an active one, employing all the sophisticated machinery of psychological science. The random element in Mendelian inheritance ensured that individuals would have to be recruited into the genetic élite in each generation. Social progress was predicated on social mobility, with an open élite constantly recruiting or rejecting aspirant members on the basis of their inherited intellectual ability. Inter-war educational psychology insisted that national survival depended on the provision of a scientific mechanism for ensuring the circulation of élites.

They also advocated both positive and negative eugenics. Spearman, Cattell, Thomson, Burt and Valentine were all active members of the Eugenics Education Society. Of course, they differed in the strength of their commitment to the movement and in the type of measures they were willing to advocate, with Cattell at the 'strong' and Valentine at the 'weak' end of the scale.²⁷ But they all agreed with the central contentions of eugenic philosophy. Throughout the inter-war period – and in Burt's case for much longer – they felt that intelligence was distributed in line with occupational status; that a high differential fertility rate between the professional and the manual classes was reducing the average intelligence of the British population; and that a reform of the breeding patterns of

²⁴ Burt, 'The Principles of Vocational Guidance', *Proceedings of the Seventh International Congress of Psychology* (1923), pp. 314ff.

²⁵ Cf. Daniel Pick, *Faces of Degeneration. A European Disorder, c.1848–c.1918* (Cambridge, 1989), p. 196.

²⁶ Burt, 'Intelligence and the Birthrate', *Daily Worker*, 30 January 1947, p. 3.

²⁷ For the importance of distinguishing between degrees of commitment to eugenics, see G. R. Searle, 'Eugenics and Class', Appendix 1, 'The Problem of Definition', in Webster (ed.), *Biology, Medicine and Society*, pp. 239–40.

the people was necessary to avert national disaster.²⁸ Eugenics was a logical extension of their meritocratic philosophy. Just as individuals ought to be placed in the social hierarchy according to merit rather than tradition, so future generations ought to be planned with a view to their innate biological qualities. They were worried that the meritocratic reforms which they advocated so passionately might prove to be counter-productive in the long-term, since 'our educational system tends to remove intelligent children from a more prolific to a less prolific social class, and thus to set in motion a resistance to the progress it is endeavouring to encourage'.²⁹ If the meritocratic reform of British society was to be successful, then it was essential that the problem of differential fertility should be solved. For them, eugenics was simply part of a much more general programme of progressive social reform.³⁰

They were clearly in favour of increased state expenditure on education, hoping to raise the school-leaving age, improve teacher training, make special provision for the retarded, the handicapped, and the maladjusted, increase the number of nursery schools, and obtain the regular medical and psychological inspection of school children. Such commitment to state intervention might strike us at first glance as somewhat incompatible with their hereditarian prejudices. In fact, the collapse in the belief in the inheritance of acquired characteristics and the triumph of a purer variety of hereditarianism had the effect of emphasising the importance of education: if nothing acquired is inherited, then the task of the teacher must begin anew in each generation.

Biology provides only capacities, education must fill in the substance. When confronted with the hard-line hereditarian argument 'that you cannot put an edge on a leaden knife, and that education is relatively unimportant in its effect on the life of the individual and the character of the society because it works within the foundations set by innate qualities',³¹ Tawney pointed out that innate capacity must be trained to be effective and quoted Cyril Burt and Lancelot Hogben in his defence.³² In advocating social reform, the psychometrists thought that they were acting in accordance with biological laws: their opinions seemed to be dictated not by political prejudice but by scientific necessity. They felt that the tension between

²⁸ See, for example, Thomson, *A Modern Philosophy of Education* (1929), pp. 27–8; 'The Trend of National Intelligence', *Eugenics Review* Vol. 73 (1946), pp. 9–18; *Scottish Council for Research in Education: The Intelligence of Scottish Children* (1933); Burt, *Intelligence and Fertility*; Cattell, *The Fight for Our National Intelligence*. This theory was discredited from within the subject itself when *The Trend of Scottish Intelligence* (Scottish Council for Research in Education, 1949) revealed that there was not a trace of decline in average intelligence.

²⁹ Thomson, *A Modern Philosophy of Education*, p. 28.

³⁰ Cf. Michael Freeden, 'Eugenics and Progressive Thought', *Historical Journal* Vol. 22, No. 3 (1979), pp. 645–71. The case of the psychologists lends support to Freeden's arguments rather than Jones' criticisms. See Greta Jones, 'Eugenics and Social Policy between the Wars', *Historical Journal* Vol. 25, No. 3 (1982), pp. 717–28.

³¹ BLPS, R. H. Tawney Papers, 17/6, *The Finance and Economics of Public Education* (Cambridge, February–May 1935), p. 2.

³² *Ibid.*, p. 4. 17/1, Lecture to the New Education Fellowship, January 1934, p. 12.

the social order and the natural order necessitated constant intervention by scientific experts to bring the two back into harmony. Finding that a number of individuals failed to adjust to their logical role in the social hierarchy, they advocated therapy to correct their psychological problems.

Their belief in the wide range of inherited intellectual differences between individual children committed them to increased state expenditure on education. The facts of biology, they argued, ensured that any attempt to herd all the children of a particular age group together into a common classroom with a uniform curriculum would result in disappointment, with the able bored and the dull discontented; instead they should be sorted into their appropriate ability groupings and dealt with according to their particular needs. Their arguments were based upon personal experience as much as on intellectual conviction, as many of them had spent their early careers teaching over-large classes.

The educational psychologists lent their enthusiastic support to the progressive education movement, arguing that education needed to be based on the mental and emotional needs of the child rather than on the demands of academic tradition. Ballard combined a belief in mental testing with a passionate commitment to liberal teaching in the infant school.³³ He regarded himself as 'a pedagogue of the newer and kindlier school – one to whom education is not an enforcement of rules and awarding of marks, but a lifelong experiment and adventure',³⁴ and produced a 'guide to the most modern methods of teaching and the happy occupations of children in nursery and infant schools'. His entire educational philosophy was based on the conviction that 'a child is not a man in miniature' and that 'he differs from the adult in his likes and dislikes, in his mode of learning, and his rate of learning'.³⁵ Burt felt that in the infant and nursery school stages 'the play way is the best way' and argued that, in teaching a young child, the object is not to convert him as rapidly as possible into an obedient scholar and well-conducted citizen, but to let him behave, with reasonable limits, in the way that is most natural to the level he has reached, and to provide him at every stage with the formative experience that Nature has assumed he would get'.³⁶ Thomson confessed that he was impressed by Dewey's belief that the school is a place for controlled experiments in life rather than for the transmission of authorised knowledge and advocated the extended use of projects in all schools.³⁷ Cattell, who spoke despairingly of the destruction of civilisation by a new breed of 'sub-men',³⁸ criticised conventional child-rearing practices as based 'not on any sound, demonstrable principles, but on the fact that

³³ Cf. *Mental Tests* (1920), and *Group Tests of Intelligence* (1922), with *The Practical Infant Teacher: A Guide to the Most Modern Methods of Teaching and the Happy Occupations of Children in Nursery and Infant Schools*, and *Thought and Language* (1934).

³⁴ Ballard, *Thought and Language*, p. 6. ³⁵ Ballard, *The Practical Infant Teacher*, p. 4.

³⁶ PRO, Ed 10/149 G 412, Memorandum of evidence proposed to be given by Professor Cyril Burt, Thursday, 23 July 1931, Paper No. T 12(21), pp. 14–15.

³⁷ Thomson, *Instinct, Intelligence and Character*, p. 254.

³⁸ Cattell, *The Fight for Our National Intelligence*, p. 2.

those methods are most consonant with adult convenience, adult dignity, and the individual's naïve love of power',³⁹ and confessed his faith in the 'natural altruistic urges and original worth' of the child.⁴⁰

Inter-war educational psychology thus combined a commitment to progressive education with a belief in natural inequality and meritocratic selection. If education is to be based on the intellectual and emotional needs of freely developing children, and if psychometric science reveals enormous differences between the rates of development of individual children, then it follows that many different types of education should be provided. The psychologists' passion for measuring and classifying resulted from their child-centred and progressive approach to education rather than from their overt political philosophy. They used mental tests in order to expose the inner workings of the child's mind and the logic of the developmental process as well as to quantify the differences between children. They felt that, if education were based on the facts of biological development rather than the demands of academic tradition, then discipline and authority would cease to be essential to school life: children would learn out of natural interest rather than out of fear or compulsion. A meritocratic calculus for placing children in schools in accordance with their innate abilities was a precondition for liberalising school teaching.

Historians have tended to focus on the more obviously unpopular aspects of sociobiology: its insistence that social inequality is rooted in natural inequality, for example, and its preoccupation with racial deterioration. They have presented sociobiologists as élitists, reactionaries and racists and pointed to convenient figures such as Karl Pearson and Ronald Fisher to illustrate their arguments. But it is clear that there were also close intellectual affinities between biological and progressive thought. The demand to base education on the needs of children rather than on the requirement of academic tradition is at root a sociobiological one.

These psychologists also argued that improved education should be used to improve the material and cultural conditions of the working-class. They advocated concerted state intervention to furnish working class children with the emotional and intellectual advantages of middle-class domestic life, presenting their case in terms of the spread of enlightenment and the eradication of ignorance.⁴¹ Burt in particular was well aware of the cultural poverty suffered by the working class slum child: he recognised that the child from a poor home 'leads a life as duplex as that of Jekyll and Hyde, just as he speaks two dialects, and obeys a double code of morals: in the street he plays the precocious urchin; in the school he is put down as mentally deficient',⁴² and he drew a sensitive contrast between the fate of the

³⁹ Cattell, *Your Mind and Mine* (1934), p. 308.

⁴⁰ Cattell, *Psychology and Social Progress* (1933), p. 368.

⁴¹ PRO, Ed 10/149, Memorandum of evidence proposed to be given by Professor Cyril Burt, *passim*.

⁴² Burt, *Mental and Scholastic Tests* (1962 edn), p. 19. See also Fletcher, *Science, Ideology and the Media*, pp. 187–245.

offspring of the respectable and the unrespectable.⁴³ He hoped that nursery schools would be able to bring the advantages of middle-class child rearing to the working-class child.

In general, the psychometrists wanted to ensure that the results of the meritocratic social race were not distorted by cultural handicaps, and did what they could to spread middle-class values to the slums. In place of a culture of communal loyalties, extended families and irregular work, they wanted to encourage nuclear families, self-help, and competitive individualism. Their ideal working-class child would live in a small and respectable family and devote himself to educational advancement:

His father and mother will have both time and ability to answer his childish questions, and to join or direct him in his games, his home lessons, and his visits to places of interest. Instead of being left to play with a crowd of small brothers and sisters, he may be the chief companion of his parents, and the object of their intellectual pride; at meals, and in the evenings, and during his walks abroad he will share their conversation and thus imbibe from day to day a miscellaneous store of worldly wisdom.⁴⁴

Secure child-centred families, backed up by state-financed nursery schools and child care services, were the natural building blocks of the meritocratic society which the educational psychologists strove to create. In their attempts to allocate social position on the basis of innate ability rather than inherited status they did not content themselves with the construction of mental tests; they also campaigned to eliminate the cultural deprivation of the young working class child.

In politics the psychometrists were on the side of the progressive intelligentsia. The ideal of a collectivist society, dominated by the state, planned by experts, and dedicated to national efficiency, biological as well as economic, was a commonplace on the left between the wars. Sociobiological arguments were highly fashionable among contemporary socialists. A number of socialist and Marxist intellectuals looked to biology for an explanation of social issues and to science for the solution to political problems. In particular, a small group of active left-wing scientists – J. D. Bernal, J. B. S. Haldane, Lancelot Hogben, Hyman Levy and Joseph Needham – helped to spread such arguments in radical circles.⁴⁵ Trained in the natural sciences but attracted to political action, they often interpreted social phenomena in biological terms, and they encouraged fellow travellers to imitate their language if not to absorb their ideas.⁴⁶ Granted, Hogben was one of the most acerbic critics of inter-war eugenics, but he criticised its abuse of biological arguments rather than the sociobiological enterprise as such.

⁴³ Burt, *The Backward Child* (1937), p. 127.

⁴⁴ *Ibid.*, p. 127.

⁴⁵ Gary Wersky, *The Visible College* (1978), provides a detailed examination of this group. For less sympathetic comments, see the essays by Koestler, Forster, and Polyani in *The Challenge of Our Time* (1948).

⁴⁶ See, for example, C. P. Dutt, *Biology. An Introductory Course for Classes and Study Circles* (Labour Research Department Pamphlet No. 5), esp. pp. 31–2.

Above all, these thinkers were optimistic – it is tempting to say messianic – about the possibilities of science. They felt that scientific method was ethically neutral and socially progressive, and were fond of condemning capitalism as incompatible with the ‘onward march of scientific progress’. J. D. Bernal believed that science ‘held the key to the future’ and sided with socialists precisely because they ‘were gathering to turn it’.⁴⁷ He hoped that in the ‘Soviet state the scientific institutions would in fact gradually become the government and a further stage of the Marxian hierarchy of domination would be reached’.⁴⁸ J. B. S. Haldane argued that ‘the future of Western civilisation depends upon whether it can assimilate that scientific point of view’.⁴⁹ Indeed, in reading these thinkers, it sometimes seems as though scientists have taken over from the proletariat as the harbingers of ‘the new society’. They would certainly have disagreed with the psychometrists on points of both detail and method – they were political activists and the psychometrists were largely indifferent to formal politics – but in their general approach both to science and to biology they seem to have belonged to the same intellectual culture.

Many leading left-wingers happily endorsed selective breeding as well as selective education.⁵⁰ As *The New Statesman* explained in July 1931: ‘The legitimate claims of eugenics are not inherently incompatible with the outlook of the collectivist movement. On the contrary, they would be expected to find their most intransigent opponents amongst those who cling to the individualistic views of parenthood and family economics.’⁵¹ Karl Pearson was a socialist as well as a pioneering eugenicist.⁵² The Webbs supported eugenic planning just as fervently as town planning. George Bernard Shaw believed that ‘the only fundamental and possible socialism is the socialisation of the selective breeding of man.’⁵³ The young Bertrand Russell argued that the state should provide everyone with coloured ‘procreation tickets’, and impose a heavy fine on people who chose to breed with the possessors of incompatible tickets.⁵⁴ Harold Laski studied eugenics under Pearson, charmed the elderly Galton, who entertained him to tea and pronounced him a prodigy, and, as an Oxford undergraduate, founded the Galton Club.⁵⁵

⁴⁷ Quoted in Wersky, *Visible College* p. 75.

⁴⁸ Quoted in *ibid.*, p. 129. For details on ‘Bernalism’, one of the most elaborate and interesting manifestations of the ‘cult of science’ in this period, see pp. 185–99.

⁴⁹ Quoted in *ibid.*, p. 88.

⁵⁰ On this theme, see Diane B. Paul, ‘Eugenics and the Left’, *Journal of the History of Ideas* Vol. 45, No. 4, (October–December 1984), pp. 567–90. See also Soloway, *Demography and Degeneration*, pp. 199–201.

⁵¹ ‘Sterilisation of Defectives’, *New Statesman*, 25 July 1931, pp. 102–3. Quoted in Mathew Thomson, ‘Sterilisation, Segregation and Community Care: Ideology and Solutions to the Problem of Mental Deficiency in Inter-War Britain’, *History of Psychiatry* Vol. 3 (1992), p. 495.

⁵² See, in particular, Karl Pearson, ‘Socialism and Natural Selection’, *Fortnightly Review*, 1 July 1894, pp. 1–21. See also Kevles, *In the Name of Eugenics*, pp. 22–4.

⁵³ George Bernard Shaw, *Man and Superman*. Quoted in A. E. Dyson and Julian Lovelock, *Education and Democracy* (1975), p. 270.

⁵⁴ Nicholas Griffin (ed.), *The Selected Letters of Bertrand Russell. Vol 1. The Private Years (1884–1914)* (1992), pp. 126–8.

⁵⁵ Granville Eastwood, *Harold Laski* (1977), p. 4.

Throughout his career he argued that only eugenics would prevent the unfit from swamping the fit. J. B. S. Haldane contributed his name, money and sperm to the cause of eugenics. The most ardent supporter of artificial insemination in the 1930s was Herbert Brewer, a socialist postal clerk and trade unionist.

Some leading Marxists tried to create a distinctively socialist eugenics. C. P. Dutt, a leading luminary of the Communist Party, argued that the science of inheritance was such a powerful weapon that it could not be left to the capitalists: 'the labour movement should create its own eugenics as well as its own economics.'⁵⁶ Enid Charles, Hogben's wife, said that she preferred the eugenics of Lenin to the eugenics of Dean Inge. These arguments eventually generated an Anglo-American movement known as 'Bolshevik eugenics', which held that the Soviet Union was the only country capable of promoting pure eugenics: only a scientific society could treat issues like breeding objectively, and only an egalitarian society could allow innate abilities to express themselves undistorted by social class. The Soviet Union fitted the bill on both counts.

The psychometrists seldom got involved in party politics. They regarded their arguments as logical deductions from the evidence rather than as ethical judgements, and they disliked the amateur and populist bias of the party political process.⁵⁷ They found their natural constituency in the Labour Party – indeed Percy Nunn was an influential member of the Party's Advisory Committee on Education – but their relationship with their colleagues was strained. Their belief in the innate inequality of man alienated them from egalitarians in the Party, while their conviction of the superiority of middle-class culture and their strictures on working class child-rearing distanced them from its proletarian elements. 'I think there is a great deal in what you say about the inadvisability of publishing the detailed classification of vocations arranged according to intelligence', Burt wrote to a co-worker, Miss Spielman:

I can quite see that in a Government report there might be serious objections to telling the various classes of the community what was the degree of intelligence attributed to them. I can imagine the labour people being very distressed at the low amount of intelligence that we give to miners, mechanics, and textile workers.⁵⁸

The alliance with the Labour Party was an alliance of convenience – the Party seemed to be more committed to the expansion and reorganisation of education than did the Conservatives – and the origins of post-war disagreements were already evident.

In so far as they can be classified in conventional political terms, they were 'new liberals'.⁵⁹ Their work was rooted in the classical liberal struggle with privilege,

⁵⁶ C. P. Dutt, *Biology. An Introductory Course*, p. 32.

⁵⁷ Such indifference to formal politics was common amongst scientists; see Wersky, *Visible College*, pp. 21, 40–1, 154–5, 212–15, 220, 279–80, 303–4, 322–3.

⁵⁸ GLCRO, Burt to Spielman, 2 August 1925, p. 1.

⁵⁹ For a detailed discussion of 'new liberals', see Michael Freedman, *The New Liberalism. An Ideology of Social Reform* (Oxford, 1978).

patronage, and monopoly, but they modified their ideas to deal with the characteristic problems of industrialism. They drew their inspiration from three sources familiar to the new liberalism: Utilitarian philosophy, the social research movement, and biological theory.⁶⁰ They shared the Utilitarian dream of securing the greatest happiness for the greatest number, but their Utilitarianism was modified by their belief in the innate inequality of man. A rational calculus for meritocratic allocation was thus an aid to the felicific calculus, since individual contentment and national efficiency were both conditional upon the proper use of human resources. They took part in the social research movement, which was persuading many politicians of the complex social origins of familiar social maladies, and argued that the scope of research should be expanded to include psychological evidence. Burt's two books on London schoolchildren, *The Young Delinquent* (1925) and *The Backward Child* (1937), examined many problems familiar to Booth's readers, but from a psychological perspective.

They agreed with the new liberals that 'social arrangements, to be just and efficacious, had to reflect what science had discovered about the structure and workings of society',⁶¹ and shared their conviction of the overwhelming importance of the biological sciences.⁶² Their hereditarianism did not deter them from hoping to create 'better human beings' or from believing in the optimal development and self-expression of the individual, but they added psychological factors to the other factors which needed to be manipulated. Their attempt to deal with 'delinquency' and 'maladjustment' seemed to translate an older quest for moral improvement and character reform into 'scientific' language; the 'moral message' of child guidance was one which most liberals would sympathise with. Whereas classical liberals concentrated on the environmental influences which discouraged self-reliance and self-help, they looked at the psychological problems, yet their aim – the liberation of the individual from *unnecessary* restraints and the encouragement of *possible* self-development – was in the mainstream of liberal thought. Their sympathy for eugenics was motivated by a desire to adapt the dream of human improvement to the facts of modern biology.⁶³ They also believed firmly in 'the liberal doctrine of according maximum scope to the development of superiorly qualified individuals, by whose talents society at large would benefit',⁶⁴ and in a theory of social reform which 'implied social and economic reorganisation in line with individual psychological characteristics'.⁶⁵ Had the Liberal Party survived as a dynamic political force, they might have found it a congenial political base.

⁶⁰ Cf. with *ibid.*, p. 256.

⁶¹ *Ibid.*, p. 201.

⁶² On liberalism and biology, see *ibid.*, pp. 76–116.

⁶³ Cf. with *ibid.*, pp. 185–94.

⁶⁴ *Ibid.*, p. 190.

⁶⁵ *Ibid.*, p. 156.

The social foundations of educational psychology

This meritocratic philosophy was rooted in the psychologists' home backgrounds, educational experiences, and professional circumstances. In general, they were drawn from relatively marginal social groups. Thomson was born into the Northumberland working class and was brought up by his mother and her two sisters, who worked for Jones' Sewing Machines in Newcastle in return for very low wages.⁶⁶ Valentine's father was a Methodist minister who was continually on the move,⁶⁷ and Nunn's father was the headmaster of an obscure private school.⁶⁸ Burt was the son of a local doctor, a gentleman by merit rather than inheritance. His family had been professionals – surgeons, ministers, and teachers – for a number of generations.⁶⁹ His father acquired the trappings of gentility – a large house (which now houses a firm of four medical practitioners), a three-acre garden, a domestic servant, a gardener-cum-groom and a horse-and-trap – but he could only just manage to support them: anxiety about money was a fact of life.⁷⁰ Burt stood on the periphery of the established professional élite – close enough to watch them at work, too distant to join them. His public school, Christ's Hospital, catered for the able rather than the established and his Oxford college, Jesus, was not one of the inner circle of Oxford colleges. His disadvantages may strike us, at first sight, as insignificant; but in a status system as finely graded as the English one, they had considerable personal impact.

They owed their careers to academic success rather than to personal patronage and spent their childhoods in scrambling up the scholarship ladder. In his defence of the selective system of education Burt was fond of pointing out that it was designed by people who would not have gone to university without the help of a scholarship,⁷¹ and in this he was undoubtedly correct. Thomson went to a local board school at Felling and would have been forced to leave school at thirteen if he had not won a scholarship which gave him free tuition and books at Rutherford College in Newcastle.⁷² He spent much of his adolescence in sitting examinations. 'Those of us who were good examinees', he recalled, 'sat innumerable "SK" examinations on May evenings, gaining for ourselves certificates in coloured cardboard cylinders, and for the school a substantial income'.⁷³ Every Friday morning all the boys in his form sat for an internal examination, in which exactness and accuracy counted for everything, and on Monday they were given their marks and arranged in class according to merit, with the top boys sitting at the front.⁷⁴ In

⁶⁶ Thomson, *The Education of an Englishman*, p. 1.

⁶⁷ L. B. Birch, 'Obituary: Emeritus Professor C. W. Valentine', *Bull. Br. Psych. Soc.* Vol. 17, No. 57 (1964), p. 49. ⁶⁸ *DNB, 1941–50*, p. 636, col. 1. ⁶⁹ Hearnshaw, *Burt*, p. 1.

⁷⁰ Hearnshaw, 'Cyril Lodowic Burt', *Proceedings of the British Academy*, p. 476.

⁷¹ See for instance, Burt and Howard, 'Heredity and Intelligence: A Reply to Criticisms', p. 40.

⁷² 'Godfrey Thomson', in Boring *et al.* (eds.), *A History of Psychology in Autobiography* (1952; 1968 edn, Clarke University), p. 279. ⁷³ Thomson, *The Education of an Englishman*, p. 21.

⁷⁴ *Ibid.*, p. 24.

the Queen's Scholarship examination he got the third best result in the country, enabling him to go up to Durham University. There he won an Open Entrance Exhibition and then a University Fellowship which paid for him to go to Strasbourg to work for a doctorate in physics.⁷⁵

Ballard won a first-class in the Queen's Scholarship examination and then a first in the Teacher's Certificate. Despite a heavy burden of teaching, he studied in the evenings and passed a succession of examinations: London Matriculation in 1888, Inter Arts in 1889, BA in 1891 – all in the first division. Throughout much of his adult life he combined his career in education with the pursuit of academic distinction. In 1903 he was placed first on the list in the London MA examination and awarded the Carpenter Gold Medal for Mental and Moral science, a distinction which was rarely awarded and which had previously gone to James Sully and James Ward. In 1914 he was awarded a London D Litt for his monograph supplement to the *British Journal of Psychology* on 'Obliviscence and Reminiscence' (1913).⁷⁶

Valentine responded to early academic disappointment with unremitting determination. His father's peripatetic existence meant that his school career was disturbed and undistinguished, and he left school at seventeen, hoping to follow his father's calling, but conscious of little prospect of financial help from home to further his education. He taught at boarding school and began to read for an inter-BA from London University by correspondence course, but his heavy work load and his duties as a local preacher meant that he made slow progress. With £30 which he had managed to save and £30 from his father he went up to Aberystwyth College, completed his inter-BA, and stayed on for a second year, supported by a small scholarship, borrowed money, and the proceeds of part-time teaching. He later went to Downing College, Cambridge, won a foundation scholarship, and gained a double first in the Moral Science Tripos.⁷⁷

Burt's parents brought him up as a perfect scholarship winner and, as he later recalled, 'set goals for me that have haunted me all through life'. His father taught him Latin while he was still in his cot, his grandfather made him learn German declensions, and, as examinations drew near, his mother regularly told him 'how my father had once won so many prizes at St. Saviour's Grammar School, that a cab was necessary to cart them home'.⁷⁸ He won a scholarship to Christ's Hospital, a classics scholarship to Jesus College, Oxford, and later paid for his trip to Wurzburg to read German psychology out of the proceeds of a University Prize, the John Locke Scholarship in Mental Philosophy.

The influence of the scholarship system on the ideals and aspirations of these men was profound, teaching them to value a very particular type of success in life:

⁷⁵ 'Godfrey Thomson', in G. Boring *et al.* (ed.), *History of Psychology*, p. 280.

⁷⁶ A. G. Hughes, 'Philip Boswood Ballard', *Brit. J. Educ. Psych.* Vol. 21, Part 3 (November 1951), pp. 163–6.

⁷⁷ Birch, 'Obituary', pp. 49–50.

⁷⁸ Burt, 'An Autobiographical Sketch', *Occupational Psychology* Vol. 23, No. 1 (January 1949), p. 10.

intellectual success purchased at the expense of personal effort and self-discipline. 'The notion of achieving success in games, sport, politics, or money-making, was curiously remote from my family's ideals', recalled Burt.⁷⁹ While still at Rutherford College, Thomson determined 'that whatever occupation I entered it must be one in which I could remain a student all my life'.⁸⁰ It left them with a lifelong obsession with examinations. In the first two pages of his contribution to Boring's *History of Psychology in Autobiography*, dealing with his childhood and youth, Thomson mentioned examinations, prizes, studentships, and qualifications ten times and said nothing whatsoever of his family and home life.⁸¹ As a student he came to look upon examiners as 'kind persons who gave me certificates and prizes',⁸² and he recalled that 'I always passed, and needless to say examinations which had never worried me, ceased to give me the slightest concern. I worked conscientiously for them and in them, and never doubted the result or had any anxieties or strain.'⁸³ It convinced them that the most appropriate way to improve the allocation of individuals to occupations was to reform the examination system. Thomson, who owed more than any of his fellow psychologists to scholarships, spoke with great eloquence on the subject, admitting that he accepted the invitation extended to him by the Northumberland education authority to design intelligence tests to be used in the scholarship exam for largely personal reasons:

I remembered my own turning point when I was thirteen and won my scholarship to Rutherford College, and was delighted to think I had found a way of helping children of intelligence who might otherwise be overlooked. I have since spent a great deal of my thought and energy in endeavouring to further this end still more, until it has become a sort of ruling passion.⁸⁴

They all had remarkably similar characters: their main commitment was to their intellectual vocations, they kept their emotional lives under rigid control, and they regulated their lives according to time-tables, plans, and long-term achievements: we seldom find passion or perversity disrupting their well-ordered careers. Their philosophy might, with some justification, be described as a secularised Calvinism, dividing the world into the meritocratic elect and the damned: election was predetermined by innate intelligence but constantly had to be proved by work and educational effort. Thomson fully acknowledged the non-conformist origins of his educational philosophy. In his childhood he was influenced by *Pilgrim's Progress* and by the writings of Samuel Smiles more than by any other books, and he 'actually looked over my shoulder to see if I bore a load of sin; and imagined possible chained lions at the stairhead'. Throughout his life he retained his commitment to such Victorian values:

It is unfashionable now to think well of these, and 'the thing' to laugh at Smiles. But I cannot laugh at a man whose words influenced me so strongly. I was ambitious, not

⁷⁹ *Ibid.*, p. 10.

⁸⁰ Thomson, *The Education of an Englishman*, p. 20.

⁸¹ 'Godfrey Thomson' in Boring *et al.* (eds.), *History of Psychology*, pp. 279–80.

⁸² Thomson, *The Education of an Englishman*, p. 30.

⁸³ *Ibid.*, p. 22.

⁸⁴ *Ibid.*, p. 101.

only for myself but to please and be able to help mother, and I took his teaching very seriously to heart. The books were encouraging, for they were about men who succeeded, if not always in a worldly sense. And they were salutary, for all these men had struggled against poverty and other handicaps. I fear I am an unrepentant Victorian.⁸⁵

It is a commonplace that men tend to admire qualities which they themselves exemplify; and it is possible that these psychologists loaded their tests, albeit unconsciously, in favour of children with personalities like their own. The usual questions in intelligence tests reward accuracy, speed, and convergent thinking; the testing situation itself favours the conforming, obedient child who wishes to please the adult. Both the questions and the situation tend to penalise any impulse towards irreverence, speculation, and fantasy. Liam Hudson recalls that he has heard a number of testers express in private a 'violent antipathy about people of extroverted or divergent temperament. Implicitly, they take the convergent skills to epitomize all that is morally, personally and educationally desirable'. The autobiographies of these psychologists did more than convince them of the need for a meritocratic reform of the educational system; they also shaped the type of personal qualities which they looked for in their tests. Hudson speculates, with some justice, that, through the 11-plus system, these psychologists selected in favour of boys and girls with temperaments like their own, penalising the extroverted, non-conformist, and divergent.⁸⁶

The professional careers of these psychologists tended to reinforce their meritocratic outlooks. Granted, they received their share of public honours and academic distinctions. But they escaped the establishment embrace: social advancement did not do its familiar work of turning young radicals into elderly conservatives. Psychologists managed to win only a marginal position within English professional life and failed to command the rewards which they felt were commensurate with their intellectual ability and professional dedication. Their choice of subject ensured that their climb up the social system was blocked by obstacles. In consequence, they had little reason to love the English establishment. They were embittered by innumerable intellectual snubs and resented the unearned privileges conferred on large sections of the professional and academic élite. Yet they stopped short of root and branch social radicalism. Like many frustrated professionals, they wanted to win membership of the social élite – albeit a reformed élite – not to abolish it. The concept of 'merit' provided them with a perfect intellectual weapon, allowing them to criticise the individuals who dominated the hierarchy, whilst leaving hierarchy intact.

It is tempting to go on from here to suggest that 'meritocracy' is in essence the ideology of the professional middle classes, that is of an intermediate group within advanced capitalist society which sides neither with the manual working class nor

⁸⁵ *Ibid.*, p. 9. Cf. *A Modern Philosophy of Education*, p. 243.

⁸⁶ Hudson, *Cult of the Fact*, pp. 132–4.

with the plutocracy and which earns its living by selling its expert services on the open market.⁸⁷ According to this interpretation, social theory is a direct reflection of economic interests of a highly specialised nature: the idea of merit advances the material position of a restricted social group while masquerading as an apolitical and objective theory. These professionals derived their social position from their mental abilities and their acquired expertise; in consequence, they advocated meritocratic selection and scientific management while deprecating the unearned privileges of the rich and the informal 'know-how' of the amateur. Their belief in the unequal distribution of innate intellectual abilities allowed them to criticise the established social order without abandoning the principle of hierarchy. Their commitment to state regulation and scientific management enabled them to suggest solutions to evident social problems without challenging the economic system, to reconcile their individualistic and competitive ethic with the need for organisation and planning, and, at the same time, to secure a market for their professional skills.

The attractions of this argument are no more than superficial. Meritocracy did not just appeal to the middle classes; and middle-class parents were the first to question selective education when it threatened the interests of their own children. In fact, the idea of a meritocracy was advanced not by a social class but by a status group which transcended the boundaries of class. A 'class' is a broad collection of individuals who share a common relationship to the means of production and who, on occasion, act in concert to advance their material interests. A 'status group', on the other hand, is a restricted group of individuals who, sharing a common code of social honour and a common set of cultural values, treat each other as equals. Status groups are formed in the community and in the domestic world; their characteristic ideologies cluster around symbolic issues. They are concerned not with advancing their common economic interests but with preserving the purity of the value system which binds them together. Their characteristic response to an aspirant member is not to weigh up his ability to advance their material interests but instead to scrutinise him for the possession of certain personal qualities valued by the group.⁸⁸ The meritocrats displayed none of the characteristics of class action and class ideology: they came from diverse backgrounds, drew their support from a number of distinct social groups, and had little to say about purely material issues. Instead, they displayed the characteristic features of a status group which had been formed by educational success and was defined by intellectual ability. They spent their early lives in climbing up the scholarship ladder; appealed to all those who valued

⁸⁷ For Marxist and neo-Marxist interpretations of the social and political commitments of the new professional middle-classes, see: E. Hobsbawm, 'The Fabians Reconsidered', in *Labouring Men* (1964), pp. 250–71; D. MacKenzie, 'Karl Pearson and the Professional Middle-classes', *Annals of Science* Vol. 36 (1979), pp. 125–43; D. MacKenzie, 'Eugenics in Britain', *Social Studies of Science* Vol. 6 (1976), pp. 499–532; L. J. Ray, 'Eugenics, Mental Deficiency and Fabian Socialism between the Wars', *Oxford Review of Education* Vol. 9, No. 3 (1983), pp. 213–22. J. Habermas, *Legitimation Crisis* (Eng. trans. 1976).

⁸⁸ Cf. Hope, *The Political Conception of Merit*, pp. 14–19. *As Others See Us*, pp. 121–30.

educational success and intellectual achievement; and were obsessed with intellectual quality and academic performance. Whatever their personal backgrounds or material circumstances happened to be, they treated all prize-winners as equals and looked down on those who failed to gain access to this charmed intellectual circle.

The meritocratic ideal drew its supporters from three different social groups – the intellectual aristocracy, the professional middle classes, and the aspirant and educated working class. They were drawn together by bonds stronger than material interests; shared values and assumptions gathered them up into an informal but cohesive network of equals. All three admired educational achievement, intellectual ability, and relentless hard work, and all three despised the stupidity of the landed élite and the ignorance and immorality of the unrespectable poor. Despite their very different positions in the class structure, they shared a number of common experiences. They were forced to rely heavily on their personal resources: ability and effort, rather than family inheritance or personal contacts, determined their social position. The children of the intellectual aristocrats naturally started off with a considerable advantage; but if they had the bad luck to be born stupid they forfeited their place within the élite. The working class scholarship winner naturally turned in upon himself, cutting his contacts with the culture of his home and his peers and concentrating on his education. But the middle class prize-winner also tended to be self-reliant, individualistic and competitive. They tended to find jobs in administration, education, scientific research and the law rather than in commerce or agriculture. They cared little for making money in itself, and acquired it almost as an incidental consequence of their other activities. This alliance rested on vertical ties of sympathy which transcended the horizontal ties of class; it formed a powerful nexus of influence and energy which has been responsible for many of the most characteristic reform movements in recent history; its handiwork can be seen in educational expansion, the restructuring of the civil service, Keynesian economics, and in the welfare state.

In British educational psychology we find the alliance reproduced in miniature. The liberal intellectual aristocracy donated Galton to the subject; the professional middle classes donated Burt; and the aspirant working class donated Godfrey Thomson. Their diverse class backgrounds lent a distinctive tinge to their writings. Galton dwelt on the family connections of successful clans; Burt identified merit with professional qualifications; Thomson focused on the fate of the intelligent working-class child. Yet the hard core of their writings was supplied by considerations of status rather than class, and on many issues of substance they were in fundamental agreement.

With its heavy emphasis on the role of chance in the process of inheritance, the hereditarian theory of intelligence did not provide a long-term defence for the social position of middle class families. Mendel's key observation was that 'the chance re-combinations of a definite number of unalterable factors will yield, as a

consequence of sexual reproduction, a wide variety of patterns in the ensuing generations, as dissimilar as the figures formed by shaking the coloured chips in a child's kaleidoscope'. Psychometry was based on a theory of regression to the mean: of the tendency for bright parents to have less bright children and of dull parents to have less dull children. It was concerned with providing justice for the individual rather than with preserving the position of the social group. At its heart was the belief that an individual's social position should be determined by his inherited biological qualities rather than by his family's social class. Michael Young rightly compared the meritocrats to the Mohicans, who took away the best young men and women from the conquered tribe and reared them as members of their own families.⁸⁹

The fact that the mental measurement movement originated with a status group rather than a social class helps to explain its confused political career. For the political commitments of those inter-war educational psychologists strike us as nothing if not ambiguous; such terms as 'reactionary' and 'progressive', 'left-wing' and 'right-wing' are quite incapable of defining them. They were liberals who believed in the inequality of man, progressives who believed in eugenic reform, hereditarians who believed in the welfare state, and élitists who believed in relentless social mobility. Their ideas had no logical connections with either the left or the right in British politics, and at various times they found committed supporters in both camps. Between the wars they sided with radicals and social reformers; after the war they tended to look for their constituency on the right. In a society as divided by class and as resistant to the rational allocation of human resources as Britain, the meritocratic idea had little chance of success. It is a testimony to the quality of their arguments, and a measure of the peculiarity of the circumstances in which they worked, that they should have got as far as they did.

⁸⁹ Young, *The Rise of the Meritocracy*, p. 150.

Psychologists as policy makers 1924–1944

Looking back on his experience as Minister of Education, Anthony Crosland reflected that 'it's a general truth that new ideas and intellectual breakthroughs normally come from the outside academics... Academics are paid to have new ideas, civil servants are paid to administer'.¹ Between the wars, most influential 'new ideas and intellectual breakthroughs' were the work of professional psychologists.

The Board of Education's Consultative Committee provided psychologists with an ideal vehicle for turning ideas into policy. Set up in October 1900 and instructed to recruit two-thirds of its members from schools, universities and other educational bodies, it was something of a hybrid, part semi-official think tank, part 'high-level pressure group for the educational world'.² The committee was suspended in the latter part of the Great War, but revived in July 1920, with a permanent membership of twenty-one appointed by the President of the Board for a period of six years, and with Sir Henry Hadow, Vice-Chancellor of Sheffield University, as Chairman.³ It examined whatever reference was handed down to it, calling witnesses, soliciting advice, and, after mulling over the evidence, producing a detailed report. The committee did little more than outline what it thought to be the best educational policy and the soundest educational theory; it was up to the Board of Education and the Local Education Authorities to interpret the proposals, rejecting them, adjusting them, or implementing them as they thought fit.⁴ Yet there is little doubt that it exercised a powerful and enduring influence over educational policy, shaping the opinions of Ministers and backbenchers, and checking the domination of a static bureaucracy.⁵

Between the wars the committee published a cycle of influential reports which analysed the emotional and intellectual development of children from birth until

¹ *The Politics of Education. Edward Boyle and Anthony Crosland in Conversation with Maurice Kogan* (1971), pp. 186–7.

² Paul Addison, *The Road to 1945. British Politics and the Second World War* (1975), p. 40.

³ L. A. Selby-Bigge, *The Board of Education* (1927), p. 203.

⁴ 'Conference on the Hadow Report', *The Times Educational Supplement*, 22 October 1927, p. 475, col. 2.

⁵ Selby-Bigge, *Board of Education*, p. 205.

late adolescence and laid down guidelines for the future development of English education.⁶ They included a mass of fresh information on numerous issues – if a curious teacher wanted to know what the ‘experts’ were thinking on anything from the nature of mental deficiency to the value of woodwork, he needed only to turn to these reports – and they reinforced a revolution in the relations between the child and the education offered to him, providing child-centred teaching with an official stamp of approval. They represented ‘a big-scale, though tentative, attempt to psychologise the organisation of education in this country’,⁷ insisting that the proper function of schools was not to impart a body of knowledge but to introduce children to successive phases of experience as they became ripe for them. Yet they also lent powerful support to selective secondary education, arguing that equality of educational provision did not mean identity of provision, and marshalling an impressive body of evidence to demonstrate that children differ widely in their innate abilities.⁸ The model of education laid down in the 1944 Education Act, which separated adolescents into different schools but insisted that teaching should be based on the needs of the young, had its roots in these documents.

Psychological tests of educable capacity

The committee’s report on *Psychological Tests of Educable Capacity* (1924) marked a turning point in the history of educational psychology, reinforcing public interest in psychological techniques, encouraging the wider use of psychological tests in scholarship examinations, and providing a nascent subject with the stamp of official approval.

The report resulted from mounting worries about the scholarship system. Most commentators agreed that a rigorous system of selection was vital to national regeneration,⁹ but worried that the established scholarship system was plagued with failure. Teachers complained that it turned teaching into a routine, pupils that it reduced learning to a chore, dons that it produced unthinking parrots, parents that it ruined home life, and doctors that it undermined juvenile health.¹⁰ On top of all that, the examination results were often inaccurate. In 1888 F. Y. Edgeworth demonstrated that key public examinations were disturbingly unreliable. Twenty years later Sir Philip Hartog mounted a devastating assault on the established

⁶ Under Sir Henry Hadow, *Psychological Tests of Educable Capacity* (1924), *The Education of the Adolescent* (1926), *The Primary School* (1931), and *Infant and Nursery Schools* (1933); under Sir Will Spens, *Secondary Education with special reference to both grammar schools and technical high schools* (1938).

⁷ Olive A. Wheeler, ‘Modern Psychology and the Spens Report’, *Brit. J. Educ. Psych.* Vol. 8 (1938), p. 225.

⁸ M. Kogan and T. Packwood, *Advisory Councils and Committees in Education* (1974), p. 6.

⁹ See, for example, PRP, Ed. 24/1226, H. W. Orange to the Secretary, His Majesty’s Treasury, 11 December 1918, 18/4354 Y.

¹⁰ Board of Education, *The Psychological Tests of Educable Capacity* (1924), p. 115.

system in *Examinations and their Relation to Culture and Efficiency*. In 1920 the Departmental Committee on Free Places lamented that 'a great many excellent fish' were slipping through the net.¹¹

Psychological tests had already found some powerful and articulate supporters by the end of the First World War, with the London County Council and the London Day Training College trying hard to promote them. P. B. Ballard designed simple tests of arithmetic and reading¹² and wrote several books intended to popularise mental tests; J. A. Green encouraged his students to investigate the Binet intelligence scale and produce improved attainment tests; and most educational journals kept their readers informed about the subject. In 1919, 'in response to a number of inquiries', the *Times Educational Supplement* provided an up-to-date reading list on the subject.¹³

Interest in testing was not just academic. Tests were increasingly used on children suspected of mental deficiency, as part of a general battery of tests.¹⁴ A handful of local educational authorities took the initiative in administering group tests. In 1919 the Bradford Education Authority included a number of Burt's written group tests in its junior scholarship examinations,¹⁵ and two years later Godfrey Thomson tested about 3,000 children in Northumberland at the request of the local educational authority.¹⁶ Other authorities and schools also incorporated intelligence tests into their examinations.¹⁷

The sub-committee appointed to report on psychological tests initially consisted of Board of Education officials who lacked any relevant expertise. But the sub-committee soon found its work impossible without the help of psychological experts, and co-opted P. B. Ballard, C. S. Myers, Charles Spearman, and, a little later, Cyril Burt to help in analysing and interpreting the specialised evidence.¹⁸ These experts made up a distinctive group within English psychology, convinced that children differ in their innate abilities, that these abilities are governed by a single general factor, and that mental tests provide an invaluable guide to academic promise. They were all conveniently based in London, with Burt and Ballard employed by the London County Council, then almost a laboratory for mass testing, Spearman based at University College and Myers just down the road at the Institute of Industrial Psychology.

¹¹ *Report of the Departmental Committee on Scholarships, Free Places and Maintenance Allowances*, p. 25, para. 75.

¹² *Journal of Experimental Pedagogy* Vol. 2 (1914), pp. 111, 396–405 (1915), pp. 153–61.

¹³ 'Tests of Intelligence', *The Times Educational Supplement*, 24 July 1919, p. 375. For a list of articles on the topic, see Gillian Sutherland, *Ability, Merit and Measurement* (Oxford, 1984), p. 145, n 29.

¹⁴ F. C. Shruballs, *Report of 81st Meeting of the British Association* (1911), pp. 195–214. Shruballs's article in *School Hygiene* for August 1921. *Annual Report of the Chief Medical Officer of the Board of Education* (1920), (Cmd 1522), p. 100 ff, and *The Health of the School Child* (1922), pp. 11–12.

¹⁵ *Tests of Educable Capacity*, p. 37. *Annual Report of the Bradford Education Committee*, 1920.

¹⁶ *Tests of Educable Capacity*, pp. 38, 153–5.

¹⁷ *Ibid.*, p. 38.

¹⁸ 24/1226: Minutes of the first Ordinary Meeting, Thursday and Friday, 23 and 24 September 1920, pp. 146–149.

The experts consulted by the committee disagreed, often violently, on basic points in psychometric theory, even squabbling about what 'intelligence' meant. (The report commented nervously that their 'replies disclose a remarkable variety of opinions'.¹⁹) Three theories proved particularly popular: that intelligence is the product of a few highly generalised 'faculties' or 'functions'; that it is merely a convenient term for the average of innumerable abilities, all highly specific; and that it is a single central factor common to all intellectual processes.²⁰ The first theory commanded little support. The second found an outstanding advocate in Godfrey Thomson, who confessed that 'I am not myself a believer in the existence of a "faculty" called general ability', insisted that 'the statistical work of those who affirm this theory is of doubtful validity',²¹ and argued 'that ability in man is a very much more complex affair than this.' His scepticism led him to 'urge that the selection of children for different types of education should as far as possible avoid the assumption that the selection is one of the children with high ability from those with low ability; rather it should be looked on as a selection of one type of child for one sort of education and another type for another'.²²

For all Thomson's eloquence, it was the general factor theory which won official approval. The theory had powerful supporters on the sub-committee which steered the investigation. Burt, who drafted the report's lengthy history of testing, presented the discovery of *g* as one of the defining breakthroughs of a new science. Moreover, several witnesses sided firmly with the general factor theory, with Percy Nunn even suggesting that 'unless Spearman's view ... was sound, inferences based upon the results of tests – whether the new psychological tests or the older competitive examinations – must often be sadly precarious'. At the same time, the theory's critics failed to agree among themselves, with William Brown, who had collaborated closely with Thomson, admitting that he was not convinced that Spearman's hierarchy was entirely due to chance and came down in favour of a general factor combined with sub-factors.²³

Cogently argued and clearly written, the resulting report remains one of the most balanced and informative studies of mental testing.²⁴ It brought its readers up to date with the most recondite theories of mental testing,²⁵ including an historical sketch of psychological tests, a discussion of the relative merits of different types of test, an examination of possible applications of tests to mass education,²⁶ and a number of technical appendices, describing experiments with tests in the scholarship examination, recounting the use made of tests abroad, and explaining

¹⁹ *Tests of Educable Capacity*, p. 68.

²⁰ These three arguments dominated but did not exhaust the discussion: J. A. Green, an education professor at Sheffield, argued, in terms which are strikingly similar to those of Piaget, that intelligence is 'revealed by its universe of operation' and 'does not exist *in vacuo*'. See *Tests of Educable Capacity*, p. 229.

²¹ Ed 24/1226, 'Notes of Evidence proposed to be given by Professor Godfrey Thomson at the meeting on 30 January 1921', p. 1.

²² *Ibid.*, p. 1.

²³ *Ibid.*, pp. 225–6.

²⁴ *Ibid.*, p. xii.

²⁵ *Ibid.*, pp. 62–107.

²⁶ *Ibid.*, pp. 108–45.

technical terms such as standardisation, norms and correlation. The report also printed some model tests.

The report was notable for more than just its thoroughness. It was far from being an exercise in evangelism. Moderate in tone, it poured cold water on the idea that psychology is a mature science, pointing out that psychologists could not even agree on what intelligence was, let alone on how to measure it.²⁷ It dealt with more than just intelligence tests, discussing standardised scholastic tests, vocational tests, tests of specialised mental attributes (such as memory, perception, attention, imagery, and association), physical tests, and even tests of temperament and character,²⁸ but still leaving room to argue that there is more to psychology than testing. 'Psychological tests', the authors argued, 'should be regarded as being only the most prominent of several ways in which a knowledge of psychology and statistical methods is being brought to bear on education' and it gave every encouragement to this trend.²⁹ As well as refining scholarship examinations, the report tried to promote child-centred education:

If questions in written examinations for younger children were always set with due regard to the peculiarities of the child mind, ... such examinations would prove more effective means of discovering ability in young children than those now in use, even apart from the application of group tests of 'intelligence'.³⁰

And yet for all its sophistication and circumlocution the report managed to put its authority behind a particular school of psychometricians: a school which argued that intelligence means innate general cognitive ability and can be measured by a standard test and represented by a single number.

From adolescence to infancy

The report on *The Education of the Adolescent* (1926) marked a turning point in educational policy, heralding an era of universal post-primary education and defining the main issues of the inter-war educational debate. As Eustace Percy put it, 'a trend of public opinion gathered around it ... and finally found expression in the Butler Act of 1944'.³¹

The committee began to consider the subject in May 1924, immediately after publishing its report on psychological tests.³² The committee emphasised that its interest in adolescent education resulted not from short-term expediency but from powerful social trends: the sustained expansion of educational provision since 1902, the improvement in primary education, rising parental expectations, and demands for a more highly skilled work-force.³³ Burt was the only psychologist to

²⁷ *Ibid.*, pp. xii, 68–71.

²⁸ *Ibid.*, p. 118.

²⁹ *Ibid.*, p. 136.

³⁰ *Ibid.*, p. 135.

³¹ Eustace Percy, *Some Memories* (1958), p. 101.

³² Board of Education, *Report of the Consultative Committee on the Education of the Adolescent* (1926), p. xvii.

³³ *Education of Adolescent*, p. 94. But cf. Ed 10/147, Paper No. P-2. Copy of letter dated 1 February 1924, from the Secretary to the Board of Education.

submit a memorandum to the committee,³⁴ but two key witnesses, Sir Robert Blair and Percy Nunn, were enthusiastic fellow travellers. In addition, Percy Nunn sat on the drafting sub-committee, earning plaudits for his 'wide knowledge and sound judgement'.³⁵

Burt's memorandum highlighted the importance of individual differences. Scientific psychology, he argued, had established that the differences in intellectual ability between children are vast, and demonstrated that, if they are to have any hope of being efficient, educational organisation and vocational guidance need to be based on an understanding of these differences.³⁶ The range of variations in individual abilities is continuous, with one group merging into another by insensible transitions, so all educational divisions must be based on administrative convenience rather than psychological necessity. But the subnormal and the supernormal differ far more among themselves than do the average, and so require smaller classes, individual attention, and scope to express their own particular abilities. Quoting the authority of intelligence tests, Burt insisted that, if the needs of the scholarship boy are to be catered for, selection should take place at about eleven years of age. He conceded that such children make up less than two per cent of the age group, but pointed out that their needs were of such decisive importance that they justified early selection.

Percy Nunn presented a similar argument.³⁷ Quoting psychological reasons – 'which must always be in the long run the controlling reasons in education' – he said that he had long favoured a 'clean cut' across public education between '(1) primary education, the education of childhood (2) post-primary education, the education of adolescence'. Primary education should be organised as a continuous process, punctuated only by a minor break when infancy passed into childhood; post-primary education should be divided between three different types of schools, the grammar school or high school, the technical school, and the rest.

The committee drew up a blueprint for a reformed and modernised educational system, with secondary education open to all normal children, the school-leaving age raised to fifteen within five years, the educational system divided by age rather than class, and high-flyers provided with the most stimulating education available.³⁸ The report argued that classification could hardly be avoided – 'so long as the demand for higher education exceeds the supply some method of selection is inevitable' – but insisted that this should be 'selection by differentiation' rather than 'selection by elimination' and pleaded that decisions taken in the 11-plus should be open to easy revision.³⁹ Psychologists influenced the detail rather than

³⁴ Ed 10/147, 'Note by Dr. Cyril Burt on psychological considerations bearing on the age of 11 as the age of entering upon another type of education.' For a list of witnesses, see *Education of Adolescent*, pp. 248–61.

³⁵ *Education of Adolescent*, p. xvii.

³⁶ *Ibid.*, p. 1.

³⁷ Ed 10/147, Paper No. P 14 (xiii), Summaries of evidence. Summary of evidence given by Percy Nunn on 26 February 1925.

³⁸ For a summary of the committee's conclusions and recommendations, see *Education of Adolescent*, pp. 172–84.

³⁹ *Ibid.*, p. 132.

the direction of the report, reinforcing the assumption that children of different abilities needed different types of schools, and persuading the committee that intelligence tests had their uses, particularly in resolving disputes about borderline candidates or exposing cases of cramming.⁴⁰

In preparing its report on *The Primary School* (1931), the committee heard numerous witnesses pronounce on psychological questions.⁴¹ Burt, Ballard, Nunn, and Thomson again contributed authoritative advice – by now their opinions had come to seem indispensable – but they were joined by numerous less-qualified spokesmen. This superabundance of conflicting psychological opinions had the paradoxical effect of reinforcing the opinion of the professionals, underlining the idea that education should be based on psychological theory and creating a demand for experts to adjudicate between rival opinions. Burt, Ballard, and Nunn were sufficiently entrenched on the committee to set themselves up as judges. Burt and Nunn both sat on the drafting sub-committee;⁴² Burt also contributed a decisive memorandum on the psychological development of the primary school child.⁴³

The shibboleths of progressive education – that child psychology differs sharply from adult psychology, that education should be determined by the needs of children rather than the convenience of adults, that children should be encouraged to express themselves and explore their environments – had clearly become commonplaces in educational circles. The committee's witnesses seldom tired of reiterating progressive orthodoxy. A. F. Watts, a school inspector, argued that

Successful Junior School work must largely depend, of course, upon clear conceptions being formed of the nature of the mental development of children between the ages of 7 and 11; indeed, we can hardly superintend wisely the mental growth of children of any age unless we understand both what they are developing away from and what they are developing towards.⁴⁴

Miss E. J. Cook, head teacher of St Martin's Girls' School, Dover, insisted that the teacher should not treat the children as 'little men' and that the school should not be a 'picture of adult life'.⁴⁵ Numerous witnesses warned against the habit of treating each stage of education as nothing more than a preparation for the next stage.⁴⁶ 'Infant schools had made progress', Percy Nunn insisted, 'just in so far as

⁴⁰ *Ibid.*, pp. 137, 139.

⁴¹ Board of Education. *Report of the Consultative Committee on the Primary School* (1931), pp. 207–21, for a full list of witnesses.

⁴² On p. xii the report went out of its way to thank them for placing at the Committee's disposal 'their wide knowledge and sound judgement' and for rendering 'invaluable help in the preparation of the Report'.
⁴³ *Primary School*, pp. 254–79.

⁴⁴ Ed 10/148, Memorandum by Mr. A. F. Watts, HMI on Language and Thought in the Junior School. Paper No. S 68, p. 1.

⁴⁵ Ed 10/148: Memorandum submitted by Miss E. J. Cook. paper No. S 75, p. 5.

⁴⁶ Ed 10/148: Memorandum submitted by the Education Section of the British Psychological Society. Paper No. S 39. 'Psychological considerations with regard to the curriculum for children from seven to eleven years of age (with particular reference to rural schools)', p. 2.

they had been allowed to adapt their work to the actual needs of infancy, unhampered by the supposed requirements of later years; and the same success of the junior school would depend upon its enjoying similar freedom.⁴⁷

This did not necessarily add up to a plea for soft teaching. Psychological arguments were often used to support a traditional emphasis on rote learning. Percy Nunn's assertion that children liked to learn by rote won widespread support;⁴⁸ Thomson emphasised the importance of teaching basic subjects and training character;⁴⁹ and the National Union of Women Teachers argued that young children took positive pleasure in rote learning and matter-of-fact teaching.⁵⁰

Intelligence tests continued to provoke more interest than any other aspect of psychological theory. Progressive opinion tended to support them, convinced that they provided a fair solution to the otherwise messy problem of selection. C. A. Richardson, another school inspector, argued, on the basis of both prolonged personal experience and careful reading, that 'for general all-round reliability in selecting the right children for free places, the well-devised group intelligence test stands in a class by itself'. Of course, it makes some mistakes: 'but it does not make very many, and every kind of mistake that it makes is made far more frequently by examinations of the traditional type'.⁵¹ Because they measured ability rather than attainment, and because they were impervious to cramming, intelligence tests would abolish the insidious influence of the free-place examination⁵² and allow primary schools to perform their proper function: preparing young children for the secondary schools appropriate to their abilities.⁵³

The committee's star witness was undoubtedly Cyril Burt. His lengthy memorandum on the mental characteristics of the primary school child was reproduced in full as an Appendix to the Report.⁵⁴ He hammered his arguments home in an interview with the Consultative Committee on 23 May 1929; and he sat on the drafting sub-committee from September 1929 to November 1930.⁵⁵ The report's third chapter on the mental development of primary school children between the ages of seven and eleven, is little more than a summary of Burt's opinions.⁵⁶

The report began by dismissing two popular, and supposedly scientific, theories:

⁴⁷ Ed 10/148: Summary of Evidence given by Nunn, 23 November 1928. Paper No. S 12(6), p. 1.

⁴⁸ *Ibid.*, p. 4. ⁴⁹ Ed 10/148. Memorandum by Thomson, Paper No. S 30, p. 1.

⁵⁰ Ed 10/148. Paper No. S 12 (11), pp. 3-4.

⁵¹ Ed 10/148. Memorandum on the free place examinations and junior school by C. A. Richardson, HMI Paper No. S 64. p. 1. ⁵² *Ibid.*, p. 3.

⁵³ *Ibid.*, pp. 4-5. For similar arguments see: summary of evidence given by Miss Grace Owen, Hon. Sec. of the Nursery School Association, on 23 November 1928, p. 1; summary of evidence given on behalf of the association of education committees and the association of municipal corporations, 27 June 1929, p. 11. Cf. Paper No. S 97, p. 6.

⁵⁴ Ed 10/148. Memorandum on the mental characteristics of children from 7 to 11 plus by Professor Cyril Burt, Paper No. S 110. 46 pp. of typescript; *Primary School*, pp. 254-79.

⁵⁵ Burt Memorandum, p. xii.

⁵⁶ *Primary School*, pp. 33-57. Cf. Appendix 3 pp. 254-279; Memorandum by Burt, paper No. S 110; summary of evidence given by Burt on 23 May 1929, paper No. S 12(15).

the 'stratification' theory (individual faculties emerge at predictable points in time) and the 'recapitulation' theory (the development of the individual reproduces, in a rapid and abbreviated form, the evolution of the race).⁵⁷ The quality which is of supreme importance to the child is intelligence; and throughout these years intelligence increases smoothly and continuously, without any sharp breaks or sudden changes. Already broad, individual differences in ability widen steadily from year to year, putting an ever higher premium on streaming:

During the infant period pupils may be grouped together without much regard to varying degrees of mental endowment, but by the age of ten children in a single age group should if possible, be organised for teaching purposes in at least three distinct sections, and at the age of eleven the range has become so wide that a still more radical classification is required.⁵⁸

Burt warned that children lose interest rapidly. 'Long sums, lengthy computations and dictations, and prolonged memory drill on tables and spelling, should not be set as tasks.'⁵⁹ The child's mental world is predominantly visual. 'If the teacher could penetrate into the consciousness of such a child, he would find the child's thoughts unrolling themselves before him rather like a cinematographic film.'⁶⁰ They enjoy fantasy and imagination; and this enjoyment, judiciously disciplined, provides an inexhaustible reservoir of educational motivation.⁶¹ Throughout the primary school years their reasoning power strengthens and their command over their environment deepens. They are no longer content with subjective whim and intellectual chaos, but instead try to classify their experiences into an orderly system.⁶²

The report emphasised that intellectual development can only be understood in the context of emotional growth.⁶³ In the past, psychological orthodoxy and educational tradition had over-emphasised the purely intellectual; yet the intellect can only operate efficiently if the emotions are properly tuned.⁶⁴ Repressing curiosity is the most foolish of all forms of discipline, Burt argued: instead, teachers should try to stimulate natural curiosity, turning it into a motor of efficient teaching. Much more space in the timetable should be given to the children's favourite subjects, and unfavoured subjects should usually be taught by sleight of hand, dressed up as something of immediate interest to the child.

The report argued that the sexes differ little in their educable capacity.⁶⁵ The key differences are emotional rather than intellectual, and widen considerably during the primary school years. 'The maternal, affectionate and submissive instincts are stronger in girls; the hunting, fighting, and assertive instincts are more marked in boys.'⁶⁶ No doubt convention reinforces this distinction, but its fundamental cause is biological rather than sociological: boys and girls inherit common instincts to different degrees.

⁵⁷ *Primary School*, pp. 33–4.

⁵⁸ *Ibid.*, p. 35.

⁵⁹ *Ibid.*, p. 38.

⁶⁰ *Ibid.*, p. 264.

⁶¹ *Ibid.*, p. 41.

⁶² *Ibid.*, p. 42.

⁶³ *Ibid.*, pp. 47–52, 268–79.

⁶⁴ *Ibid.*, p. 48.

⁶⁵ *Ibid.*, pp. 52–4.

⁶⁶ *Ibid.*, p. 53.

The report also provided a lucid analysis of the nature–nurture debate.⁶⁷ Noting that there is a high correlation between poverty and backwardness, it warned against interpreting this in dogmatically environmentalist terms: dull children were often the offspring of dull parents ‘who have drifted into that environment, and have often contributed to make it what it is’.⁶⁸ On the other hand, it distanced itself from hard-line eugenic orthodoxy, suggesting that biologists had once paid too little attention to circumstances, and providing a sympathetic survey of the debilitating impact of poverty on the child. Unhealthy and insanitary conditions in the home weaken his physique and undermine his mental energy and alertness; heavy domestic duties and lack of sleep encourage listlessness and fatigue. From the very first, cultural backwardness in the home weakens the child’s mental equipment. ‘His vocabulary is limited; his general knowledge is narrow; he has little opportunity for reading and his power of expressing himself in good English is inadequate.’⁶⁹ He picks up only a few hundred words – ‘most of them inaccurate, uncouth, and mispronounced, and a good many unfit for reproduction in the classroom’. His experience is limited: ‘closed in and circumscribed by walls of brick and pall of smoke’.⁷⁰ The emotional atmosphere of the home tends to undermine the child’s school work, occasionally producing severe emotional disturbances, more often encouraging slack and irregular habits.⁷¹

The committee argued that there should be no sharp breaks in education. Mental growth on both the intellectual and emotional side is gradual and continuous; abrupt changes in teaching style, disciplinary methods and classroom environment could well unhinge a sensitive child.⁷² The ‘play-way’ in vogue in infant departments should slowly shade off into the more formal and academic style of the primary school.

The committee insisted that children should be classified according to their natural abilities⁷³ and promoted on the basis of their mental rather than chronological ages.⁷⁴ Noting that all the teachers it had interviewed had remarked on the wide range of abilities among primary school children, it endorsed the opinion of its psychologists that large primary schools should be divided into three streams, with an ‘A’ stream for bright children, a ‘C’ stream for the retarded, and a large ‘B’ stream for the rest. Such classification, it insisted, should be as fluid as possible and should be based on capacity rather than attainment.⁷⁵

Infant and Nursery Schools (1933) completed the cycle of official investigations into children in different age-groups. Once again psychologists exercised a marked influence, with Percy Nunn suggesting the names of witnesses and evaluating evidence,⁷⁶ Cyril Burt and Susan Isaacs presenting oral evidence and producing

⁶⁷ *Ibid.*, pp. 54–8.

⁶⁸ *Ibid.*, p. 55.

⁶⁹ *Ibid.*, p. 56.

⁷⁰ *Ibid.*, p. 56.

⁷¹ *Ibid.*, p. 57.

⁷² *Ibid.*, pp. 63–5.

⁷³ *Ibid.*, pp. 73–8, 83–90, 203–6.

⁷⁴ *Ibid.*, p. 70.

⁷⁵ *Ibid.*, pp. 77–8.

⁷⁶ London Institute of Education Archives, Board of Education Consultative Committee 1925–32, Young to Nunn, 17 April 1931.

memoranda, and Robert Rusk providing invaluable help.⁷⁷ The committee placed heavy emphasis on their opinions, not least because they coincided with its own prejudices on several key issues, notably, the need for specialisation among infant and nursery school teachers, the virtues of free activity and voluntary discovery, and, more grandly, the state's obligations towards young children.⁷⁸

The psychological witnesses can be divided into two groups: an inner circle, consisting of Burt and Isaacs, who had a hefty influence on the content of the report; and an outer circle, including experts, teachers and progressive educationalists, who had no direct influence, but who provided a backdrop of opinion and argument. Members of the outer circle managed to drive home some important points, emphasising the overwhelming importance of the child's early years, stressing the need for education to follow the natural path of child development and calling for the psychological profession to be expanded and for psychological wisdom to be given much more publicity.⁷⁹

Again, Burt was easily the most influential witness. He suggested that 'the present moment' was 'supremely suitable for a review of the education of children between the ages of two and seven': psychological opinion on the mental growth of the young had been revolutionised over the last twenty years; the importance of the first five years had been increasingly recognised; and methods of teaching in nursery and infant schools had changed out of recognition. The theory of infant education needed to be revised and reconstructed in the light of contemporary scientific psychology. He wished that people would be more sensitive to the peculiarities of young children.⁸⁰ 'It is easy to see that a baby is a baby; but it is difficult to recognise that an infant is not a little man.' Child-rearing should be based on scientific theory rather than custom and whim: 'It is too often forgotten that managing a young child is as difficult and technical an affair as managing a locomotive or an aeroplane, and that superintending the growth of human beings is as scientific a business as cultivating plants or training a race horse.'⁸¹

He came down firmly on the side of progressive education, championing freedom against discipline, concern for the child against reverence for academic standards. In teaching a child, he suggested, 'the object is not to convert him as rapidly as possible into an obedient scholar and well conducted citizen, but to let him behave, within reasonable limits, in the way that is most natural to the level he has reached, and to provide him at every stage with the formative experience that nature has assumed he would get'.⁸² The ideal infants' school is not a classroom but a playground: 'Not a limited space enclosed by four walls and a ceiling, but an open

⁷⁷ Board of Education. *Report of the Consultative Committee in Infant and Nursery Schools* (1933), pp. xi–xii.

⁷⁸ *Ibid.*, pp. xvi–xvii.

⁷⁹ Ed 10/149. Memorandum of evidence submitted by the National Union of Women Teachers, 16 June 1931.

⁸⁰ Ed 10/149. Memorandum of evidence proposed to be given by Burt, 23 July 1931, Paper No. T 12 (21), p. 1.

⁸¹ *Ibid.*, p. 3.

⁸² *Ibid.*, pp. 14–15.

area resembling as nearly as possible a patch of wild country, where the interests natural to this biological stage of growth can be stimulated and pursued.⁸³ In the past, he argued, too much emphasis had been placed on teaching reading, writing and arithmetic. The ideal method of teaching was play: 'the narrower scholastic accomplishments should grow out of games ... During the infant stage the play way is the best way.' Children learn better by doing than by sitting and listening.⁸⁴ Such progressive education would not turn out undisciplined children; on the contrary, it would furnish the young with the self-discipline which comes from self-understanding:

The fact that [the child] is internally free makes him all the more willing to submit to external authority when necessary without resistance or resentment. It is the child that fretted under the arbitrary restraints imposed by a narrow home or school who tends to rebel against authority later on when he feels himself stronger and more independent.⁸⁵

He wanted to extend the state's role in rearing young children. Middle-class parents might be left to fend for themselves; working-class parents, hampered by poverty, overwork and ignorance, deserved the help of a benevolent state:

It is often said that the right place for the child under five is not with a teacher, but with its mother, and not in a school but in its own home. For those whose homes are genuinely homes, and whose mothers are free and competent to undertake maternal duties, this is no doubt an incontestable principle. In the outset, therefore, at any rate, the nursery school will mainly be recruited from households where social and economic handicaps are most severe.⁸⁶

More than any other institution, the nursery school would be able to bring the advantages of middle-class child-rearing to the working-class child, strengthening the family tie and popularising enlightened notions of child-rearing and domestic commitment among the working-class. In an ideal world, he argued, the nursery school would cease to be modelled on family life and, instead, family life would be modelled on the nursery school.⁸⁷ Creating a meritocracy, it seems, was not just a matter of providing accurate IQ tests; the government also had to correct familial deprivation in order to ensure that all children had an equal opportunity to express their innate abilities.

The problem of mentally subnormal children

In between analysing the adolescent and pronouncing on the primary school the committee turned its attention to the mentally subnormal. In the summer of 1924 George Newman decided to organise an informal committee to discuss the

⁸³ *Ibid.*, p. 20.

⁸⁴ *Ibid.*, pp. 23–5.

⁸⁵ *Ibid.*, p. 32.

⁸⁶ *Ibid.*, p. 3.

⁸⁷ *Ibid.*, pp. 17–19.

incidence of mental deficiency among children, a subject about which the Board found itself embarrassingly ignorant.⁸⁸ In 1925 the brief was extended to cover adults as well, and the committee effectively became a joint committee of the Board of Education and Board of Control under the chairmanship of A. H. Wood.⁸⁹ It took almost five years to reach its conclusions, reporting in 1929 and provoking a flurry of public interest in mental deficiency.

The Wood Committee consisted of a mixture of officials, recruited from both the Board of Education and Board of Control, and outside experts.⁹⁰ The officials, many of them drawn from the medical branch of the Board of Education and from the senior staff of mental hospitals,⁹¹ inevitably had the upper hand, giving the committee a pro-medical bias and a decidedly old-fashioned flavour. But psychological theory did find two powerful champions: Cyril Burt and E. O. Lewis, a Board of Control official who was entrusted with the massive task of investigating the incidence of mental deficiency in several representative areas. Lewis was superbly qualified for his job, having taught in elementary and secondary schools, collected three degrees, including a London DSc in psychology, lectured in psychology in St Andrew's and Cambridge, qualified as a doctor, held a research post on mental deficiency in Cambridge, and, finally, worked as an Assistant Medical officer to the London County Council. Trained to deal with mental deficiency from every possible professional standpoint – teacher and psychologist, researcher and administrator, inspector and doctor – he did an enormous amount to win respect for his discipline.⁹² Psychology had clearly found an appropriate subject, an able spokesman, and a willing audience.

The committee adopted an overtly social definition of defect, describing it as a condition which rendered the 'individual incapable of adjusting himself to his social environment in a reasonably efficient and harmonious manner' and which required 'external care, supervision or control'.⁹³ Yet it was also deeply influenced by contemporary psychological teaching. It argued that 'inborn inferiority in general intelligence' was the commonest cause of all, pointing out that 'in such a case, not the child, nor the parent, nor the teacher, but nature is to blame'.⁹⁴ (Unlike the Royal Commission on the Care and Control of the Feeble-Minded, the

⁸⁸ *Report of the Mental Deficiency Committee* (1929), henceforward Wood Report (3 vols), Vol. 1, ch. 1, para. 4. Cf. Sutherland, *Ability, Merit and Measurement*, pp. 62–7 on the work of the Committee.

⁸⁹ Wood Report, Vol. 1, ch. 1, para. 6.

⁹⁰ *Ibid.*, Vol. 1, ch. 1, para. 4.

⁹¹ They included Wood, Crowley, Cecil Eaton and Bosworth-Smith from 'M' Branch of the Board of Education; Miss Hilda Redfern, HMI for schools for mentally defective children and, after 1927, an inspector for the Board of Control; Mrs Pinsent from the Board of Control; Miss Evelyn Fox and A. F. Tredgold from the Central Association for Mental Welfare; Dr F. C. Shrubbsall, senior Medical Officer of Health and Dr F. Douglas Turner, the medical superintendent of the Royal Eastern Counties Institution.

⁹² Wood Report, Vol. 1, ch. 9, para. 169. For a useful outline of Lewis's opinions on mental deficiency see E. O. Lewis, 'Mental Deficiency', *The Realist*, Vol. 2, No. 1 (October 1929), pp. 24–35.

⁹³ Wood Report, Vol. 1, ch. 1, para. 18.

⁹⁴ *Ibid.*, Vol. 1, ch. 1, para. 166. Cf. ch. 1, paras 16 and 19 and ch. 6, para 104.

committee also emphasised a number of non-congenital factors, such as brain damage brought about by illness and accident, the temporary effects of mental illness, and the influence of a deprived environment.⁹⁵) It argued that the defective merged into the normal by insensible gradations; that deficiency was, to a great extent, a family problem;⁹⁶ and that it was from the ranks of the dull and backward, rather than from the mentally defective, 'that the majority of our criminals, paupers and ne'er-do-wells are drawn'.⁹⁷ Despite its concessions to environmental influences, it succeeded in endorsing several key propositions in psychometric theory.

Wood reported on the incidence of mental deficiency in six areas, each containing a typical population of some 100,000 people: an extra-metropolitan urban area, a north country cotton town, a coal-mining district in the Midlands, an agricultural district in the eastern counties, a rural area in the south-west which contained a large town, and a thinly populated rural area comprising two counties in Wales.⁹⁸ The result of the report was to add hugely to official understanding of the problem of mental deficiency. Earlier studies had been hopelessly misleading. The *Report of the Royal Commission on the Feeble-minded* had included a worryingly amateur investigation of the subject, conducted by poorly-trained investigators, who studied rather small populations and spent too little time over their work.⁹⁹ In the aftermath of the Great War, Local Education Authorities had reported to the Board of Education on the incidence of mental deficiency, but the results were so inconsistent as to be 'fantastic', varying from 0.73 per thousand in one area to 16.4 in another.¹⁰⁰ Lewis provided one of the first prerequisites for sensible policy: sound figures. His team of investigators spent at least three months in each area,¹⁰¹ applied consistent standards of 'deficiency', and spent almost three and a half years on the study, two and a half in collecting evidence and a year in analysing it and writing it up. This made it all the more startling that Lewis and his colleagues found that the number of mental defectives had increased significantly since 1908, from 4.6 to 10.49 defectives per 1,000.

The report echoed the somewhat ambivalent attitude to educational selection popular in psychological circles. On the one hand, it insisted that the innate differences between children are so great that some form of classification is essential. Different children inherit different mental capacities; and the differences between them increase progressively from year to year, so that the child who was backward by one year at five is likely to be backward by two years at ten and by three years at fifteen. It was no longer reasonable to expect all children to move

⁹⁵ *Ibid.*, Vol. 1, ch. 2.

⁹⁶ *Ibid.*, Vol. 1, ch. 6, para. 105.

⁹⁷ *Ibid.*, Vol. 1, ch. 8, para. 164.

⁹⁸ *Ibid.*, Vol. 3, *passim*. For an analysis and explanation of the geography of defect, see Mathew Thomson, *The Problem of Mental Deficiency*, pp. 179–219.

⁹⁹ *Wood Report*, Vol. 3, ch. 5, para. 85.

¹⁰⁰ *Ibid.*, Vol. 1, ch. 1, para. 2.

¹⁰¹ *Ibid.*, Vol. 1, ch. 5, para. 78.

through the school at the same average speed; for the sake of both teachers and pupils, it was essential to organise classes which were as homogeneous as possible.¹⁰² On the other hand, the report argued that these differences were a matter of degree rather than kind. The defective formed a continuous series ranging from the deepest to the mildest form of defect, and variations occurred within as well as between different groups in the child population. All divisions were largely arbitrary – matters of administrative convenience rather than psychological necessity.¹⁰³ On the basis of this reasoning, the report suggested the recognition of a new group in the child population: the retarded, consisting of both the ‘educable mentally defective’ and the ‘dull or backward’.¹⁰⁴ It hoped that as many defective children as possible would be educated in the community rather than herded together in schools for the mentally deficient. ‘It would be wrong to deprive these children of the immense benefits of association with their fellows’, it argued, ‘and to stigmatise as a class apart children for many of whom the only hope for their future lies in their being trained from childhood and adolescence to regard themselves as members of the general community of normal people’.¹⁰⁵

The Wood Committee reinforced the position of mental tests, publicising their virtues and incorporating them into official policy towards the subnormal. It made use of tests in two important ways: to provide local education and control authorities with universal criteria for identifying the subnormal, and to calculate the number of mentally-subnormal children in the population. The report insisted that, when examining children suspected of mental deficiency, Certifying Officers should include an IQ test ‘to measure the child’s innate capacity’.¹⁰⁶ It suggested that only children with IQs below 50 should be referred to the local control authority as ‘ineducable’. Children with IQs between 50 and 70 should be grouped together with children with IQs between 70 and 80 to form a ‘retarded’ class within the ordinary school system. The report envisaged a universal 11-plus examination as a key device for discovering the defective:

At the age of 11 plus when the normal period of primary education ends, there will be a general survey of all children whether normal or retarded, with a view to determining the type of post-primary education to which each child should proceed. The survey, with the necessary modifications, including appropriate medical and psychological examination, should be used for sorting out the various groups of retarded children and determining what further children, being mentally defective, should now be transferred to the Local M. D. Authority.¹⁰⁷

Lewis’ report on mental deficiency provided a model of how to apply psychological tests. He made a point of testing all children suspected of being ‘deficient’ with both group and individual tests. He felt that these tests provided

¹⁰² *Ibid.*, Vol. 1, ch. 8, para. 164; ch. 2, para. 14.

¹⁰³ *Ibid.*, Vol. 1, ch. 1, para. 20, ch. 4, para. 63; Vol. 3, pp. 39–40.

¹⁰⁴ *Ibid.*, Vol. 1, ch. 6, para. 106.

¹⁰⁵ *Ibid.*, Vol. 1, ch. 7, para. 111.

¹⁰⁶ *Ibid.*, Vol. 1, ch. 4, para. 54.

¹⁰⁷ *Ibid.*, Vol. 1, pp. 158–9.

a 'fairly efficient' means of measuring 'innate general intelligence'; that they were 'the best instrument for rapid ascertainment in all but exceptional cases'; and that they helped to eliminate the bias of teachers and care workers.¹⁰⁸ But he added that the tests were not a fail-safe mechanical device; they should form the main, but never the sole, criterion of diagnosis. Group tests had a marked verbal bias, and needed to be counter-balanced by performance tests. The tests had to be applied by an expert, knowledgeable in psychology, medicine, and education, and flexible in his approach to children. In making his diagnosis he should judge the child's mind as a whole, temperamental as well as intellectual. Only a skilled psychologist, or a medical officer with psychological training, was qualified to examine a subnormal child.¹⁰⁹

The committee hoped that the education of the backward would be based on their idiosyncratic abilities and interests. Instead of being herded together and forgotten, they were to be given more attention than almost any other group of children. They needed small classes, so that teachers could give them individual attention, and large classrooms, so that they had plenty of room for making things and gallivanting about.¹¹⁰ The committee lamented that, in the past, many teachers of the subnormal had possessed neither the proper training nor the requisite zest for their work: 'many a teacher, being human, instead of realising that he has been honoured with the most interesting psychological cases in the whole school, groans because he will have nothing to show for his efforts and longs to be relieved or promoted to the scholarship class instead.'¹¹¹ It hoped that, from now on, only properly qualified and carefully selected teachers would be allowed to teach the retarded: teachers who regarded their work not as a 'thankless burden' but as 'a unique opportunity for studying types of mind, at once the most puzzling and the most fascinating that the elementary school can show', and who knew how to combine 'human sympathy and patience' with 'a scientific attitude towards' the backward.¹¹² Clearly, psychology was supposed to influence not just the selection of the retarded, but also the texture of their teaching.

According to the committee, even the mentally deficient had a part to play in promoting national efficiency. Economic progress might easily transform the dull into an intolerable burden, as organisations became more complex, techniques more scientific, and personnel selection more discriminating. Already a worrying percentage of the 'social problem group' – that is, habitual criminals and the perpetually unemployed – was recruited from the ranks of the retarded.¹¹³ On the other hand, a careful programme of 'socialisation of the defective', entailing the adaptation of the backward to their environment and their environment to the backward, might transform today's problem youths into tomorrow's productive citizens. The committee hoped that the special schools for the severely deficient

¹⁰⁸ *Ibid.*, Vol. 3, p. 38.

¹⁰⁹ *Ibid.*, Vol. 3, p. 27.

¹¹⁰ *Ibid.*, Vol. 1, ch. 8, para. 167.

¹¹¹ *Ibid.*, Vol. 1, ch. 8, para. 165.

¹¹² *Ibid.*, Vol. 1, ch. 8, para. 167.

¹¹³ *Ibid.*, Vol. 1, ch. 6, para. 105.

would fit their charges for some place, however humble, in the outside world. In particular, a manual training would help to prepare them for a slot in the world of work. Gardening, boot repairing, tailoring, carpentry, and metal work for boys, domestic work, housewifery, laundry work, sewing and stitching for girls might provide both a general education and a training in trade – and extra income for the school from the sale of the children's products.¹¹⁴

The Spens Report on secondary education

The committee returned to the subject of secondary education in November 1933. When the investigation began, Sir Henry Hadow was still chairman, but in January 1934 ill-health forced him to retire and he was replaced by Will Spens, who was then Master of Corpus Christi, Cambridge, and notorious for appointing fellows who were sincere churchmen, intelligent conservatives, good conversationalists, and regular diners.¹¹⁵ (R. A. Butler was one of his favourite protégés.) His arrival naturally aroused suspicions in radical circles – Lady Simon, who had been appointed to the committee under the second Labour government, wondered whether 'his appointment was not meant to curb the progressive spirit, which has been the mark of the Consultative Committee's reports up to the present' – but in fact he seems to have run the committee on very much the same lines as his predecessor.¹¹⁶

The report marked the climax of the psychologists' influence on the committee. Burt masterminded the section on the mental development of adolescents and threw in a learned appendix on faculty psychology for good measure;¹¹⁷ Percy Nunn, a co-opted member of the committee, supplied a memorandum on the curriculum;¹¹⁸ C. W. Valentine, P. B. Ballard, and the National Institute of Industrial Psychology all commented on the scholarship examination. The psychologists wanted to defend the *principle* of educational selection, which, they argued, was amply justified by the wide variation in innate intellectual capacities in the population,¹¹⁹ but to reform its *practice*. They complained that the old-fashioned scholarship examination was inaccurate and unscientific,¹²⁰ testing attainment rather than ability and making life-changing decisions on the basis of much too little evidence.¹²¹ Using examples which were strikingly similar to the ones chosen by left-wing critics of the 11-plus in the late 1950s and 1960s, they

¹¹⁴ *Ibid.*, Vol. 1, ch. 4, para. 71.

¹¹⁵ T. E. B. Howarth, *Cambridge Between Two Wars* (1978), p. 164.

¹¹⁶ Quoted in Joan Simon, 'The Shaping of the Spens Report on Secondary Education 1933–38: An Inside View' *Brit. J. Educ. Studies* Vol. 25 (1977), p. 69.

¹¹⁷ Board of Education. *Report of the Consultative Committee on Secondary Education with Special Reference to Grammar Schools and Technical High Schools* (1938), pp. 107–39 and 429–38.

¹¹⁸ *Ibid.*, p. xv.

¹¹⁹ Ed 10/151, Notes of evidence to be given by Burt, 25 January 1935, Paper No. U 5 (38), p. 9.

¹²⁰ *Ibid.*, p. 10.

¹²¹ ED 10/152, Notes on the free place examination by Dr. P. B. Ballard, Paper No. U 29.

pointed out that there were 'striking examples of difference between the order of merit in the entrance examination and the order of merit in school four or five years later':¹²² many pupils admitted to grammar schools turned out to be failures and many grammar school rejects later proved to be outstanding scholars.¹²³ The solution to this problem, they argued, lay not in scrapping selection but in making it scientific, using intelligence tests to increase accuracy¹²⁴ and eliminate favouritism.¹²⁵

The psychologists also suggested far-reaching reforms in the secondary-school syllabus. Burt presented his case with carefully contrived modesty. 'To criticise an educational curriculum is hardly the task of a psychologist. Psychology is concerned, not with the aims of education, but only with methods and possibilities.' That said, he rubbished the established syllabus and outlined a better one. He argued that any curriculum which set out to train distinct intellectual faculties or which introduced sharp breaks in teaching clashed with the facts of child psychology. Dismissing one of the favourite arguments of classics masters, he pointed out that there are no distinct intellectual faculties, lodged in separate areas of the brain and ripe for development by a rigorous classical education. (Valentine also insisted that there is no evidence that classics develops the mental muscles.¹²⁶) Burt insisted that English education was too literary and abstract, stressed the importance of practical relevance and manual skills, and argued that science, not classics, should form the basis of secondary school teaching.¹²⁷ Psychologically unsound and practically irrelevant, the traditional grammar school syllabus needed to be replaced by one which trained the young in modern subjects before guiding them, swiftly and efficiently, into productive occupations.

Burt also took the opportunity to reiterate his familiar teachings on mental and emotional development. He summarised his position on the overwhelming importance of general intelligence in a passage which the report chose to emphasise:

Intellectual development during childhood appears to progress as if it were governed by a single central factor, usually known as 'general intelligence', which may be broadly described as innate all-round cognitive ability. It appears to enter into everything which the child attempts to think, or say, or do, and seems on the whole to be the most important factor in determining his work in the classroom.¹²⁸

Since the ratio of each child's mental age to his chronological age remains approximately the same while his chronological age increases, the mental

¹²² Ed 10/151. Memorandum by C. W. Valentine on the entrance examination for secondary schools, and the influence of examinations upon work with special reference to the School Certificate examination, Paper No. U 5 (37), p. 2.

¹²⁴ Ed 10/151, Valentine, p. 5; Burt, p. 10.

¹²³ *Ibid.*, p. 4.

¹²⁵ Ed 10/152, Ballard, p. 70.

¹²⁶ Ed 10/151, Oral evidence given by Valentine, p. 4.

¹²⁷ Ed 10/151. Notes of evidence given by Cyril Burt, and Summary of the Principal Points which emerged from the oral evidence given by Cyril Burt, Paper No. U 6 (38).

¹²⁸ Spens Report, p. 123.

differences between children grow larger each year, reaching their maximum during adolescence. By this time, individual variations in ability are so wide that nothing less than different types of schools for children of different levels of ability will suffice to cater for them.

Burt's conviction that psychological evidence supported educational selection – or at least 'classification' – did not go unchallenged on the committee. In February 1938 Lady Simon raised with Spens the 'difficult question of general intelligence', proposing that, since this was a controversial matter among psychologists, other opinions should be sought and suggesting the name of Godfrey Thomson. Spens replied that the committee's secretary, R. F. Young, had submitted the section on *g* to Thomson and 'some other psychologists', who had approved it. During a subsequent drafting meeting, largely thanks to Young's enthusiasm, Burt's original memorandum was elaborated and reinforced.¹²⁹ Lady Simon had succeeded only in entrenching a position she anathematised.

Since the Spens Report was the last one the committee was to issue, it is worth pausing for a while to look back over its work. Three things are particularly striking: the inordinate influence which a handful of psychologists exercised over its recommendations; the progressive, child-centred character of psychological orthodoxy; and the part which the committee played in promoting the psychological profession and popularising its teachings.

The committee provides a clear example of the influence which experts can exert on policy thinking. Psychologists only had a peripheral position on the committee. In theory, the witnesses formally represented interest groups within the educational world, and were drawn from the universities, from teachers' organisations, and from the rank-and-file of the teaching profession. The psychological witnesses were few compared with the legion of lay witnesses. And yet psychologists did more than anyone else to determine the tone of the reports. Their memoranda were clear, articulate, and persuasive; they spoke eloquently as witnesses and worked efficiently as drafters; and they translated scientific arguments into easily comprehensible language. On top of all that, they claimed to be masters of a technique which could solve otherwise intractable educational problems and elevate teaching from a lowly occupation into an admired profession: intelligence testing.

These reports marked a significant stage in the subject's development. Hitherto, psychologists had operated on the margins of the educational system, in special schools for the mentally deficient, in clinics for the delinquent, and in private schools for the bohemian intelligentsia. The committee gave them a chance to influence the education of the mass of state-educated children. The reports on the adolescent, the primary school child, and the infant and nursery school child applied insights which had been gathered from dealing with marginal populations to general problems of child development. Intelligence tests had originally been

¹²⁹ J. Simon, 'Shaping of Spens Report', *Brit. J. Educ. Studies*, Vol. 25 (1977), pp. 174–5.

intended to help diagnose individual mental defectives: the report on psychological tests converted many educationalists to the idea that the mass of children might be classified according to their IQs.

Sir Cyril Norwood and the revolt against educational psychology

The Norwood Report on *Curriculum and Examinations in Secondary Schools* (1943) suddenly interrupted the psychologists' influence over educational policy making. Before the report, their position had been secure; after it, they were forced to compete with a rival tradition. Written without the help of either sociologists or psychologists, the report was a self-conscious exercise in educational traditionalism, and a very eccentric one at that. Its chief architect, Sir Cyril Norwood, put his faith in the English 'genius for action and indifference to theory'.¹³⁰ Having made his name as headmaster of Marlborough (1916–1925) and Harrow (1926–1934), he liked to see himself in the great tradition of Victorian public school headmasters.¹³¹ (His pupils, however, did not share this conceit, styling him 'Boots', an allusion to his questionable social origins.¹³²) His outlook was shaped by his classical education – he had taken a first in *literae humaniores* – and his Christian convictions; he felt that Greek philosophy and Christian teaching, rather than the provisional hypotheses of modern 'scientists', should form the basis of educational practice. He felt that education should concern itself with building the character as much as with training the intellect, and he never tired of emphasising the importance of the chapel and the playing field.¹³³

The Norwood Report started with a declaration of the 'true foundations and proper aims'¹³⁴ of education:

We believe that education cannot stop short of recognising the ideals of truth and beauty and goodness as final and binding for all times and in all places, as ultimate values ... Further, we hold that the recognition of such values implies, for most people at least, a religious interpretation of life which for us must mean the Christian interpretation of life.¹³⁵

Dismissing the pretensions of scientific planners, it assigned them the humbler role of technicians:

¹³⁰ Cyril Norwood, *The English Educational System* (1928), p. 9.

¹³¹ *DNB*, 1951–1960, pp. 773–5. For a highly-sympathetic recent account of Norwood, see McCulloch, *Philosophers and Kings*, pp. 41–65.

¹³² T. C. Worsley, *Flannelled Fool*, p. 40. For an equally damning assessment, focusing on his intellect rather than his origins, see Jonathan Gathorne-Hardy, *The Public School Phenomenon*, 597–1977 (1977), pp. 298, 302.

¹³³ McCulloch, *Philosophers and Kings*, p. 41.

¹³⁴ Board of Education. *Curriculum and Examinations in Secondary Schools. Report of the Committee of the Secondary School Examinations Council appointed by the President of the Board of Education in 1941* (1943).

¹³⁵ *Ibid.*, p. vii.

We have no sympathy ... with a theory of education which presupposes that its aim can be dictated by the provisional findings of special sciences, whether biological, psychological, or sociological, that the function of education is to fit pupils to determine their outlook and conduct according to the changing needs and the changing standards of the day.¹³⁶

The report distinguished between three broad types of children. Some were interested in learning for learning's sake, capable of grasping a complex argument, and sensitive to linguistic expression and experimental proof.¹³⁷ Some were drawn towards applied science or applied art.¹³⁸ The rest were indifferent to ideas and at home in a world of concrete events and practical work. They might be intelligent, but their intelligence operated in the realm of facts. Interested in 'things as they are', they found 'little attraction in the past or in the slow disentanglement of causes or movements'.¹³⁹

The report did little to justify so dogmatic a division. 'Whether such groupings are distinct on strictly psychological grounds, whether they represent types of mind, whether the differences are differences in kind or in degree, these are questions which it is not necessary to pursue.' It rested its case solely on historical tradition. Such groupings had established themselves over centuries of educational experience: they must therefore correspond to natural divisions among children. The grammar school, the technical school, and the modern school had developed to cater for the varying needs of these types of pupils.¹⁴⁰ The process of sorting pupils into their appropriate categories, it argued, should mainly be left up to the teacher.¹⁴¹ In some cases intelligence tests may be used; but they should only be used with 'full consciousness of their experimental nature and their proper application',¹⁴² and then only to supplement the school record based on the judgement of the teacher.

The report advanced an uncompromising defence of the traditional grammar-school curriculum. It rejected the argument that 'new ideas in psychology have destroyed whatever justification the old curriculum may have had' with an appeal to the average schoolmaster's good sense and habitual practice:

It may in the past have been associated with a psychology which is now in some quarters considered to be unsound, but it is not a necessary consequence that the curriculum itself is basically unsound; it may have been the right thing, though for the wrong reason, and the experience of schoolmasters that through it they are doing good work for their pupils is not lightly to be set on one side.¹⁴³

It sought to preserve at the apex of the state school system a traditional grammar school, unmodified by psychological theory, indifferent to vocational pressures, and capable of transmitting a liberal education to a social élite of school children.

¹³⁶ *Ibid.*, p. vii.

¹³⁷ *Ibid.*, p. 2.

¹³⁸ *Ibid.*, p. 3.

¹³⁹ *Ibid.*, p. 3.

¹⁴⁰ *Ibid.*, p. 14.

¹⁴¹ *Ibid.*, p. 17.

¹⁴² *Ibid.*, p. 17.

¹⁴³ *Ibid.*, pp. 10–11.

The members of the Spens Committee were dumbfounded by the emphasis placed on Norwood's Report. They soon found themselves the victims of a palace revolution within the Board of Education, outmanoeuvred and unable to retaliate. The Report was the work not of the prestigious Consultative Committee but of an *ad hoc* committee of the Secondary Schools Examinations Council.¹⁴⁴ The committee should have investigated a tightly defined topic, the future of examinations in secondary schools, but, with Butler's connivance, Norwood widened his remit to include the curriculum.¹⁴⁵ On completion, the report should have been sent to the Council for further consideration – a process which might have taken some time. Instead, it went directly to the President of the Board, R. A. Butler, who arranged for its immediate publication, commenting that 'this well-written report will serve our book very well – particularly its layout of the Secondary World. Spens will be furious.'¹⁴⁶ 'Those with whom now lay the power to frame ministerial policy', a member of the Secondary Schools Examination Council observed, 'had adopted the Norwood Report as the Tables of the Law.'¹⁴⁷

This palace revolution was partly provoked by official impatience with the Consultative Committee. Asked to deal with tightly-defined issues, it had repeatedly overstepped its authority, producing lengthy reports based on abstract principles and calling for a wholesale reconstruction of English education. Almost as a matter of habit it had encroached on the Board's position as arbiter of educational policy and controller of educational organisation; and its pronouncements had proved so popular with the public that the Board had frequently found itself associated with policies which were not of its own making. The Spens Report's open support for raising all post-primary education to secondary status had brought this issue to a head; it had trespassed onto territory which the upper levels of the educational bureaucracy regarded as peculiarly its own. The Board dismissed its recommendations as both too radical and too expensive, and put the report into 'cold storage'.¹⁴⁸ A number of leading Board officials were now determined to kill off the committee. In March 1942 the Permanent Secretary told R. A. Butler that it 'had outlived its usefulness'; that, even if the war had not put an end to its activities, it would have been difficult to suggest 'any fresh matter to refer to it'; that its reports had tended to cover too wide an area; and that it would be better to replace it with a small advisory committee which met regularly with ministers and officials.¹⁴⁹ R. A. Butler's use of the Norwood Report to undermine

¹⁴⁴ For details about the Report's preparation, see P. H. J. H. Gosden, *Education in the Second World War. A Study in Policy and Administration* (1976), pp. 367–80.

¹⁴⁵ McCulloch, *Philosophers and Kings*, p. 57.

¹⁴⁶ Ed. 136/681, Butler to Holmes and Williams, 6 June 1943. On the tension at the time between Norwood and Spens, see Gary McCulloch, 'Spens v. Norwood: Contesting the Education State?', *History of Education*, Vol. 22 No. 2 (1993), pp. 163–80, esp. 166–70.

¹⁴⁷ J. A. Petch, *Fifty Years of Examining* (1953), pp. 164–5.

¹⁴⁸ *The Schoolmaster*, 5 January 1939.

¹⁴⁹ Quoted in Brian Simon, *The Politics of Educational Reform 1920–1940* (1974), p. 269.

the Spens Report (ironically, Spens had been one of Butler's mentors at Cambridge) preceded a more important move to destroy the Consultative Committee completely. Under the 1944 Education Act, it was replaced by two central advisory councils, one for England and one for Wales, which lacked both its authority and its autonomy; henceforward consultation was to be on the government's terms.

The palace revolution may also have owed something to a widespread impatience with educational psychology. The majority of witnesses who replied to Norwood's questionnaire on the most efficient method of selecting children for secondary education were sceptical of IQ tests. Ernest Barker, who served as a member of the Consultative Committee when it prepared the *Report on Psychological Tests of Educable Capacity*, stressed that 'I am *not* in favour of intelligence tests'.¹⁵⁰ The National Union of Teachers argued that 'intelligence tests at 11-plus were fallacious' since 'emphasis tended to be put upon the verbal factor: a real practical test had not yet been evolved'.¹⁵¹ A number of schoolteachers echoed their criticisms. A. M. Walmsley confessed that 'I have not much faith in intelligence tests at present',¹⁵² and Jean Brown noted that 'the intelligence test seems too often to test merely presence of mind and common sense, and handicaps the nervous, thin-skinned child'.¹⁵³

The report dealt a body blow to the psychological establishment, dismissing its claims to base education on scientific theory, rejecting its attempts to reform the grammar school syllabus, and restricting the part which intelligence tests could play in educational selection. On all substantial issues it clashed with the assumptions of the psychologists.¹⁵⁴ The psychologists felt that education should follow the mental and emotional growth of children; the report argued that it should transmit moral values and academic knowledge. The psychologists argued that ability is scattered in the population in a normal distribution curve; the report divided children into three groups according to the type of mind they possessed. The report emphasised the importance of social cohesion and the community spirit; the psychometrists were preoccupied with the assessment and assertion of individual differences.¹⁵⁵ The psychologists were convinced meritocrats, determined to educate children in line with their innate abilities rather than their cultural training, and bent on using intelligence tests to promote bright working-class children at the expense of their dull middle-class competitors. The report was thoroughly conservative, arguing that the type of mind possessed by the child was

¹⁵⁰ Ed 12/479. Minutes of the 19th Meeting of the Committee held on Friday and Saturday, 19 and 20 March 1943. Answer to questionnaire by Dr Ernest Barker (Cambridge).

¹⁵¹ *Ibid.*, WEA. HCS/SP/WEA.

¹⁵² *Ibid.*

¹⁵³ *Ibid.* (EV 46).

¹⁵⁴ Oddly, several historians seem to be labouring under the illusion that the report was based on psychometric theory. See, for example, Kenneth O. Morgan, *The People's Peace. British History 1945-1989* (Oxford, 1990), p. 19; Caroline Benn, 'Comprehensive School Reform and the 1945 Labour Government', *History Workshop Journal* Vol. 10 (Autumn, 1980), p. 197; Roy Low, *Education in the Post-War Years. A Social History* (1988), p. 6.

¹⁵⁵ Cf. McCulloch, *Philosophers and Kings*, pp. 50-1.

determined by its cultural and class background rather than its biological endowment and that the task of education was simply to ensure that a child received an education appropriate to its social station and family expectations.¹⁵⁶

Burt was quick to launch a public attack on the report, castigating its recommendations as inconsistent with the evidence of science and incompatible with the needs of national reconstruction.¹⁵⁷ Its theoretical justification for a 'clean break' in education at the age of eleven was fallacious. 'Even during the pubertal period maturation is a steady rather than a rapid process'.¹⁵⁸ The real justification for selection was administrative rather than psychological. 'The crisis, if there is one, lies rather in the mind of the administrator than in the life of the child'.¹⁵⁹ If there was any scientific justification for educational selection, it lay in the increasing intellectual differences between individuals and not in abrupt qualitative changes occurring at the age of eleven. The report's division of children into three broad types was arbitrary and unfounded. 'This view entirely reverses the facts that are known to us. The one thing which the analysis of mental measurements has demonstrated beyond all doubt is the supreme importance during childhood of the general factor of intelligence'.¹⁶⁰ A scientific measurement of the innate ability is the only rational basis for educational selection. 'Any scheme of organisation which proposes to classify children at the age of eleven or twelve according to qualitative mental types rather than according to general intelligence is in conflict with the known facts of child psychology'.¹⁶¹

He lamented the committee's attack on the 'free place' examination. Although he recognised that there had been problems with the system in the past, he argued that they could be cured by extending psychological testing. The examination should be selective rather than competitive, and should measure innate abilities rather than acquired attainments.¹⁶² Intelligence tests were infinitely more successful than teacher's assessments in spotting real talent.¹⁶³ Properly applied, they might hold the key to national recovery:

In the interest of the nation as well as the child, the paramount need is to discover which are the ablest pupils, no matter to what school or social class they may belong, and generally to grade each child according to the relative degree of his ability, and give him the best education that his ability permits. The existing system, which tends to direct all the most intelligent to schools of an academic type, regardless of potential technical abilities is obviously in conflict with the needs of both the child and the nation.¹⁶⁴

¹⁵⁶ See, for example, Ed 12/480. Report of the Education Committee (LCC) to the Council of 14 December 1943.

¹⁵⁷ Cyril Burt, 'The Education of the Young Adolescent: The Psychological Implications of the Norwood Report', *Brit. J. Educ. Psych.* Vol. 13 (1943), pp. 126–40. Cf. the criticisms in *The Times Educational Supplement*, 25 September 1943, p. 381. On the report's reception more generally, see Gosden, *Education in the Second World War*, pp. 380–7.

¹⁵⁸ Burt, 'The Education of the Young Adolescent', p. 140.

¹⁵⁹ *Ibid.*, p. 128.

¹⁶⁰ *Ibid.*, p. 131.

¹⁶¹ *Ibid.*, p. 140.

¹⁶² *Ibid.*, pp. 134–5.

¹⁶³ *Ibid.*, pp. 135–8.

¹⁶⁴ *Ibid.*, p. 140.

Measuring the mind

But for all their industry and eloquence, these psychologists found their hopes for a meritocratic and scientific system of education frustrated. They were outmanoeuvred by the educational traditionalists in a period which is normally associated with radical social reconstruction. The grammar school retained its position at the apex of the state school system and, even if it succeeded in recruiting its pupils by more meritocratic methods, continued to uphold the ideal of 'learning for its own sake' and to direct its pupils' aspirations away from technology and industry.

From theory to policy

The Consultative Committee succeeded in influencing official educational policy until well into the post-war period. The Board of Education endorsed a diluted version of the Hadow Committee's recommendations. In May 1928, eighteen months after the publication of *The Education of the Adolescent*, it issued Circular 1397 and Pamphlet No. 60, *The New Prospect in Education*, urging an expansion in the later stages of elementary education and preparing to raise the school leaving age in 1933.¹⁶⁵ All three political parties sympathised with the committee's main proposals. They all wanted to improve elementary education, and all agreed on the importance of opening grammar schools to able children, whatever their origins. They disagreed over 'the speed and extent of reform, rather than over its direction'. The Labour Party wanted to raise the school leaving age by statute, the Conservatives to encourage children to stay on at school of their own free will, and the Liberals supported a system of part-time continued education until eighteen; but all shared the Hadow Committee's conviction that the time had come to extend mass education.¹⁶⁶ To borrow one of Lord Eustace Percy's habitual equestrian metaphors, they debated over 'the right balance between the use of the spur and bridle',¹⁶⁷ but they all agreed on the general direction of the hunt.

The Hadow Committee aroused an astonishingly wide range of popular support, succeeding in both articulating and directing a widespread commitment to educational expansion. Percy, who had nothing to gain from exaggerating popular interest in educational reform, later reflected that, between the wars, 'something was happening in the country which had hardly yet penetrated to the mind of any politician in Whitehall or Westminster. The demand for real "equality of opportunity" in education was become nothing less than the main popular motive for political action'.¹⁶⁸

In practice, though, little was done to satisfy this 'simple appetite' for educational reform. Politicians and administrators were bound in a financial

¹⁶⁵ Simon, *Educational Reform*, pp. 137–41. A long excerpt from Pamphlet 60 is reprinted in Willem van der Eyken, *Education, the Child and Society* (1973), pp. 308–14.

¹⁶⁶ Rodney Barker, *Education and Politics 1900–1951. A Study of the Labour Party* (Oxford, 1972), p. 49.

¹⁶⁷ Percy, *Memories*, p. 98.

¹⁶⁸ *Ibid.*, p. 94. See also Sutherland, *Ability, Merit and Measurement*, p. 181.

straitjacket, with money so short that initiatives which had immediately preceded and followed the Great War – the 1914 Act on Defective and Epileptic Children, the 1918 Education Act, and the Hilton Young report on scholarships and free places – soon seemed like utopian fantasies. The proposal to increase the percentage of free places in secondary schools from 25 to 40 was immediately shelved. Even before the ‘Geddes axe’ fell, H. A. L. Fisher began to urge the Board to economise. In January 1921 it issued Circular 1190, suspending all schemes of development and reorganisation under the first sections of the 1918 Act. The Geddes Committee, set up in August 1921 to cut government expenditure by 30 per cent, hoped to reduce Educational Estimates by some £18m, and suggested a range of educational cuts to achieve their goal: raising the lower age limit in elementary schools to six, increasing class sizes, and restricting state support for secondary education. Although Fisher managed to reduce these cuts to £6.5m, their impact on education was devastating. When the Coalition collapsed in 1922, it was clear that the school leaving age would not be raised to fifteen for some time to come, and Local Education Authorities began to abandon their plans for an extension of post-primary education. The total number of secondary school pupils who received government grants actually began to fall.¹⁶⁹

Educational policy was characterised by stops and starts. In 1924 a Labour President of the Board, Sir Charles Trevelyan, withdrew Circular 1190 and invited Local Education Authorities to proceed with plans for reorganisation, providing them with financial incentives to increase the provision of free-places, and inviting them to draw up plans to abolish fees in selected secondary schools. The return of a Conservative Government in November 1924 halted this modest expansion. In early 1925 the Government cancelled grants for free places above the 25 per cent minimum, and in November, 1925, it issued Circular 1371, freezing educational provision for 1926–9 and replacing percentage grants with block grants.¹⁷⁰ (A violent public outcry eventually forced it to withdraw this circular.¹⁷¹) Lord Eustace Percy wrote to Sir Henry Hadow on the day of the publication of *The Education of the Adolescent* to reject the proposal to raise the school-leaving age to fifteen in 1932.¹⁷² He was determined to ‘use the curb’ on moves to reorganise post-primary education.¹⁷³ The return of Labour in 1929 and the reappearance of Trevelyan at the Board briefly replaced the bridle with the spur.¹⁷⁴ Trevelyan encouraged Local Education Authorities to increase the percentage of free places and to think about reorganisation. He even tried to legislate on the subject of the

¹⁶⁹ Sutherland, *Ability, Merit and Measurement*, pp. 59, 172–3; Simon, *Educational Reform*, pp. 33–58.

¹⁷⁰ For details on inter-war educational policy, see Sutherland, *Ability, Merit and Measurement*, p. 179; Barker, *Education and Politics*, pp. 49–55; Simon, *Educational Reform*, pp. 84–115. As will be obvious, this paragraph and the one which follows draws heavily on these texts.

¹⁷¹ Percy, *Memories*, pp. 97–8.

¹⁷² Sutherland, *Ability, Merit and Measurement*, p. 179; Barker, *Education and Politics*, pp. 49–55; Simon, *Educational Reform*, pp. 84–115.

¹⁷³ Percy, *Memories*, pp. 97–8.

¹⁷⁴ Simon, *Educational Reform*, pp. 132–7.

school leaving age, introducing three successive bills, but a combination of indifference on the part of his colleagues and opposition from vested interests succeeded in frustrating his efforts.¹⁷⁵ Furious with 'intriguing Catholics, extreme advocates of no means test and hostile Premiers', he resigned his post.¹⁷⁶

This 'stop-go' pattern continued throughout the thirties. In 1931 the May Committee imposed severe cuts on educational expenditure and managed to put an end to the percentage grant system. On 15 September the President, Edward Wood, later Lord Halifax, issued Circular 1421, abolishing free places and replacing them with 'special places', whereby parents of successful children were put through a means test, with the richer children being expected to make a contribution or even pay full fees. Between 1931 and 1934 there was a complete embargo on new nursery-school and special-school provision, and a review of expenditure on school medical services. Only in 1936 did things look up, and the new Education Act provided for a raising of the school leaving age to fifteen in just three years.¹⁷⁷

Throughout this period most politicians put educational reform low on their list of priorities, flummoxed by its administrative complexities and worried that it would bring them few extra votes.¹⁷⁸ The Presidency of the Board was regarded as little more than a stepping stone to higher office; and even then it was not always easy to fill. When Edward Wood moved to agriculture in 1924, Baldwin turned in desperation to the Deputy Secretary to the cabinet, Thomas Jones, asking him if they had 'any man in the Party who takes any interest in education'. He felt that Percy's appointment boded well for his political career: 'What a chance he has got', he enthused. 'He is only 37.'¹⁷⁹ Indeed, past prime ministers had not always been so successful in finding men to take an interest in education. When Percy first moved to the Board, a well-wisher said to him: 'My dear boy, I am *very* glad to see you in this position. I once played bridge with a President of the Board, an ex-President and a Parliamentary Secretary. None of them knew anything about education; and one of them could not even play bridge.'¹⁸⁰

MacDonald, Snowden, and Churchill all shared 'the impatience of the self-educated man with formal school education'. Their attitude was typical of the upper echelons of all three political parties; enthusiasm for educational reform was almost the monopoly of younger politicians. 'In this field, more than most others', Percy commented, 'the war years had been a real dividing line between new and old schools of thought.'¹⁸¹ Churchill's contempt for education was so marked that it reminded Percy of Porson's comment on Gibbon's attitude to Christianity: he

¹⁷⁵ *Ibid.*, pp. 151-67; Barker, *Education and Politics*, pp. 60-3.

¹⁷⁶ Quoted in Barker, *Education and Politics*, p. 62.

¹⁷⁷ Sutherland, *Ability, Merit and Measurement*, pp. 68, 176-7, 180; Simon, *Educational Reform*, pp. 180-7; Gosden, *Education in the Second World War*, p. 7.

¹⁷⁸ Simon, *Educational Reform*, pp. 279-81. ¹⁷⁹ Cited in Simon, *Educational Reform*, p. 84.

¹⁸⁰ Percy, *Memories*, p. 92.

¹⁸¹ Percy, *Memories*, p. 97. Both quotations are from the same page.

seemed to 'hate it so cordially that he might seem to revenge some personal injury'. For Churchill, education policy dealt with little more than 'village schools with a few half-naked children rolling in the dust'.¹⁸² When R. A. Butler was in an unbuttoned mood he liked to tell the story of how he became the author of the 1944 Education Act:

Winston sent for me one day in 1941, and said that he was reshuffling the Government and wanted to make me a proposition. Would I go to the Board of Education? I could have the day to think it over. I replied that I needed no time for reflection, since this was the one job I would like to have more than any other. At which the Old Man growled: 'Just like you, Rab, but I offered it to you as an insult'.¹⁸³

Churchill outlined Butler's duties as President of the Board in baroque terms: "'You will move poor children from here to here'", and he lifted up and evacuated imaginary children from one side of his blotting pad to another; "this will be very difficult"'.¹⁸⁴

This indifference to educational reform – or even to state education – even infected the Board of Education itself.¹⁸⁵ The last government department to introduce open competition, the Board provided a billet for public-school-and-Oxbridge products who lacked either the intelligence or the ambition to join one of the more glamorous departments, such as the Treasury or the Foreign Office.¹⁸⁶ Between 1919 and 1939, 60 per cent of its administrative class officials were educated at Oxbridge, and 50 per cent at public schools. These officials were very much of a type, evaluating maintained schools by their degree of similarity to public schools, despising or ignoring technical training and scientific instruction, and pooh-poohing schemes for radical reorganisation. In 1938 F. H. Spencer, a school inspector, noted that the Board's officials were 'able products of the old universities and public schools' who were entirely 'without first hand acquaintance with the "proletarian" class whose education they control'. They were collectively 'against enthusiasm'; they hoped to move ahead by 'an inch rather than a mile a year'; and their cast of mind was 'always critical and seldom constructive'.¹⁸⁷ Writing in the same year, R. H. Tawney made the same point in rather more sweeping language:

¹⁸² *Ibid.*, p. 96. Even in the 1950s Churchill had little interest in education. See Anthony Seldon, *Churchill's Indian Summer. The Conservative Government, 1951–55* (1981), pp. 270–2.

¹⁸³ R. H. S. Crossman, 'Rab Butler, Ideologist of Inequality', in *The Charm of Politics and Other Essays in Political Criticism* (1958), p. 57.

¹⁸⁴ R. A. Butler, *The Art of the Possible* (1971), p. 90.

¹⁸⁵ Simon, *Educational Reform*, pp. 281–3.

¹⁸⁶ Gail L. Savage, 'Social Class and Social Policy: The Civil Service and Secondary Education in England during the Interwar Period', *Journal of Contemporary History* Vol. 18, No. 2 (April 1983), pp. 261–80. For a useful summary of the educational backgrounds of ministers and top-ranked civil servants, see pp. 264–5. See also, Gillian Sutherland, 'Administration in Education after 1870: Patronage, Professionalism and Expertise' in G. Sutherland (ed.), *Studies in the Growth of Nineteenth-Century Government* (1972), pp. 263–85.

¹⁸⁷ F. H. Spencer, *An Inspector's Testament* (1938), pp. 313–14. Cf. John Dover Wilson, *Milestones on the Dover Road* (1969), pp. 91–3.

‘the capital fact about English educational policy is that hitherto it has been made, except at brief intervals, by men, few, if any, of whom have themselves attended the schools principally affected by it, or would dream of allowing their children to attend them.’¹⁸⁸

Yet attitudes within the Board were changing; indifference to mass education and hostility to innovations were rapidly becoming archaic vices. The Board was in general agreement with its Consultative Committee’s recommendations; and it even shared its enthusiasm for the new discipline of educational psychology. Indeed, the Board began to build up an independent expertise on psychology in general, and on mental measurement in particular. Two Government Inspectors, Frank Watts and C. A. Richardson, knew a good deal about educational psychology. Watts had worked as a lecturer in psychology at Manchester, and although he was critical of some of the more grandiose claims made for mental measurement, he insisted that education should be based on an understanding of child psychology. Richardson was an enthusiastic supporter of mental testing, and was deeply involved in the experiments in Northumberland, preparing mental tests to supplement attainment tests in the 1921 free-place examination, and adapting ‘Simplex’ tests for selecting would-be teachers in 1923.¹⁸⁹ In 1955, some time after his retirement, he published a spirited summary of the case for IQ testing.¹⁹⁰ Other members of the Inspectorate soon turned themselves into experts on the tests. They appreciated both the strengths and the weaknesses of the group tests, and were not afraid to challenge the professionals on points of detail. Indeed, one of the earliest studies of the influence of schooling on test-performance – a comparison of the achievements of physically defective children, canal-boat children, gypsy children, and backward children attending ordinary elementary schools – was produced by an Inspector of elementary schools, Hugh Gordon.¹⁹¹ In its *Supplementary Memorandum on Examinations for Scholarships and Free Places in Secondary Schools*, the Board suggested that, as long as they were properly devised and carefully administered, intelligence tests had an important part to play in educational selection; it also indicated that the standard statistical procedures, perfected by the psychologists, might be used to improve academic examinations.¹⁹² The Board’s *Handbook of Suggestions*, intended for teachers in the public elementary schools, lent its support to educational psychology, arguing that teachers should take care to classify their pupils correctly,¹⁹³ that they should

¹⁸⁸ R. H. Tawney, *Equality*, p. 157. Tawney was educated at Rugby and Balliol.

¹⁸⁹ Sutherland, *Ability, Merit and Measurement*, p. 154.

¹⁹⁰ C. A. Richardson, *An Introduction to Mental Measurement and Its Applications* (1955), see esp. p. 50.

¹⁹¹ Board of Education. Educational Pamphlets No. 44, *Mental and Scholastic Tests among Retarded Children* (1923). Cf. Sutherland, *Ability, Merit and Measurement*, pp. 90–1.

¹⁹² Sutherland, *Ability, Merit and Measurement*, p. 162.

¹⁹³ Board of Education, *Handbook of Suggestions: For the Consideration of Teachers and Others Concerned in the Work of Public Elementary Schools* (1927).

concentrate on the development of each child rather than on the mechanical transmission of facts,¹⁹⁴ and that, in dealing with backward children, they should be sensitive to modern psychological teaching. The *Handbook* even reprinted the whole of Burt's London County Council Memorandum on the backward child.¹⁹⁵

The decentralised structure of English education ensured that there was more to shaping policy than getting the ear of the minister; the would-be reformer had to convert the rank-and-file of the teaching profession as well. The Consultative Committee provided educational psychologists with a unique opportunity for doing just that. Its reports were respectfully reviewed, eagerly read, and passionately discussed; more than any other publications, they determined the direction of educational debate. The reports assumed the status of official manifestos and textbooks, setting out plans for educational reconstruction and laying down guidelines for 'scientific teaching'. Inevitably, some teachers paid more attention to them than others – some studied them from cover to cover, some dipped into them, some only knew of them from reviews and common room conversations – but everyone heard of them, and the ambitious and committed took them to heart. They probably influenced trainee teachers more than established professionals; their influence on educational practice, like their influence on educational policy, probably increased in the 1940s and 1950s, as the recruits of the 1930s moved up the occupational ladder. It is impossible to reconstruct the dissemination of the reports with any accuracy, but a survey of reviews in the press, popular as well as specialised, should give some impression of their reception.

The press was sensitive to the psychologists' influence over the committee, noting the appearance of a new group of experts, and trying hard to evaluate the nature and implications of their ideas. In general, the left-wing press applauded the rise of psychology, endorsing its desire for a radical and yet scientific reform of the social structure. Writing in *The New Statesman*, G. D. H. Cole praised the committee on the adolescent for producing 'the most valuable plan of educational reform which has been issued for many years' and added that 'the educational psychology of the Report is undoubtedly sound'.¹⁹⁶ The psychologists found their harshest critics among old-fashioned teachers, who were jealous of their traditional expertise, and from reflective conservatives, who dismissed the pretensions of these so-called scientists. *The Times Educational Supplement* tempered its enthusiasm for *The Education of the Adolescent* (1926) with the observation that 'a tradition of teaching which has grown as a living thing for more than two thousand years and has accumulated data from a great number of generations of children must represent a body of truth as to the child mind not likely to be displaced'.¹⁹⁷ The *Christian* felt that *The Primary School* (1931) suffered from an insidious 'cult of the

¹⁹⁴ *Ibid.*, pp. 36–7.

¹⁹⁵ *Ibid.*, p. 38.

¹⁹⁶ G. D. H. Cole, 'The Education of the Adolescent', *New Statesman*, 8 January 1927, p. 383.

¹⁹⁷ *The Times Educational Supplement*, 26 July 1924.

expert': 'So far as any doubt at all is stirred while reading the report, it is likely to arise chiefly from a fear lest the increasing number of "experts" employed in connection with juvenile growth and training may not be in some danger of regarding children as "cases" rather than as human beings'. The journal was particularly critical of the work of the school psychologist.¹⁹⁸

The press presented psychologists not just as manufacturers of intelligence tests, but also as prophets of child-centred and progressive education. *The Times Educational Supplement* praised the report on *The Primary School* (1931) for including 'a chapter of the greatest importance which, with the flood of new psychological light which Professor Burt and others have thrown upon the subject, will undermine many plausible generalisations', and it printed a detailed summary of its arguments.¹⁹⁹ *The Education Outlook* argued that 'the new Report has the great merit of providing a scientific basis for primary stage work', while *The Teacher's World* felt that 'the chapters on physical and mental growth are invaluable to thoughtful parents'. *Overseas Education* emphasised that the scientific content of the report was valid irrespective of local conditions and particular circumstances. *The Scottish Educational Journal* noted that 'the discoveries of medicine and of psychology are daily shedding new light on the nature and needs of children', while *The Lancet* praised the report for its 'modern and scientific outlook on the problem presented' and added that 'it is no disparagement of the rest of the report to say that its most vital chapters are the two appendices dealing with these conditions'.²⁰⁰ The *British Medical Journal* agreed, praising Burt for writing a memorandum 'of fascinating interest' and for making 'suggestions which ought to be of practical use, not only to the teacher, but also the school doctor and to the private practitioner'.²⁰¹

Intelligence tests inevitably aroused considerable press interest, most of it enthusiastic. *The Times Educational Supplement* heralded the *Report on Psychological Tests of Educable Capacity* as a 'volume which gives a more comprehensive survey of mental testing in its many and varied ramifications than any book that has yet appeared', again providing a synopsis.²⁰² A long front-page article concluded that 'there is complete unanimity regarding the practical value of the tests ... One is not therefore surprised to find that the 37 recommendations of the committee resolve themselves roughly into a general exhortation to the teaching profession to give the new tests a trial'.²⁰³ The *British Medical Journal* argued:

This scientific study of the principles on which examinations should be based is without doubt a most valuable contribution to the advancement of the general

¹⁹⁸ Ed 24/1226. Quotations all taken from this source unless otherwise stated.

¹⁹⁹ *The Times Educational Supplement*, 14 February 1931, p. 59.

²⁰⁰ Ed 24/1226. Quotations all taken from this source unless otherwise stated.

²⁰¹ *British Medical Journal*, 21 February 1931, pp. 317b–318a.

²⁰² 'The New Tests', *Times Educational Supplement*, 13 September 1924, p. 381.

²⁰³ *Ibid.*, p. 586.

intelligence of the nation. It will pave the way for the very considerable improvement, both in giving instruction and in testing its practical value. Without such a scientific basis much education of the past has failed in its objective.²⁰⁴

The relationship between central policy and local behaviour was necessarily complicated. The 1902 Education Act had given Local Education Authorities considerable power, and financial shortages tended to increase their autonomy.²⁰⁵ In general, authorities took their lead from the Board, distinguishing between primary and secondary education and allocating secondary school places on the basis of an 11-plus examination. But even an increasingly strong lead from the centre was not enough to persuade all LEAs to go over to the new technology of mental measurement. According to Gillian Sutherland, at least 81 of the 146 Authorities responsible for secondary education claimed to use intelligence tests – though they interpreted the term rather loosely. Another 27 may also have used intelligence tests, though the figures are uncertain. Birkenhead even went so far as to divide elementary schoolchildren into ability groupings on the basis of IQ tests.²⁰⁶ Test use was sometimes intermittent: having tried one test, authorities might move on to another, or even revert to traditional methods.²⁰⁷ Local Education Authorities were not always technically respectable in their tests; some so-called ‘intelligence tests’ were far from respectable in the eyes of experts. They also enjoyed complete autonomy in deciding which kind of test to use, although there was a marked tendency to turn to Godfrey Thomson’s unit at Moray House.²⁰⁸ As Gillian Sutherland has put it, examining procedures resembled a kaleidoscope, with an astonishing diversity of patterns and a remarkable capacity to change over time.²⁰⁹

The psychologists and their allies frequently despaired in the 1920s and 1930s, as the Treasury wielded its axe and the more traditional teachers expressed their scorn. But wartime reconstruction re-ignited their hopes. The 1944 Education Act embodied some of the Consultative Committee’s main recommendations, treating primary, secondary, and further education as ‘a continuous process conducted in three successive stages’,²¹⁰ and insisting that each child should receive an education suitable to his ‘age, ability, and aptitude’.²¹¹ The 1943 White paper on Educational Reconstruction was even more heavily influenced by the Consultative Committee in general, and its educational psychologists in particular. Unlike the Act, which said nothing on the subject, it came down firmly on the side of selection, arguing

²⁰⁴ *British Medical Journal*, 26 July 1924, p. 157a. See also *ibid.*, 7 September 1924, p. 586. For less favourable comment, see Eastwell, ‘Intelligence Tests’, *Journal of Education and School World*, June 1926, p. 409.

²⁰⁵ Sutherland, *Ability, Merit and Measurement*, pp. 270–82.

²⁰⁶ D. Caradog-Jones (ed.), *The Social Survey of Merseyside 3* (1934), pp. 77–8.

²⁰⁷ This unstable pattern continued after the war. See Alfred A. Yates and D. A. Pidgeon, *Admission to Grammar Schools, Third Interim Report on the Allocation of Primary School Leavers to Courses of Secondary Instruction*, National Foundation for Educational Research (1957), p. 94.

²⁰⁸ Sutherland, *Ability, Merit and Measurement*, pp. 191–270, provides details on which these generalisations are based.

²⁰⁹ *Ibid.*, p. 254.

²¹⁰ Education Act, 1944, part 2, 7.

²¹¹ *Ibid.*, part 2, 36.

Measuring the mind

that ‘after 11, secondary education, of diversified types but of equal standing, will be provided for all children’.²¹² It maintained that ‘children at age of about 11 should be classified, not on the results of a competitive test, but on an assessment of their individual aptitudes largely by such means as school records, supplemented, if necessary, by intelligence tests’.²¹³ It supported moves for improved nursery and primary education, committing the government to eliminating ‘large classes and bad conditions’.²¹⁴ The keynote of future education, according to the document, like the keynote of the advice of the educational psychologists, was that the child was to become the centre of teaching.²¹⁵

²¹² Board of Education, *Educational Reconstruction* (White Paper) (HMSO, 1943), para. 2.

²¹³ *Ibid.*, para. 27.

²¹⁴ *Ibid.*, para. 2.

²¹⁵ *Ibid.*, para. 27. For details about the White Paper and the Education Act see Gosden, *Education in the Second World War*, pp. 268–331.

The measurement of merit anatomised

Merit on the march

The meritocratic ideal commanded widespread support during post-war reconstruction. By imposing common burdens and demanding common sacrifices, the war stimulated demands for a more just social order, administered by the state, planned by a technocracy and dedicated to the ideal of fair shares for all.¹ It quickened the pace of social mobility, breaking down class barriers and rewarding talent with opportunity.² The RAF, for example, was increasingly open to men of ability. 'The war saw the weakening of the public school influence,' a Flight Lieutenant emphasised. 'In the RAF technical and managerial ability was becoming more important than one's background. We had one man who had been the "Boots" in a public school and became a very respected flying officer.'³ On the Home Front the war brought rapid promotion for many, as employers abandoned old prejudices for the sake of economic efficiency. 'We were searching for talent, as were most factories. Trying to get people to take on a greater level of responsibility', recalled a managing director in the engineering industry. 'We were pulling them up all the time. Everybody felt wanted. There were promotion prospects. Able people who wouldn't have had the chance before came forward. Anybody who had the talent was used.'⁴ The 1945 Labour victory confirmed the popular impression that British society was opening up to the talented. Of Labour MPs, 43 per cent had no formal education after the age of fourteen. Ernest Bevin was the illegitimate son of a village midwife, Herbert Morrison the son of an alcoholic police officer and a domestic servant, Ellen Wilkinson the daughter of a cotton operative, Chuter Ede

¹ See Angus Calder, *The People's War. Britain 1939-45* (1969), esp. pp. 351-7, 457-77, 545-6; Paul Addison, *The Road to 1945. British Politics and the Second World War* (1975), esp. pp. 270-8; Richard M. Titmuss, *Problems of Social Policy* (HMSO, 1950), pp. 507-8; Kenneth O. Morgan, *Labour in Power 1945-51* (1984), pp. 9, 19, 21; William Harrington and Peter Young, *The 1945 Revolution* (1978), pp. 20, 82-87; Henry Pelling, *Britain and the Second World War* (1970).

² Addison, *The Road to 1945*, pp. 129-30.

³ Harrington and Young, *The 1945 Revolution*, p. 83. Cf. Richard Hilary, *The Last Enemy* (1942), p. 152.

⁴ Harrington and Young, *The 1945 Revolution*, p. 87. Cf. Brian Jackson, *Streaming: An Educational System in Miniature* (1964), p. 77.

had worked for many years as an elementary school master, A. V. Alexander had left school at thirteen to become an office boy. Numerous ministerial appointments went to coal miners.⁵

The war discredited the ‘blimps’, the well-born, public-school-educated, muddle-headed, tradition-bound fogies of the established élite, and elevated instead intelligent experts, trained in science and committed to rational planning.⁶ Plunged into a total war, the British needed to mobilise all their resources, mental as well as material. Pitted against a scientific and organised enemy, they had no choice but to become scientific and organised in turn.⁷ The war stimulated both official and popular enthusiasm for education.⁸ Policy makers increasingly insisted that Britain’s economic future depended upon its educational system. Unless scientists and technologists could be trained in greater numbers than ever before British industry was doomed.⁹ Even Winston Churchill, hardly an habitual enthusiast for educational reform, paid lip service to the trend. ‘The future of the world is to the highly educated races who alone can handle the scientific apparatus necessary for pre-eminence in peace or survival in war’, he reasoned. ‘You cannot conduct a modern community except with an adequate supply of persons upon whose education much time and money have been spent.’¹⁰

The people took a keener interest in education than they ever had before. The army put on lectures on current affairs for the troops; civilians and prisoners of war killed boredom by giving lectures and taking courses; the BBC produced a raft of educational programmes, including the wildly popular ‘Brains Trust’; and Penguin published its ‘specials’.¹¹ George Orwell summed up the popular mood when he complained that ‘it is all too obvious that our talk of “defending democracy” is nonsense while it is a mere accident of birth that decides whether a gifted child shall or shall not get the education it deserves’.¹² Mass Observation reports in 1942 and 1944 reported that 71 per cent of respondents said that the change that they would most like to see was equality of opportunity.¹³

⁵ J. J. Lawson at the War Office, George Hall at the Admiralty, Aneurin Bevan at the Ministry of Health, Tom Williams at Agriculture, and J. Westwood at the Scottish Office. To redress the balance, Clement Attlee was an upper-middle-class professional, Stafford Cripps was a member of the gentry and Hugh Dalton was educated at Eton and King’s College, Cambridge.

⁶ Calder, *The People’s War*, pp. 457–77; Addison, *The Road to 1945*, pp. 132–3.

⁷ Addison, *The Road to 1945*, esp. p. 19; Harrington and Young, *The 1945 Revolution*, pp. 82–3.

⁸ H. C. Dent, *Education in Transition. A Sociological Study of the Impact of War on English Education 1939–1943* (1944), esp. pp. vii, 234; Gosden, *Education in the Second World War*, pp. 237, 301, 367, 431–3.

⁹ See, in particular, Ministry of Education, *Higher Technological Education. Report of a Special Committee Appointed in April 1944*, esp. paras. 2, 3, 44, 45, 57.

¹⁰ Quoted in Gerald Bernbaum, *Social Change and the Schools 1918–1944* (1967), p. 104.

¹¹ Calder, *The People’s War*, pp. 364–6; Pelling, *Britain and the Second World War*, p. 323. The Brains Trust had a regular audience of ten to twelve million.

¹² George Orwell, ‘The Lion and the Unicorn’, in Sonia Orwell and Ian Angus (eds.), *Collected Essays, Journalism and Letters of George Orwell: Volume 2: My Country Right or Left* (1968), p. 98.

¹³ Deborah Thom, ‘The 1944 Education Act: The Art of the Possible?’ in Harold L. Smith, *War and Social Change. British Society in the Second World War* (Manchester, 1986), p. 107.

The 1944 Education Act attempted to respond to this demand, decreeing that children should be educated according to their 'age, ability and aptitude' and ensuring that education would be stratified not by class but by intellectual capacity. The 1944 Education Act altered the character and composition of the grammar schools. They ceased to be in part finishing schools for middle-class children of good character and concentrated instead on the education of the ablest – a change which was reflected in numerous complaints that the schools were being flooded by 'spivs' and 'smart alecks' and that they were losing 'the boy who was not good academically, but who had character, loyalty and other virtues which made him and his kind the backbone of the grammar school'.¹⁴

To some extent, the grammar schools prospered at the expense of the public schools.¹⁵ In November 1939, Robert Boothby told Lloyd George that 'it is inconceivable to me that our present hereditary system, our "caste" system of education, can survive the struggle without drastic modification'.¹⁶ In the same year, Clement Attlee predicted that the war would sweep away the public schools, his *alma mater* included.¹⁷ They were almost proved right. Polemicists such as T. C. Worsley dismissed public schools as factories of blimps and bigots.¹⁸ The high level of taxes on personal income left many parents too poor to afford school fees, wreaking havoc with already precarious school finances. Headmasters complained that they faced bankruptcy. Newspapers started to speculate that the only way to keep these schools from turning into ruins was to nationalise them. The government was so worried about the independent sector that, in 1942, it appointed a commission to look into the issue, headed by Lord Fleming, Senator of the College of Justice in Scotland.¹⁹

For the most part, the Labour Party was delighted with the meritocratic implications of the Act. The inner-circle of Labour Ministers – Attlee, Cripps, Dalton, Bevin and Herbert Morrison – were all meritocrats of one stripe or another.²⁰ Ellen Wilkinson, Minister of Education from 1945 to 1947, applauded

¹⁴ IAHM, Presidential Address, *Annual Conference Report, 1948*. Quoted in Keith Fenwick, *The Comprehensive School, 1944–1970* (1976), p. 50. Cf. Alfred A. Yates and D. A. Pidgeon, *Admission to Grammar Schools. Third Interim Report on the Allocation of Primary School Leavers to Courses of Secondary Education. National Foundation for Education Research in England and Wales* (1957), p. 97.

¹⁵ See, in particular, Gary McCulloch, *Philosophers and Kings. Education for Leadership in Modern England* (Cambridge, 1991), pp. 23–40; Brian Simon, 'The 1944 Education Act: a Conservative Measure?', *History of Education* Vol. 15, No. 1 (March, 1986), pp. 33–4 and his *The Politics of Educational Reform, 1920–1940*, pp. 270ff.

¹⁶ Quoted in Addison, *The Road to 1945*, p. 72.

¹⁷ Stephen Brooke *Labour's War. The Labour Party during the Second World War* (Oxford, 1992), p. 131.

¹⁸ T. C. Worsley, *Barbarians and Philistines. Democracy and the Public Schools* (1940) and *The End of the Old School Tie* (1941). The anti-public-school polemic was already an established art form before the war. See Graham Greene, *The Old School* (1934), and Cyril Connolly, *Enemies of Promise* (1939).

¹⁹ Board of Education, *The Public Schools and the General Educational System* (Fleming Report, 1944).

²⁰ See, for example, Clement Attlee, *The Will and the Way to Socialism* (1935), p. 81, and *The Labour Party in Perspective – and Twelve Years Later* (1949), pp. 107, 112, 186; also Hugh Dalton, *Practical Socialism for Britain* (1935), p. 323.

the rise of the new grammar school élite. The product of the scholarship system – she had won scholarships to her local grammar school and Manchester University – Wilkinson marshalled emotional as well as intellectual arguments in favour of upward mobility:²¹ ‘I cannot agree with those people who say that by setting up distinctions of brains between people you are only producing another kind of distinction. I am sorry if people feel like that, but I am glad to think that we are not all born the same’.²² Her successor, George Tomlinson, agreed. Tomlinson was not himself a grammar-school product – his parents had been too poor to afford anything more than an elementary school education – but he thought of educational policy entirely in terms of extending the old school tie rather than abolishing distinctions.²³

The majority of Labour MPs were paid-up meritocrats. A Party pamphlet neatly summarised the accepted wisdom of the time:

People are not equal in their capacities. Some are more capable with their hands, others with their brains. The purpose of a socialist society is to make the best use of all the rich variety of gifts which people possess. Our ideal is not uniformity but diversity through which all people will contribute to the common good in their own way.²⁴

Enthusiasm for comprehensive schools was almost a mark of eccentricity. The tiny pro-comprehensive lobby (it had no more than half a dozen hardline members)²⁵ aroused general scorn when it suggested that Ellen Wilkinson’s salary should be cut in protest against her pro-tripartite philosophy. Party spokesmen excoriated her critics and celebrated her educational philosophy:

There are differences in intelligence among children as well as among adults. There are distinctions of mind and these are imposed by nature. I am afraid that is a fact which we cannot get over. Children will be different in bent, and in intellectual capacity. There is a purpose in education and that is to draw out and develop the best in every child. Because children differ in their intellectual make up, it seems to me that different provisions must be made by the Ministry of Education.²⁶

Though opinion was more divided in the rank-and-file, grammar school supporters probably outnumbered advocates of reorganisation. Richard Crossman was struck

²¹ Betty D. Vernon, *Ellen Wilkinson 1891–1947* (1982), p. 6; Kenneth O. Morgan, *Labour in Power 1945–51* (Oxford, 1984), p. 174. For a highly judgemental debate on Wilkinson, see Billy Hughes, ‘In Defence of Ellen Wilkinson’, *History Workshop Journal* Vol. 7 (Spring 1979), pp. 157–60; David Rubinstein, ‘Ellen Wilkinson Re-considered’, *History Workshop Journal* Vol. 7 (Spring 1979), pp. 161–69; Caroline Benn, ‘Comprehensive School Reform and the 1945 Labour Government’, *History Workshop Journal* Vol. 10 (Autumn 1980), pp. 197–204. Billy Hughes was her Parliamentary Private Secretary from 1945 to 1947. ²² F. Blackburn, *George Tomlinson* (1954), p. 169.

²³ *Ibid.*

²⁴ *Labour and the New Society. A Statement of the Policy and Principle of British Democratic Socialism* (1950), p. 11. The Conservatives soon began to echo these arguments, with David Eccles, for example, assuring the electorate that the ‘sharing of power on the basis of merit, and merit alone, was true Conservative democracy’.

²⁵ Vernon, *Ellen Wilkinson*, pp. 218–19.

²⁶ *Ibid.*, p. 56.

by the enthusiasm for grammar schools among delegates to the Labour Party conference: 'nearly all the delegates either were at grammar school or have their children at grammar school, and are not quite so susceptible to the romantic socialism of the 1920s'.²⁷

The Ministry of Education was permeated by a tripartite philosophy. It insisted that 'everyone knows that no two children are alike. Schools must be different too, or the Education Act of 1944 will not achieve success. They must differ in what they teach and how they teach it, just as pupils differ in tastes and values.'²⁸ The innate differences between children, which widened as they grew older, rather than the convenience of educationalists, necessitated educational selection.²⁹ It praised grammar schools for grouping the highly intelligent together, 'so that the teaching may be specially suited to their needs, and the pace of their work need not be slowed down to give a chance to less able children'.³⁰ It argued that secondary moderns, precisely because they were freed from the pressures of external examinations, would be able to 'work out the best and liveliest forms of secondary education suited to their pupils',³¹ and ridiculed comprehensive schools as too large, too amorphous, and too experimental, adding that 'past experience suggests that schools with a limited and well-defined aim are the most likely to succeed in reaching and maintaining the highest standards within the particular field they serve'.³²

The bulk of local authorities, whatever their political complexions, remained wedded to the tripartite system. Under pressure of stringent local finances, they found it more sensible to continue the Hadow system, with its divisions between secondary, technical and senior schools, rather than to engage on major reorganisation. Many Labour authorities welcomed the grammar schools as avenues of social mobility for able working-class children, concentrating their attention on making the selection system work fairly. Most authorities feared that comprehensive schools would be massive educational factories, lacking any sense of intimacy, and so set themselves firmly against reorganisation.³³

Confronted with the daunting task of sorting the school population into categories at the age of eleven, the Local Education Authorities increasingly resorted to a battery of sophisticated tests, intended to identify talent regardless of social background. A National Union of Teachers survey of selection in 1947 revealed that, of the 106 LEAs who bothered to respond, seventy-eight used some kind of standardised intelligence test and nearly all used examinations in English and arithmetic.³⁴ By 1952 almost all LEAs had incorporated an intelligence test

²⁷ Janet Morgan (ed.), *The Backbench Diaries of Richard Crossman* (1981), p. 270.

²⁸ *The New Secondary Education. Ministry of Education Pamphlet No. 9* (1947), p. 22.

²⁹ *The Nation's Schools. Their Plan and Purpose. Ministry of Education Pamphlet No. 1* (1945), p. 12.

³⁰ *New Secondary Education*, p. 44. ³¹ *The Nation's Schools*, p. 21. ³² *Ibid.*, pp. 23–4.

³³ Fenwick, *The Comprehensive School*, pp. 60–1.

³⁴ Thom, 'The 1944 Education Act: The Art of the Possible?', p. 117.

into their selection exams.³⁵ Alfred Yates and Douglas Pidgeon, who made a detailed study of grammar school selection in the mid-1950s, and who both favoured the introduction of comprehensive education, concluded that 'the amount of constructive thought and conscientious effort that the officers of the Local Education Authorities have devoted to this task can only be adequately appreciated by those who have had the opportunity of observing at close range the care taken to ensure that procedures of allocation operate as fairly and efficiently as possible'.³⁶ They discovered that 'the "examination" in its best forms comes out as a highly reliable and remarkably valid instrument of prediction, considering what it is expected to do',³⁷ and insisted that 'we would confidently predict, on the basis of the evidence that we have examined, that the reliability and validity of most of the examinations and assessments commonly used to allocate children to grammar schools would be found, if suitable comparisons were made, to be considerably superior to those used, for example, for the General Certificate of Education, for awarding University degrees, for selecting entrants to the civil service, and for a variety of other purposes'.³⁸ By opening grammar school places to general competition, the Act reinforced a post-war revolution in parents' attitudes to their children's education, encouraging working-class parents to hope to send their children to grammar schools and, if their children were successful, to make sacrifices to keep them at school until they were sixteen or eighteen.³⁹

The combination of intense competition and rigorous selection ensured that grammar school pupils were characterised by their intellectual ability rather than by their social backgrounds. Jean Floud and A. H. Halsey concluded, on the basis of examining selection in southwest Hertfordshire and Middlesbrough in 1956, that 'if by "ability" we mean "measured intelligence" and by "opportunity" access to grammar schools, then opportunity may be said to stand in close relationship with ability in both these areas today', adding that 'we may reasonably conclude that in very many, if not in most, parts of the country the chances of children at a given level of ability entering grammar schools are no longer dependent on their social origins'.⁴⁰ As the schools improved the quality of their intake they also extended the range of their ambitions. Even the less distinguished schools ceased to limit their horizons to the local élites, concentrating instead on preparing their pupils for the universities, the professions and the metropolitan establishment.⁴¹

Eric James, then High Master of Manchester Grammar School, presented an eloquent summary of the argument that Britain was in the middle of a meritocratic

³⁵ *Ibid.*, p. 123.

³⁶ Yates and Pidgeon, *Admission to Grammar Schools*, p. 20.

³⁷ *Ibid.*, Ben S. Morris' foreword, p. viii.

³⁸ *Ibid.*, p. 143.

³⁹ J. E. Floud, A. H. Halsey and F. M. Martin, *Social Class and Educational Opportunity* (1956), p. 147.

⁴⁰ *Ibid.*

⁴¹ See, for example, Colin Lacey, *Hightown Grammar: The School as a Social System* (Manchester, 1970), pp. 26–31 and fig. 3, p. 14.

revolution in *Education and Leadership* (1951).⁴² The country, he argued, had to a remarkable extent been transformed from a society divided by class to one stratified by merit; and the engines of this revolution had been the grammar schools. 'Every child from Bricktown Secondary School who secures a commission, or a position in the administrative civil service, or a controlling place in industry or commerce', he reasoned, 'is a portent of an immense social change, the slow creation of an élite of merit, a transfer of power to those whose qualification for wielding it is neither birth nor wealth, but talent.'⁴³ By sifting the population for natural leaders and then introducing them to the traditions of high civilisation, the grammar schools were dissolving inherited class barriers, spreading 'sweetness and light' to the working classes, and acting as bulwarks against the rule of 'the rich, or the well-born, or the demagogues, or the strong'.⁴⁴ The fact of individual differences in natural endowment was undeniable; and the solution to the problem of boosting the economy and extending high culture lay in recognising and exploiting such differences.

This argument reflected the heartfelt sentiments of numerous grammar school masters throughout the country. It also found widespread support among parents and the wider teaching profession. Even in the mid-1960s, during a vigorous campaign against selection, parents and teachers alike tended to believe that intelligence tests and examinations measured innate abilities, sorting children into their appropriate educational slots.⁴⁵ Brian Jackson discovered that the overwhelming majority of teachers in his survey supported streaming and selection; that well over half the parents 'thought the system was basically sound and should be continued exactly as it was'; and that "'A" stream parents constantly referred to IQs, and commonly quoted figures'.

A meritocratic revolution?

The 1944 Education Act clearly did something to promote equality of opportunity, abolishing fees in most state-sector schools and invigorating the grammar schools. But it sadly failed to usher in the meritocratic society of which Eric James spoke and so many of his colleagues dreamed.

The work of a quintessentially Tory politician, the Act reformed in order to preserve.⁴⁶ It pandered to a litany of cherished Conservative beliefs – the relevance

⁴² On Eric James and his critics, see McCulloch, *Philosophers and Kings*, pp. 70–6, 78–81.

⁴³ Eric James, *Education and Leadership* (1951), p. 38.

⁴⁴ *Ibid.*, pp. 107, 105, 111.

⁴⁵ Jackson, *Streaming*, pp. 90–7.

⁴⁶ See, in particular, Addison, *The Road to 1945*, pp. 237–9; Kevin Jeffreys, 'R. A. Butler, the Board of Education and the 1944 Education Act', *History* Vol. 69 (1984), pp. 415–31, esp. p. 427; Brian Simon, 'The 1944 Education Act: a Conservative Measure?', *History of Education* Vol. 15, No. 1 (March, 1986), pp. 31–43 and his *Education and the Social Order 1940–1990* (1991), pp. 23–87; and Thom, 'The 1944 Education Act: The Art of the Possible?', pp. 101–28.

of traditional religion, the virtue of variety and de-centralisation, the value of hierarchy and privilege – and left the balance of power in the educational world unaltered, with the LEAs retaining their autonomy and the Churches preserving their accumulated powers. The Fleming Report protected the public schools behind a mountain of waffle, and the Norwood Report helped to ensure that the traditional school disciplines retained their position in the academic pecking order.

The Ministry lacked the money to make a reality of even Butler's cautious vision. In the aftermath of the war, educationalists were more concerned with making ends meet than with ushering in a meritocratic utopia. The post-war baby boom and the burgeoning new housing estates put an almost intolerable burden on school buildings. In 1947 the Ministry calculated that it would have to provide 1,150,000 new school places to keep pace with demand. By 1950 it was almost 200,000 places behind schedule. Many secondary moderns were just the old elementary schools with new nameplates. Most LEAs reported a persistent shortage of teachers. The school-leaving age was not raised to sixteen until 1972.

Most disappointingly of all, the Act did little to promote technical education. The tripartite system quickly turned out to be a bipartite system: in 1955 only 4.4 per cent of secondary school children were educated in technical schools and by 1958 this had shrunk to 3.7 per cent.⁴⁷ Ministry of Education officials were much more interested in strengthening grammar schools than in establishing technical schools.⁴⁸ Most LEAs lacked either the capital or the will to build new technical schools. Some encouraged established secondary schools to develop a technical stream. Others argued that impending comprehensive reorganisation would make technical schools irrelevant.⁴⁹ Employers and trade unionists were strikingly hostile to technical schools – employers because they preferred grammar school types and trade unionists because they did not want education distorted by early specialisation or corrupted by the world of work.⁵⁰ The bulk of teachers continued to look down on technical education as intolerably vulgar.

This shortage of technical schools meant that most eleven-year-olds confronted a stark choice between two sorts of schools: grammar schools, with their high reputations and established links with the universities and the professions, and secondary moderns, with their dismal reputations and predilection for preparing their pupils for dead-end jobs. It would hardly be possible to design a system more calculated to excite anxiety and despondency in the population at large. On the day the examination results were published parents sat, according to David Glass, 'like King Aegeus ... on the cliffs, waiting to see if the returning sails are black or white'. A. J. P. Taylor advised 11-plus failures bluntly to 'run away to sea rather than go to a secondary modern'.⁵¹

⁴⁷ Gary McCulloch, *The Secondary Technical School. A Usable Past?* (1989), pp. 3, 66. On the success of the technical schools, see Thelma Veness, *School Leavers* (1962), p. 162. ⁴⁸ *Ibid.*, p. 49.

⁴⁹ *Ibid.*, pp. 61–5.

⁵⁰ *Ibid.*, pp. 79–97.

⁵¹ Both quoted in W. H. G. Armytage, *Four Hundred Years of English Education* (1964), p. 241.

To make matters worse, wide local variations in the provision of places meant that a child's educational career might be decided by an accident of geography rather than by his personal abilities and needs. The number of grammar school places available varied enormously from one part of the country to another. In Gateshead only 8 per cent of children went to grammar school, whereas in Merioneth as many as 60 per cent went. Places might even vary within a particular educational district. In the West Riding in 1952, for instance, there were places for 40 per cent of the children in one district and for only 15 per cent of the children in another. The marks needed to get into a grammar school varied accordingly. In general, most educational authorities agreed that the minimum standard of ability and attainment required for admission to grammar schools was an arbitrary standard determined by the accommodation available.⁵² The regional distribution of places bore no relation to the regional distribution of abilities or occupations. In Wales, 29 per cent of children went to grammar schools, yet the average IQ was slightly below the national average and the region contained the largest proportion of semi-skilled and unskilled manual workers' children in the country. Only 13 per cent of children in the South went to grammar schools, yet the average IQ in the South was slightly above the national average and the region contained the highest proportion of professional and salaried workers' children in the country.⁵³ Irrational though it was, the regional variation in the provision of grammar school places had a dramatic impact on the life-chances of schoolchildren. In areas where more than 23 per cent of children went to grammar schools, 11 per cent of the age group entered full time higher education, compared with only 7.5 per cent in areas where grammar school places were provided for 18 per cent of children or under.⁵⁴

Such institutional anomalies encouraged the critics of the selective system to mobilise emotional as well as scientific arguments in support of their case. They emphasised the damage it did to the home life, educational progress, and emotional development of the children who were subjected to it; and the fact that so many children sat the 11-plus examination, and that so much hung upon the outcome, ensured that they did not lack ammunition to support their case.⁵⁵ They pointed out that far-seeing and anxious parents chose to live where grammar school places were numerous and coached their children in examination techniques from an astonishingly early age. Agencies designed to coach children for the examination flourished, and advertisements for a certain breakfast cereal included specimen test questions, with the implication that children fed on the cereal would perform

⁵² *The Politics of Education*. Edward Boyle and Anthony Crosland in *Conversation with Maurice Kogan* (Harmondsworth, 1971), p. 174.

⁵³ J. W. B. Douglas, *The Home and the School: A Study of Ability and Attainment in the Primary School* (1964), pp. 54–55. Paradoxically, waste of talent through early leaving was especially high in those areas where grammar school places were in short supply.

⁵⁴ Committee on Higher Education (Robbins Committee), *Higher Education, Appendix One*, Cmnd 2154 – 1 (1963), para. 53.

⁵⁵ Simon, *Intelligence, Psychology and Education*, p. 97.

better.⁵⁶ They argued that primary schools spent a disproportionate amount of their time cramming children for the examination, concentrating on the able children at the expense of the average, and abandoning progressive teaching methods in the pursuit of examination success. They suggested that eager parents offered children bribes, in the form of presents like bicycles, to encourage them to do well in the examination. They also argued that young children suffered undue emotional strain because their future careers depended on an examination taken at such an early age.

By the mid-1950s a number of influential educationalists were highly critical of the practical effects of testing. Professor Pilley's correspondence with local Directors of Education and Chief Education Officers about the Moray House tests revealed plenty of discontent with the established system. The Director of Education for the County Borough of Wigan emphasised that cramming was commonplace in his schools:

We find, from our own experience, that teachers endeavour by any means possible to obtain copies of tests which are likely to be helpful to them in their preparation of the pupils for the classification examinations. We know of instances where teachers have surreptitiously copied a Moray House test and have passed the information to teachers in another area.

He felt that 'the testing of pupils, especially in the junior fourth year, is becoming an obsession with some people and there is no doubt that children are becoming, in some instances, over-tested'.⁵⁷ The Director of Education for the City of Nottingham Education Committee felt that 'under pressure from parents there is a danger that too much of the last year of the primary school is in any case devoted to the problem of selection for secondary schools',⁵⁸ while the Director of Education for the City of Sheffield Education Committee pointed out that 'There are ... indications that the amount of coaching outside school with the object of defeating the true purpose of the selection arrangements for secondary education is increasing. This I have reason to believe is not only carried out by private agencies for commercial ends but in their spare time by some practising teachers.'⁵⁹

The Director of Education for the County Borough of Bootle agreed that testing was introducing important distortions into junior school teaching. 'In the past I have found that there has been a tendency to devote too much time to the testing of children to ascertain their capabilities with a consequent neglect of the teaching

⁵⁶ *Ibid.*, p. 56, n 1.

⁵⁷ Moray House Papers, Professor Pilley's Correspondence about Open Tests, 1956-57: letter from the Director of Education, County Borough of Wigan, to Professor Pilley, 19 July 1956 (private and confidential).

⁵⁸ *Ibid.*, Director of Education, City of Nottingham Education Committee, (F. Stephenson) to Pilley, 20 July 1956.

⁵⁹ *Ibid.*, Director of Education, City of Sheffield Education Committee (Stanley Moffett), to Pilley, 2 August 1956.

of the children', he argued, adding that the result is a concentration on the brighter children and a neglect of those children below average'.⁶⁰

It is against this background of professional anxiety and parental discontent that the academic argument about the 11-plus needs to be set.

Social biology, reform eugenics and the study of mental deficiency

The earliest scientific criticisms of the psychometrists came from a group of social biologists and sociologists based at the Department of Social Biology at the London School of Economics.⁶¹ The Department's research was intended to be a contribution to 'political arithmetic'. Invented by Petty in the late seventeenth century, revived by Booth, the Webbs and other social reformers in the late nineteenth century and the early twentieth and used to great effect in Kenneth Lindsay's *Social Progress and Educational Waste* in 1926, this tradition was concerned with calculating the relative life-chances of people from different backgrounds and with varying abilities.⁶² By combining precise calculations with political polemic it provided social investigators with a powerful tool for both analysing the social structure and agitating for political reform. Its emphasis on widespread personal injustice appealed to egalitarians, while its concern with 'social waste' influenced a political establishment worried about national efficiency and the rational use of the nation's resources.

The Department was the result of a compromise between the Rockefeller Foundation, which had been making a generous grant to the LSE since 1925 and wanted to see at least some of this money used to fund biological research, and the School itself, which wanted to continue to focus on the social sciences.⁶³ William Beveridge, the School's director, got Hogben's name from Harold Laski, and justified his appointment on the grounds that the Webbs had always been keen on bringing 'social science nearer to natural science' and 'treating human biology as an integral part of the study of human society'.⁶⁴ H. G. Wells expressed enthusiastic support for the project, introducing Hogben's inaugural lecture at the LSE with a panegyric to the new science. Together with social anthropology and social

⁶⁰ *Ibid.*, Director of Education, County Borough of Bootle (W. H. Bolam) to Pilley, 14 August 1956.

⁶¹ On the Unit and Hogben, see José Harris, *William Beveridge: A Biography* (Oxford, 1977), pp. 288–90; Garry Werskey, *The Visible College* (1978), pp. 101–15; Sutherland, *Ability, Merit and Measurement* (Oxford, 1984), pp. 143–4; Pauline M. H. Mazumdar, *Eugenics, Human Genetics and Human Failings. The Eugenics Society, its Sources and its Critics in Britain* (1992), pp. 154–8; Elazar Barkan, *The Retreat of Scientific Racism. Changing Concepts of Race in Britain and the United States Between the Wars* (Cambridge, 1992), pp. 230–5.

⁶² A. H. Halsey, A. F. Heath and J. M. Ridge, *Origins and Destinations. Family, Class, and Education in Modern Britain* (1980), pp. 1, 14 (n 3); Karabel and Halsey (eds.), *Power and Ideology in Education*, p. 11. Lancelot Hogben, 'Introduction – Prolegomena to Political Arithmetic', in Hogben (ed.), *Political Arithmetic. A Symposium of Population Studies* (1938), pp. 13–46, provides an intellectual genealogy of the new discipline.

⁶³ Barkan, *Retreat of Scientific Racism*, pp. 230–1.

⁶⁴ Lord Beveridge, *Power and Influence* (1953), p. 250; Soloway, *Demography and Degeneration. Eugenics and the Declining Birth-rate in Twentieth Century Britain* (1990), p. 196.

psychology, he argued, it promised to place the 'dismal science' of economics on a new foundation, turning it into a 'special case of the science of ecology, the science of the balance and welfare of species'. It might also provide scientific support for eugenics, leading to the planned 'elimination of detrimental types and characteristics' and the 'fostering of desirable types and characteristics'. In the process, it might rule out a good deal of cruelty and bigotry, since 'massacres, lynchings, race wars' were for the most part 'premature social biology in a state of inflammation'.⁶⁵ Hogben eventually resigned from his chair because he felt that the reactionary nature of universities had prevented him from convincing his 'professorial colleagues that some knowledge of natural science should be part of the training of those who specialise in social studies'.⁶⁶ Intended to support social reforms, and based on a systematic method of sociobiological analysis, the Unit's work was one of the most impressive contributions to social research between the wars.

Throughout the 1930s Lancelot Hogben devoted considerable intellectual energy to demolishing the major claims of the psychometrists. Although he conceded that the Binet scale provided a reliable description of an important aspect of human behaviour, he rejected the 'dubious speculations' which the testers had built upon this 'solid foundation of fact'.⁶⁷ He suggested that the tests reflected temperamental as well as intellectual qualities,⁶⁸ and emphasised the numerous environmental factors which influenced measured intelligence, such as the uterine environment, the condition of the home, the availability of food, sunlight, sleep and exercise, the social traditions of the family, and the protracted period of development which preceded formal schooling.⁶⁹ On the basis of recent twin studies, he dismissed speculations about the average IQs of different occupational and racial groups as 'devoid of any scientific validity'.⁷⁰ He insisted that the idea that intelligence owed so much to inheritance and so much to the environment was utterly unacceptable: the contribution of nature depended on nurture and *vice versa*, since, in mathematical language, the one was a function of the other. The sneeze which accompanied the taking of snuff was almost the only example of an innate reflex in human social behaviour;⁷¹ every other characteristic was 'the end product of an immensely complicated series of reactions between external agencies and the hereditary materials of the living cells'.⁷² Thus psychometrists tried to base

⁶⁵ H. G. Wells, 'Introductory Remarks to the Inaugural Lecture of the Research Professor of Social Biology in the University of London' (23 October 1930), *Economica* Vol. 11, No. 31 (1931), p. 3. All quotations are taken from the same page.

⁶⁶ Hogben's introduction in *Political Arithmetic*, p. 46. Beveridge commented that the 'disappearance of social biology from the School of Economics was a symptom only of a larger defeat' (*Power and Influence*, p. 252).

⁶⁷ Hogben, *Nature and Nurture* (1933), p. 28.

⁶⁸ *Science for the Citizen* (1938), p. 1072.

⁶⁹ Hogben, *Nature and Nurture*, p. 28.

⁷⁰ *Ibid.*

⁷¹ *Genetic Principles in Medicine and Social Science* (1931), p. 93.

⁷² *Ibid.*, p. 98. In a letter to *The Times* (3 November 1976, p. 17), P. B. Medawar rightly emphasised that these considerations are much more damaging to the hereditarian views of intelligence than any doubts about the probity of Burt's research.

their estimates of the heritability of intelligence on the evidence of shoddy experimentation in which a crucial factor – the environment – could not be held constant:

A human society may be crudely compared to a badly managed laboratory in which there are many cages each containing a pair of rats and their offspring. The rats are of different breeds. The cages are at different distances from the windows. Different cages receive different rations. Rats in the same cage cannot all get to the feeding trough together. Some get more food and light than others.⁷³

Impressed by the inextricability of inheritance and the environment, and convinced that the peculiar problems of social biology resulted from the fact that man was the most teachable of all the animals, he warned against all one-sided approaches to social stratification. 'A genuinely scientific analysis of the genetic basis of occupational and social stratification', he suggested, 'must build on the recognition that human society is a unique biological phenomenon inasmuch as the family is a unit of the cumulative communication of conditioned stimuli as well as a group delimited by genetic affinity'.⁷⁴ Psychometry was consequently far from being 'genuinely scientific'.

Indeed, Hogben seldom missed an opportunity to sneer at the scientific pretensions of his psychological colleagues. He felt that psychology was an undeveloped science as compared with biology and genetics, and suspected its practitioners of 'a pathetically irrelevant anxiety to put their data through the mill of statistical tests based on highly controversial assumptions which they themselves have not examined'.⁷⁵ His criticisms of psychometry were motivated by his much wider campaign against 'the pastime of decking out the jackdaws of class prejudice in the peacock feathers of biological jargon'.⁷⁶ Just as the Jews were the scapegoats of 'Rassenhygiene' in Germany, so in England the entire working class was represented as the menace.⁷⁷

J. L. Gray and Pearl Moshinsky, both researchers in Hogben's unit, presented a radical, although still meritocratic, critique of psychometric orthodoxy. Their main interest lay in how far natural ability found its appropriate educational reward; and they suggested that the findings of Burt, among others, severely underestimated the amount of ability in the manual classes and overestimated the amount in the professional classes. According to their investigations of the secondary school population in London in the mid-1930s, seven fee-paying pupils of high ability would receive a higher education for every one non-paying pupil of

⁷³ Hogben, 'The Limits of the Applicability of Correlation Techniques in Human Genetics', *Journal of Genetics* Vol. 27 (1933), p. 393.

⁷⁴ Hogben's inaugural lecture at the LSE, p. 18.

⁷⁵ *Science in Authority* (1963), p. 121.

⁷⁶ *Dangerous Thoughts* (1939), pp. 54–5.

⁷⁷ *Ibid.*, p. 51. His contempt for eugenics did not prevent him from applying for a grant from the Eugenics Society when his department was dismantled because of lack of money. See Soloway, *Demography and Degeneration*, pp. 196–7.

the same ability, whereas for every one free pupil of relatively low ability who was given the opportunity of higher education, there were 162 fee-paying pupils enjoying the same advantages.⁷⁸ Even within the meritocratic calculus, Burt's work was beginning to seem disturbingly conservative.

J. L. Gray popularised and extended the group's case against psychometry in his short book on *The Nation's Intelligence* (1936). He denounced the discipline's emphasis on 'fixed estates in the realm of the mind' as a feeble excuse for social inequality⁷⁹ and dismissed its practitioners as villains and fools.⁸⁰ Intelligence tests, he argued, measured only what the testers wanted them to measure.⁸¹ Altered social circumstances would reward different personal qualities, so that tests in a future society concerned more with selling goods than making them might be little more than tests of salesmanship.⁸² He questioned the psychometrists' assumption that intelligence was useful, pointing to incompetent geniuses and productive simpletons.⁸³ The extinction of the race, he suggested, was likely to be the work of the highly intelligent, who were restricting their fertility to an alarming degree.⁸⁴ Besides which, the danger from the military was 'incomparably more real and urgent than any that arises from the presence of a few thousand mentally inferior individuals'.⁸⁵ He pointed out that IQ and social position were hardly correlated, since low-paying jobs (such as teaching) required high intelligence whereas many high-paying positions needed little more than social charm.⁸⁶ Insisting that nature mattered less than nurture in determining test scores, he blamed the poor performance of working-class children on malnutrition and bad housing.⁸⁷ He felt that psychometry's obsession with 'the limits to the social efficiency of individuals' meant that it had outlived its usefulness. The way was now open 'for social psychology to take up the new problem of the part played by temperament and personality in the life of the nation'.⁸⁸

At the same time a new school of what Daniel Kevles has christened 'reform eugenics' began to cast doubt on some of the main points of Galtonian orthodoxy.⁸⁹ Masterminded by C. P. Blacker, a medical psychiatrist who was appointed General Secretary of the Eugenics Society in 1931, the movement tried to dissociate English eugenics from Nazi 'racial science',⁹⁰ to bring it into line with recent developments in the social and biological sciences, and to deal with the doubts, and win the

⁷⁸ J. L. Gray and Pearl Moshinsky, 'Ability and Opportunity in English Education', pp. 334–76, esp. pp. 374–5, and 'Ability and Educational Opportunity in Relation to Parental Occupation', in Hogben (ed.), *Political Arithmetic*, pp. 377–417.

⁷⁹ J. L. Gray, *The Nation's Intelligence* (1936), p. 2. ⁸⁰ *Ibid.*, p. 7. ⁸¹ *Ibid.*, p. 12.

⁸² *Ibid.*, p. 75. ⁸³ *Ibid.*, p. 62, 65. ⁸⁴ *Ibid.*, p. 65. ⁸⁵ *Ibid.*, p. 82.

⁸⁶ *Ibid.*, p. 135. ⁸⁷ *Ibid.*, p. 118.

⁸⁸ *Ibid.*, p. 149. Gray was himself, of course, a lecturer in social psychology.

⁸⁹ Daniel J. Kevles, *In the Name of Eugenics* (New York, 1985), p. 164 introduces this term. Cf. C. P. Blacker, *Eugenics in Prospect and Retrospect*, Galton Lecture 1945, esp. pp. 9–13. See also Soloway, *Demography and Degeneration*, pp. 195–203.

⁹⁰ Cf. Eug/C 185, Blacker to Huxley, 3 May 1935; Eug/C 184 (Aldous Huxley), Blacker to Huxley, 4 December 1933.

support of several respected left-wing biologists.⁹¹ The reform eugenicists shared Galton's outlook on a number of subjects, arguing that nature mattered at least as much as nurture, that men were naturally unequal, and that the multiplication of the unintelligent – or 'the social problem group' as they preferred to call them – posed a serious threat to social progress. But they calculated that the Eugenics Society would never succeed in shaping official policy so long as it was associated with class prejudice and racial bigotry.⁹² To them right-wing eugenics was a farrago of pseudo-science and an excuse for class prejudice and racial bigotry; the movement could survive only if it was reformed from within. They concentrated their energies on revising Galton's legacy rather than on reiterating his gospel of racial improvement. Persuaded by Lancelot Hogben that 'the first task of the social biologist was not to advocate the sterilisation of the unfit, but to undertake the sterilisation of the instruments of research before operating on the body politic',⁹³ they urged that the biology of inheritance was more complex than Galton had imagined; that the rich were not all gifted and the poor not necessarily stupid; that unemployment was a social rather than a biological problem; that the feeble-minded were not multiplying at a menacing rate; that sterilisation would not provide an instant solution to England's problems; and that superior individuals could not be bred like pedigree guinea pigs.

Under the influence of demographers such as David Glass, A. M. Carr-Saunders, and Lancelot Hogben's wife, Enid Charles,⁹⁴ they argued that neo-Malthusian fears of over-population and the multiplication of the unfit had been misguided, since the main threat to national well-being was posed by the overall decline in fertility, and they turned their attention away from differential fertility and negative eugenics to pro-natalism and population planning.⁹⁵ Aware that their tone had often given offence, particularly when they allowed supporters to refer to the poor as 'riff-raff, scum, and dregs',⁹⁶ they began to sanitise the language of eugenics, talking of the population rather than the race and the social problem group rather than the residuum.⁹⁷ At the same time, they tried to establish more amicable relations with the Labour Party, cultivating personal links with Labour intellectuals and arranging informal interviews with selected Labour MPs and

⁹¹ See Pauline M. H. Mazumdar, *Eugenics, Human Genetics and Human Failings. The Eugenics Society, its Sources and its Critics in Britain* (1992), pp. 146–95.

⁹² Soloway, *Demography and Degeneration*, pp. 197–8.

⁹³ 'Social Biology: The Address at the Inauguration of the New Chair', *Eugenics Review* Vol. 22, No. 4 (Jan. 1931), p. 250.

⁹⁴ See, for example, Enid Charles, *The Twilight of Parenthood* (1934); A. M. Carr-Saunders, *World Population* (1936); D. V. Glass, *The Struggle for Population* (1936); R. Kuczynski, *Population Movements* (1936) and 'The Dwindling Family', *The Times*, 28 and 29 September 1936.

⁹⁵ Blacker, *Eugenics in Prospect and Retrospect*, pp. 11, 22. Blacker emphasised the 'remarkably sudden swing over of opinion and sentiment' within the Society. See also Soloway, *Demography and Degeneration*, pp. 203–15.

⁹⁶ *Ibid.*, p. 9.

⁹⁷ *Ibid.*, pp. 164–175. J. B. S. Haldane's 'The Inequality of Man' in *The Inequality of Man and Other Essays* (1932), pp. 22–36, is typical of this style of argument.

would-be MPs in 1931. (One of the few Labour MPs to take the bait was Ellen Wilkinson, who suggested that the Eugenics Society should set up an advisory committee of Labour sympathisers.⁹⁸) To many it must have seemed that Galton's legacy was being undermined even from within his own movement. Having been an ardent Galtonian and an influential supporter of the movement throughout his adult life, Dean Inge resigned in disgust, thundering that the movement had become 'too environmental' and too inclined to dally with 'the silly nonsense about race-suicide'.⁹⁹

Julian Huxley was something of an impresario of reform eugenics. He persuaded Blacker, a former pupil of his at Oxford, to overcome his loathing for Hogben's manner and instead listen to his arguments.¹⁰⁰ He also popularised moderate eugenics, writing in the press, delivering public lectures, and broadcasting on the wireless.¹⁰¹ In summing up the case for 'reform eugenics' in his Galton lecture for 1936,¹⁰² he took the opportunity to aim several shafts at the intelligence testing establishment. He argued that 'neither nature nor nurture can be more important, because they are both essential': any characteristic expressed 'the interaction between a particular set of genes and a particular set of environmental conditions', and it was impossible to separate the two.¹⁰³ He pointed out that Boyd Orr's work on nutrition meant that 'it is no longer legitimate to attribute the observed differences in physique and intelligence between social classes mainly to genetic factors. Genetic differences may, of course, exist; but the strong probability is that most of the differences are dependent on differences in nutrition.'¹⁰⁴ He insisted that intelligence tests revealed little about the innate abilities of groups reared in very different social environments (although he could not refrain from admitting that 'I regard it as wholly possible that true negroes have a somewhat lower average intelligence than the whites or yellows').¹⁰⁵ He argued that eugenics could only realise its aims under conditions of social reform. 'We eugenicists must familiarise ourselves with the outlook and the concepts of sociology, with the technique and practice of social reform', he argued. 'For they are an indispensable part of the machinery we need to realise our aims.'¹⁰⁶

⁹⁸ Soloway, *Demography and Degeneration*, pp. 198–9.

⁹⁹ W. R. Inge, *England* (third and revised edn, 1953), p. xix. Yet reform eugenics did have some impact on Inge's thinking. On p. xxii of the preface he admitted that 'I have come to think that Galton and his followers made rather too much of the supposed intrinsic superiority of the upper and middle class, who have had advantages denied to the manual workers'.

¹⁰⁰ *Ibid.*, Huxley to Blacker, 4 November 1930. Huxley argued that Hogben 'is really on the verge of being a genius' and 'he is one of the very few of my colleagues for whom I have a deep personal affection as well as intellectual respect and interest'.

¹⁰¹ *The Eugenics Review* Vol. 25, No. 4 (January 1934), p. 221.

¹⁰² Julian Huxley, 'Eugenics and Society' (Galton Lecture), *Eugenics Review* Vol. 28, No. 1 (April 1936), pp. 11–31.

¹⁰³ *Ibid.*, p. 14.

¹⁰⁴ *Ibid.*, p. 16.

¹⁰⁵ *Ibid.*, p. 19. He also refused to soften his line on mental defectives and the multiplication of the unfit. See 'What are We to Do with Our Mental Defectives?', *Eug/C* 185. On Huxley's complicated and ambivalent views on race, see Barkan, *Retreat of Scientific Racism*, pp. 178–89, 235–48.

¹⁰⁶ *Ibid.*, p. 31.

Richard Titmuss, a liberal who joined the Eugenics Society in 1937 and, at Blacker's invitation, was elevated to its Council two years later, lent his support to the reformist's case, arguing that the vast disparities in housing, health and nutrition in the population meant that speculations about the innate qualities of different social classes were futile.¹⁰⁷ He insisted that, whereas 'we still have no conclusive proof of the simple inheritance of intelligence',¹⁰⁸ there could be little doubt that sustained vitamin and mineral deficiencies have a harmful effect on mental ability'.¹⁰⁹ 'Many a child classed as dull or backward', he concluded, 'should have been recorded as deficient in vitamin A.'¹¹⁰ He agreed with Raymond Cattell that differential fertility threatened to reduce the nation's intelligence, warning that, if the country continued to rely on depressed communities for its children, then there would be an increase in the 'number of and the incidence of unstable, unemployable, irresponsible, delinquent, dull and backward individuals'.¹¹¹ He feared that the stock of 'independent, co-operative and intelligent citizens' was diminishing.¹¹² But, unlike Cattell, he suggested that 'the most likely method of effecting an improvement in national intelligence and social competence would be to raise the social conditions under which the majority of our children are reared',¹¹³ a solution which could be attained both by stimulating the fertility of the middle classes and by improving the living conditions of the working classes.

Several specialists on mental deficiency helped to underline these arguments. Lionel Penrose, the leading English expert on the genetics of defect until his death in 1972, was persistently critical of psychometrics. He dismissed the idea that 'tests resembling parlour games' could measure innate intelligence,¹¹⁴ and insisted, in his own work with defectives, that they were only used as part of a larger battery of psychological devices.¹¹⁵ He questioned the correlation between social standing and intellectual ability, pointing out that poor defectives were much more likely than rich ones to end up in public institutions.¹¹⁶ Indeed, the widespread fear of the multiplication of the 'social problem group' struck him as a remnant of a primitive fear of the handicapped; the defective, he observed, could all be given the institutional care they needed at a fraction of the cost of armaments.¹¹⁷ He denied that there was any evidence for the widespread fear that national intelligence was declining.¹¹⁸ Sceptical of the rigid distinction between 'nature' and 'nurture', he

¹⁰⁷ On the complicated relationship between Titmuss and the Eugenics Society, see Soloway, *Demography and Degeneration*, pp. 316–17, and Ann Oakley, 'Eugenics, Social Medicine and the Career of Richard Titmuss in Britain 1935–50', *British Journal of Sociology* Vol. 42, No. 2 (June 1991), pp. 165–94. Titmuss remained a member of the Society until 1973.

¹⁰⁸ Richard M. Titmuss, *Poverty and Population. A Factual Study of Contemporary Social Waste* (1938), p. 42. ¹⁰⁹ *Ibid.*, p. 41. ¹¹⁰ *Ibid.*, p. 40. ¹¹¹ *Ibid.*, p. 44.

¹¹² *Ibid.*, p. 43. ¹¹³ *Ibid.*, p. 49.

¹¹⁴ L. S. Penrose, *Heredity and Environment in Human Affairs* (Convocation Lecture of the National Children's Home) (1955), p. 18. ¹¹⁵ *Mental Defect* (1933), p. 14.

¹¹⁶ *Ibid.*, p. 148; *The Biology of Mental Defect* (1949), pp. 39–40. ¹¹⁷ *Mental Defect*, p. 174.

¹¹⁸ *The Biology of Mental Defect*, pp. 120–1. 'The Supposed Threat of Declining Intelligence', *American Journal of Mental Deficiency* Vol. 53 (1948), pp 114–118. However, he had been in broad

was relentlessly critical of orthodox hereditarian arguments, emphasising the environmental origins of such defects as mongolism, trauma and encephalitis.¹¹⁹ He argued that there were many different types of retarded minds, as different from each other as they were from normal minds, and so found only a limited use for the psychometric notion of a normal distribution of abilities. In particular, he suggested that the more severe cases of defect could no more be regarded as the tail of a normal distribution than could dwarfs four feet high, who were vastly more frequent than they should have been on the basis of the normal distribution of statures. He disliked the fact that his professorship, to which he was elected in 1945, was one of 'eugenics' – a name which he associated with uninformed racial bigotry – and eventually, in 1963, managed to change its title to the Galton Professorship of Human Genetics.¹²⁰ Eugenics, he felt, were the victims of outmoded biology as well as disreputable politics.¹²¹ They failed to recognise that genes were efficient only in relation to their environments: changed circumstances demanded different qualities;¹²² technical innovations, such as the invention of spectacles, could compensate for inherited deficiencies.¹²³ They ignored the obvious truth that variations within the species were favourable to long-term survival: a homogenous species might also be an endangered one. 'The genes carried by the fertile scholastically retarded', he warned, 'may be just as valuable to the human race, in the long run, as those carried by people of high intellectual capacity.'¹²⁴

Political arithmetic, population investigation, and the sociology of education

After the war the case against intelligence testing was taken up and extended by a highly influential cohort of sociologists. Though sociology developed late in England, it underwent a period of hectic expansion after the war. The sociologists who presided over this expansion belonged to a tightly knit generation. They were

agreement with Cattell in the late 1930s. See 'Is Our National Intelligence Declining? The Genetic Point of View', Penrose Papers, 65/4.

¹¹⁹ See, for example, *Medical Research Council. Special Report No. 229. A Clinical and Genetic Study of 1280 Cases of Mental Defect* (1938), p. 70. See also Barkan, *Retreat of Scientific Racism*, pp. 260–6.

¹²⁰ 'Lionel Sharples Penrose 1898–1972', *Biographical Memoirs of the Fellows of the Royal Society* (1972), pp. 537–8. See also Mazumdar, *Eugenics, Human Genetics and Human Failings*, pp. 252–3. Blacker felt that Penrose's 'pronouncements now constitute just about our most serious problem' and wondered how he found it possible to 'sit in the Chair founded by a man with most of whose views he disagrees so emphatically'. Eug/C 108 (Fisher), Blacker to Fisher 18 April 1951. Cf. also Blacker to Fisher, 29 June 1949.

¹²¹ See, for example, 'Eugenics', *Scientific Worker* Vol. 6, No 1 (Jan. 1951), pp. 7–8.

¹²² *The Influence of Heredity on Disease* (1934), pp. 76–7.

¹²³ 'Limitations of Eugenics: The Royal Institution of Great Britain Woodhall Lecture', *Proceedings of the Royal Institution* Vol. 39, No. 180 (1963), p. 511.

¹²⁴ *The Biology of Mental Defect*, p. 240.

born within a few years of each other; shared similar provincial and often working-class backgrounds; and went through an almost identical professional training.¹²⁵ No fewer than thirteen graduates in sociology from the London School of Economics in the years between 1950 and 1952 went on to hold key positions within the profession.¹²⁶

The sociology of education was one of the main growth-points within the discipline. A. H. Halsey wrote his doctoral thesis on the implications of the 1944 Education Act for social mobility, and went on in the 1950s to collaborate with Jean Floud 'to give the sociology of education a place in the general development of sociological theory and research'.¹²⁷ Asher Tropp wrote a thesis on school teachers and Olive Banks on parity and prestige in English Secondary Education, while Basil Bernstein studied class, language and school performance. Educational sociologists drew on a variety of well-established traditions: social investigations into working-class living conditions, medical inquiries into the impact of welfare services, economic inquiries into social selection and educational wastage, and, of course, psychological investigations into the distribution of abilities and opportunities. But in borrowing ideas and techniques from adjacent disciplines they invariably translated them into their own language. The result was that, in the post-war decades, the discussion of education quickly became 'sociologised'.¹²⁸ For good or ill, the sociologists managed both to change the climate of opinion on education and to determine the direction of educational policy-making.

The political sympathies of these pioneers were far from anti-meritocratic. Most believed that individuals differed in their innate abilities, and hoped that sociological analysis would reveal the extent to which raw ability was being wasted because of social injustice.¹²⁹ Both Halsey and Floud were concerned to emphasise the social factors which prevented able working-class children from profiting from the scholarship system.¹³⁰ Jean Floud recalls conversations in which the meritocracy was held up as an ideal which could only be achieved by abolishing the family.¹³¹ Yet, as the subject developed, the ideal of equality of opportunity gave way to the ideal of equality of outcome and criticism of the existing social hierarchy was replaced by criticism of all social hierarchies, whatever their basis.¹³² In the

¹²⁵ See A. H. Halsey, 'Provincials and Professionals: The British Post-War Sociologists', *European Journal of Sociology* Vol. 23 (1982), pp. 150–75.

¹²⁶ Halsey lists them as follows: J. A. Banks, O. Banks, M. Banton, B. Bernstein, P. Cohen, N. Dennis, R. Dahrendorf, D. Lockwood, C. Smith, J. H. Smith, A. Tropp, J. Westergaard, and Halsey himself.

¹²⁷ A. H. Halsey, 'Provincials and Professionals', p.165.

¹²⁸ Harold and Pamela Silver, *An Educational War on Poverty. American and British Policy-Making 1960–1980* (Cambridge, 1991), pp. 173–4.

¹²⁹ Cf. Ronald Fletcher, *Science, Ideology and the Media. The Cyril Burt Scandal* (1991), pp. 208–11.

¹³⁰ J. E. Floud, A. H. Halsey and J. M. Martin's *Social Class and Educational Opportunity* (1956) is inspired by this theme.

¹³¹ Author's tape-recorded interview with Jean Floud, 19 June 1984.

¹³² Floud and Halsey, 'The Sociology of Education: A Trend Report and Bibliography', *Current Sociology* Vol. 7, (1958), p. 167.

short term, the sociologists questioned the practical workings of the educational system, exposing numerous barriers to the creation of a meritocracy; in the longer term, some of them went on to question the ideal of meritocracy itself.

The first generation of educational sociologists preserved the pre-war tradition of interest in fertility, social mobility and occupational structure,¹³³ and they naturally owed a great deal to both Eugenics and Social Biology. They inherited several of their characteristic concerns from the Population Investigation Committee, which had been founded in 1936 by the Eugenics Society, acting on a suggestion made by Carr-Saunders in his Galton lecture for 1935,¹³⁴ and which continued to preserve strong links with the Society, housing its office in its headquarters and relying on its staff for assistance. The committee was essentially a research body, composed of eugenicists (particularly pro-natalist or 'positive' eugenicists) together with representatives of relevant organisations – the Medical Research Council, the British Medical Association, the Royal Economic Society, the Royal College of Obstetricians and Gynaecologists – and concerned with inquiry rather than policy and diagnosis rather than treatment.¹³⁵ Its main interest lay in studying the qualitative as well as the quantitative aspects of population problems, with a particular emphasis on declining fertility.¹³⁶ David Glass, who acted as the committee's research secretary from its foundation and in 1948 became Professor of Demography at the London School of Economics, provided the main link between pre-war eugenics and post-war sociology, and did his best to encourage students in the quantitative study of the social structure.

Educational sociologists drew their immediate inspiration from social biology and 'political arithmetic'. Their research arose out of a national study of British social mobility, directed by David Glass and carried out by the Social Research Department of the London School of Economics in 1949.¹³⁷ Glass owed a direct intellectual debt to Lancelot Hogben, with whom he had worked before the war.¹³⁸ But it was T. H. Marshall, also a keen eugenicist,¹³⁹ who initiated the study with a memorandum calling for a long-term programme of research into social selection and differentiation in Britain.¹⁴⁰ Behind this memorandum lay both an intellectual interest in measuring the impact of the welfare state on social stratification and a political commitment to meritocratic allocation. David Glass provided an eloquent statement of the meritocratic prejudices of the researchers:

¹³³ *Ibid.*, p. 167.

¹³⁴ A. M. Carr-Saunders, 'Eugenics in the Light of Population Trends', *Eugenics Review* Vol. 27, No. 1 (April 1935), p. 18.

¹³⁵ C. M. Langford, *The Population Investigation Committee. A Concise History to Mark its Fiftieth Anniversary* (1988); *Population Investigation Committee. A Record of Research and Publications 1936–1978*; 'Population Investigation Committee. First Annual Report', *Eugenics Review* Vol. 29, No. 4 (January 1938), p. 239. See also, Soloway, *Demography and Degeneration*, pp. 247–8.

¹³⁶ C. P. Blacker, *Eugenics in Prospect and Retrospect*. The Galton Lecture 1945, pp. 21–22, 32.

¹³⁷ David Glass (ed.), *Social Mobility in Britain* (1954), reported the findings of this survey.

¹³⁸ Glass's preface, *ibid.*, p. vi.

¹³⁹ Eug/C 227 (Professor T. H. Marshall), Marshall to Blacker, 3 July 1945. ¹⁴⁰ *Ibid.*, p. v.

There are two primary reasons for wishing to see the possibility of high social mobility in a community. First, in order to increase economic and social efficiency, since with a fluid social structure there is more likelihood that positions requiring high ability will in fact be held by individuals who possess high ability. A fluid social structure is also, on that account, more capable of adapting itself to internal and external change. Secondly, from the point of view of the individual, social mobility should ensure that there are fewer square pegs in round holes, and the existence of opportunity to rise in status will in any case provide an incentive for the fuller utilisation of a person's capacities. There may, as a consequence, be less feeling of personal frustration and a greater possibility of social harmony ... Certainly it is one of the postulates of a democratic and egalitarian society that ability, whatever its social background, shall not be denied the chance to fulfil itself.¹⁴¹

The analysis of the impact of education in general, and of the 1944 Education Act in particular, was naturally central to the LSE project. The sociologists shared a widespread public optimism about the implications of universal secondary education. Glass regarded the Act as one of the 'most important measures of the last half century',¹⁴² arguing that, by 'greatly increasing' the amount of social mobility,¹⁴³ it would 'do much to enable ability to fulfil itself';¹⁴⁴ it was nothing less than a harbinger of a new meritocratic social order. The analysis of social mobility thus did a great deal to legitimise the relatively new discipline of educational sociology, associating it with an established and respected branch of social research, providing it with a quantitative methodology, and furnishing it with a well-defined and politically charged body of problems.¹⁴⁵

Social Class and Educational Opportunity (1956) by Jean Floud, A. H. Halsey and F. M. Martin was perhaps the classic post-war contribution to this tradition. The study examined in detail the part education played in social selection, paying particular attention to the impact of the 1944 Education Act on the role of the grammar schools. In order to avoid vague national generalisations, it focused on selection in two contrasting communities: a traditionally prosperous district in the South of England – the South West Education Division of Hertfordshire – and an industrial county borough in the North – Middlesbrough, Yorkshire.¹⁴⁶ The work gained much of its political bite from a mounting suspicion on the left that the Education Act had done less to advance the interests of working class children than had been expected.

¹⁴¹ Glass's introduction, *ibid.*, p. 24. Glass was, however, 'more than a little suspicious of IQ averages for large non-homogeneous populations'. Eug/C 124, Glass to Blacker, 28 March 1947.

¹⁴² *Ibid.*, p. 4.

¹⁴³ *Ibid.*, p. 22.

¹⁴⁴ *Ibid.*, p. 25. Cf. Jean Floud, 'The Educational Experience of the Adult Population of England and Wales as at July 1949', *ibid.*, p. 123.

¹⁴⁵ Cf. with Karabel and Halsey (eds.), *Power and Ideology in Education* (New York, 1977), editors' introduction, p. 11.

¹⁴⁶ J. E. Floud, A. H. Halsey and F. M. Martin, *Social Class and Educational Opportunity* (1956), pp. xiii–xiv.

The authors started their inquiry by relating the social distribution of ability to access to grammar school places, examining the post-war educational revolution 'in the same terms as those in which reform was demanded in the pre-war years'.¹⁴⁷ It concluded resoundingly that, in these terms, the reforms had been successful:

If by 'ability' we mean 'measured intelligence' and by 'opportunity' access to grammar schools, then opportunity may be said to stand in close relationship with ability in both these areas today ... we may reasonably conclude that in very many, if not in most, parts of the country the chances of children at a given level of ability entering grammar schools are no longer dependent on their social origins.¹⁴⁸

A comparison between their results and those obtained by Gray and Moshinsky in the 1930s demonstrated that a massive advance had been made in securing equality of opportunity for children of the same intellectual ability.¹⁴⁹ The meritocratic ideal was being realised, and 'the distribution of opportunity stands today in closer relationship to that of ability (as measured by intelligence tests) than ever before'.¹⁵⁰

Paradoxically, however, working-class children seemed to be losing out in the race for grammar school places. Between the wars the widening of the scholarship ladder had encouraged middle-class children to sit for scholarships rather than to pay fees, and the economic recession and educational cutbacks of the 1930s had led to a decline in the competitive strength of working-class children. The 1944 Education Act, which had turned all grammar school places into free places, produced only a very slight improvement in working-class chances. An obvious increase in the numbers of working-class children at grammar schools concealed very small gains in their relative chances.¹⁵¹ The authors concluded pessimistically that 'under conditions of "full competition", and the provision of places being what it is at present, there is, in effect, a limit to the expansion of their chances of a secondary grammar school education despite their nominal preponderance in the general population'.¹⁵²

That said, the authors went on to interpret their evidence in much more radical terms. Arguing that 'access to grammar schools is a narrowly conceived criterion for educational success' and that 'the IQ is an arbitrary criterion of ability', they suggested some general criticisms of educational selection.¹⁵³ They emphasised that 'measured intelligence is well known to be largely an acquired characteristic',¹⁵⁴ and examined the influence of the environment on test scores. Noting that the crude economic factors which had governed selection in the past – poverty, ill-health, poor attendance, overcrowding and bad schools – had been amoli-

¹⁴⁷ *Ibid.*, p. xiii.

¹⁴⁸ *Ibid.*, p. 139.

¹⁴⁹ *Ibid.*, pp. 51–3.

¹⁵⁰ *Ibid.*, p. 143.

¹⁵¹ *Ibid.*, pp. 141–3. 'Of those working-class boys who reached the age of 11 in the years 1931–41 rather less than 10 per cent entered selective secondary schools. In 1953 the proportion of working-class boys admitted to grammar schools was 12 per cent in Middlesbrough and 14 per cent in South West Hertfordshire'.

¹⁵² *Ibid.*, p. 39.

¹⁵³ *Ibid.*, p. xix.

¹⁵⁴ *Ibid.*, p. 65.

orated by post-war prosperity and social reform, they concentrated instead on more subtle influences. In particular, large families, lack of interest in education, and the absence of a tradition of education in the family tended to depress the IQ scores of working-class children.¹⁵⁵

In *The Home and the School* (1964) J. W. B. Douglas, Director of the Medical Research Unit at the LSE, continued to examine the problem of educational wastage, concentrating on children aged between eight and eleven. Once again, the study was inspired by David Glass and initiated by the post-war Population Investigation Committee; it grew out of a determination to monitor the impact of the welfare state on the condition and fertility of the people. In 1945 the National Survey of Health and Development, directed by Douglas and funded by the Medical Research Council, began to collect information on 5,362 children born in the first week of March 1946, drawn from all social backgrounds and every part of the country. Initially, the survey dealt exclusively with the availability and effectiveness of British ante-natal and maternity services, relying on the testimony of the mothers and the reports of the Medical Officers of Health. But the uniqueness of the sample, combined with the importance and quality of its results, persuaded the Population Committee to continue the investigation, following the progress of an entire cohort from birth into adulthood. (James Douglas recalls that the idea of continuing the investigation occurred at more or less the same time to David Glass, Richard Titmuss and himself.)¹⁵⁶ In particular, the provision of educational opportunity within the welfare state became a central theme in the investigation.¹⁵⁷ Much to Douglas' surprise, his discoveries on the subject were widely discussed and reverently cited.¹⁵⁸ The Plowden Committee asked for copies of the book in galley proofs and summoned Douglas for an interview; Michael Young, a member of the committee, prepared a summary of the book, complete with a potted history of the sociological tradition to which it belonged.¹⁵⁹

Douglas demonstrated that, during the primary school years, measured intelligence bore a close relationship to school performance and success in the 11-plus. But he also showed that, even in the few years between eight and eleven, measured intelligence responded to environmental influences, and that, for children in the border zone for places with IQs of 110 and 120, environmental factors dramatically affected school allocation; 11-plus results were startlingly different from those predicted by IQ tests administered at the age of eight. The condition of the home, the degree of parental encouragement, the academic record of the primary school (measured by the proportion of its pupils regularly going to grammar schools), and the 'streams' into which children were initially divided –

¹⁵⁵ *Ibid.*, pp. 65–110. The argument is summarised on pp. 144–9.

¹⁵⁶ Langford, *The Population Investigation Committee*, p. 11.

¹⁵⁷ J. W. B. Douglas, *The Home and School. A Study of Ability & Attainment in the Primary School* (1964), David Glass's Introduction, pp. 11–15.

¹⁵⁸ Silver and Silver, *An Educational War on Poverty*, p. 174.

¹⁵⁹ *Ibid.*, pp. 225–6.

all these environmental factors sharply distorted the allocation of places, improving the chances of middle-class children and damaging those of their working-class contemporaries.¹⁶⁰

Working-class children started their school careers with the handicaps of poor physical conditions and unstimulating cultural environments; they tended to go to schools with a low record of academic success at the 11-plus; they often lacked encouragement at home and sometimes had to deal with apathy and neglect; they were all too frequently allocated to lower streams in the junior schools, and their performance suffered in consequence. With middle-class children the situation was reversed. Affluent homes, cultural stimulation, good schools, parental encouragement, and respect for learning among their schoolmates led to a rate of success unjustified by their innate abilities.

Douglas spent much of his book weighing up the importance of various environmental influences. Parental expectations and attitudes had a dramatic impact on school performance. The children of parents who *expected* them to go to secondary modern schools, for example, received 60 per cent fewer places than their abilities at the age of eight suggested. Throughout school life parental interest deeply affected children's attitudes and performances, leading to vigorous study and intense concentration amongst those favoured with interested parents and lack of concentration and emotional instability amongst those with apathetic and difficult parents. The children of lower working-class parents were always at a particular disadvantage.¹⁶¹ The quality of the primary school reinforced these pressures, with children at schools with a good academic record gaining 20 per cent more places than their test scores at eleven justified, those with a fair record gaining 3 per cent fewer places, and those with a poor record gaining 37 per cent fewer places. The concentration of the best primary schools in prosperous residential areas, combined with the ability of parents with a car to drive their children to favoured schools, reinforced the class bias of these figures.¹⁶² Early streaming also reinforced the process of social selection. The clean and well-dressed children of middle-class parents stood a much better chance of being allocated to the upper streams than did the equally able but ill-turned-out children of the working class. Their measured ability then tended to increase up to the age of eleven, whereas that of children in lower streams declined; children took on the characteristics of their peers, turning streaming into a self-fulfilling prophecy.¹⁶³

Clearly, the selective system of education was a highly inefficient 'capacity-catching machine', wasting potential ability during the primary school years and misdirecting it at the point of selection. Many clever children, particularly working-class children, were failing to reach selective secondary schools; and some of those who did pass the 11-plus dropped out of school as soon as they could. Of

¹⁶⁰ The environmental influences highlighted by Douglas are remarkably similar to those emphasised by Burt in *The Backward Child*. See Fletcher, *Science, Ideology and the Media*, pp. 224–5.

¹⁶¹ Douglas, *Home and School*, pp. 89–97. ¹⁶² *Ibid.*, pp. 133–43. ¹⁶³ *Ibid.*, pp. 144–50.

children with IQs over 115, 15 per cent left higher education at the age of sixteen, and four-fifths of these were working-class. Douglas concluded by suggesting that improved primary schools in working-class areas and extensive nursery education might make for a more effective use of the nation's potential ability.¹⁶⁴

In *All Our Future* (1968), Douglas and his colleagues turned to the secondary school careers of this cohort of children, again paying particular attention to the relationship between innate ability and academic achievement. Once again, they were interested in the impact of a system of universal secondary education expressly intended 'to give each child, irrespective of his family circumstances and social origins the type of education that was best suited to his abilities'.¹⁶⁵ Their conclusions were uniformly pessimistic. The unprecedented expansion of educational facilities and personal opportunities had done nothing to improve the life-chances of disadvantaged children, and middle-class pupils retained almost intact their historical advantages over their working-class contemporaries. In 1960 the ratio of middle-class to manual working-class children in the universities was exactly the same as it had been between 1928 and 1947.¹⁶⁶ The class inequalities in opportunity observed in the primary schools were extended in the secondary schools, and began to affect even the most able working-class children. The poor but highly-able children who had encountered no obstacles to entry to grammar schools found that they suffered from numerous handicaps as their careers progressed, and they tended to gain poor 'O' level certificates and to leave early.¹⁶⁷ Nearly half of the most able children from lower working-class homes left school before they were sixteen-and-a-half, leaving their talents unexploited and their teachers disappointed.¹⁶⁸ The main cause of this problem lay in the attitudes of parents rather than the operation of schools. Working-class parents had far lower ambitions and expectations than their middle-class counterparts, and this was vividly reflected in the poor academic performance of their children, particularly at the end of compulsory education.¹⁶⁹ Working-class attrition led to a vast wastage of the nation's ability, so that about 5 per cent of the next generation of manual workers were likely to be recruited from pupils who, in other circumstances, might have qualified for administrative or professional occupations.¹⁷⁰

This tradition of sociological inquiry was clearly rooted in the inter-war passion for meritocratic social reform. Its practitioners were fond of arguing that an efficient mechanism of selection would serve the ends of both social justice and national efficiency. They felt that social and geographical inequalities acted as 'intrusions on the ideal relationship of ability to opportunity and performance',¹⁷¹

¹⁶⁴ *Ibid.*, pp. 151–60.

¹⁶⁵ J. W. B. Douglas, J. M. Ross and H. R. Simpson, *All Our Future: A Longitudinal Study of Secondary Education* (1968), p. xi. ¹⁶⁶ *Ibid.*, pp. xii–xiii. ¹⁶⁷ *Ibid.*, p. 27.

¹⁶⁸ *Ibid.*, p. 185.

¹⁶⁹ *Ibid.*, pp. 28, 34, 177.

¹⁷⁰ *Ibid.*, p. 185.

¹⁷¹ A. H. Halsey, 'Review of the Conference', in Halsey (ed.), *Ability and Educational Opportunity* (1961), pp. 28–9.

and hoped that their research would help to make the ideal actual. They tended to measure at least part of the success of education in terms of its capacity to mobilise human resources and contribute to economic growth. Floud and Halsey, for example, concentrated on 'the problem of making the best use of human resources in a modern economy'.¹⁷² They recognised that, so long as education had to produce the differentiated skills required by an advanced society, some form of selection was unavoidable: they simply deplored the fact that in England selection seemed to be too early and too inaccurate.¹⁷³ They agreed that individuals differed in their natural capacities, though they felt that psychologists had frequently overestimated the ability of IQ tests to disentangle inherited and acquired aptitudes. Indeed, they tended to be ambivalent – it is tempting to say opportunistic – in their treatment of the tests. When tests pointed to the lower average ability of the working-class population, they emphasised the importance of environmental influences; when they indicated a wastage of working-class talent, they quoted them in support of their case for educational reform. They certainly agreed that, given a system of early selection for élite education, tests were much less class-biased than more subjective judgements of ability. Halsey and Floud demonstrated conclusively that a Local Education Authority's decision to abandon the use of IQ tests led to a 'slight but persistent diminution of opportunity for working-class boys and a corresponding increase in opportunity for those at the higher social levels'.¹⁷⁴ They shared a commitment to the ideals of the inter-war psychologists even if they lacked a confidence in their methods. Jean Floud, for example, argued that the 'fundamental' problem in education was that of reducing differences in educational performance to differences of natural endowment:

Some pupils will always do better than others, but it is desirable that the order of inequality should be, as it were, a natural one, unmarred by fictitious and irrelevant social differences. No matter that such an objective is 'only an ideal' and must in practice remain for ever unattainable; the important thing is that it should guide policy and that we should actively seek to approach it.¹⁷⁵

The main conclusion of these 'political arithmeticians' was simple but devastating: educational selection was, to a disconcerting degree, a process of social selection disguised as academic selection. Instead of determining social strati-

¹⁷² Jean Floud, 'Social Class Factors in Educational Achievement', *ibid.*, p. 91. Halsey, Floud and Anderson's 'reader' in educational sociology was characteristically entitled *Education, Economy and Society* (1961). However, Halsey added the caveat that 'an educational system which was closely and completely geared to supplying manpower for the productive organisation of society would, at the same time, be an agency of dehumanisation', *ibid.*, p. 20.

¹⁷³ Halsey, 'Review of the Conference', p. 41.

¹⁷⁴ Floud and Halsey, 'Social Class, Intelligence Tests, and Selection for Secondary Schools', *Education, Economy, and Society*, p. 214.

¹⁷⁵ Floud, 'Social Class Factors in Educational Achievement', p. 93.

fication, education was effectively validating distinctions which had their origins elsewhere. Floud, Halsey and Martin demonstrated that, within grammar schools, social background frequently shaped academic performance and determined how long children remained in school. The problem, they suggested, was one of assimilation. The traditions and aspirations of the grammar schools had been shaped by middle-class culture, and often seemed alien and antagonistic to successful working-class children. Paradoxically, the increase in the intake of working-class children after the 1944 Education Act only exacerbated the problem, encouraging the creation of a 'counter-culture' which resisted school values. A small and highly selected minority of 'scholarship boys' had been easily assimilated, accepting school values, making the most of their opportunities, and becoming socially mobile. An increase in numbers had made the school's job more difficult.¹⁷⁶

The 'political arithmetic' tradition eventually generated a fully-fledged 'sociology of talent', a vigorous sub-discipline which analysed the environmental determinants of educational performance.¹⁷⁷ Sceptical about the accuracy of intelligence testing, but reluctant to pronounce on the nature-nurture debate, sociologists tended to bypass the problem of the genetic limits to educability and to concentrate instead on environmental influences on intellectual development and academic performance.¹⁷⁸ They suggested that all measures of academic ability – intelligence tests, teachers' assessments, and examination results – were subject to social influences. In analysing these influences, they increasingly shifted their attention away from gross material factors, such as poverty, malnutrition and overcrowding, towards the more subtle effects of cultural background and personal motivation.¹⁷⁹ In the past, it had been possible to analyse the problem of educational wastage in simple material terms. 'Poverty caused ill-health and poor attendance; facilities for study could not be provided in slum homes, nor proper instruction given in overcrowded schools; grammar school places were refused by parents who could not afford to forgo adolescent earnings'. But, in the post-war period, rising standards of living, improved social services, and the rapid democratisation of access to secondary and higher education, had done a great deal to eliminate the more obvious material disadvantages.¹⁸⁰ In southwest Hertfordshire in 1952, for example, the material conditions of the home, at any given social level, did not distinguish the successful from the unsuccessful grammar school candidates; grammar school boys were not those whose parents earned the highest incomes and occupied the best housing.¹⁸¹ The social influences on educational selection took much more subtle forms.

¹⁷⁶ Floud, Halsey and Martin, *Social Class*, p. 148.

¹⁷⁷ Floud and Halsey pointed out that 'it was, in fact, a psychologist, Cyril Burt, who carried out some of the earliest and best sociological work on the influence of the social environment on educability; and, in general, psychologists have perhaps been somewhat more successful than sociologists in coming to grips with the scientific problem'. 'The Sociology of Education', p. 183.

¹⁷⁸ *Ibid.*, pp. 182–3.

¹⁷⁹ *Ibid.*, p. 184.

¹⁸⁰ Floud (ed.), *Social Class and Educational Opportunity*, p. 144. ¹⁸¹ *Ibid.*, pp. 88, 90, 140.

Sociologists increasingly focused on the problem of social class, treating it not simply as a factor in the distribution of educational opportunity but also as a cultural determinant of educational performance.¹⁸² Their interests shifted away from pre-war obsessions with fertility, social mobility and occupational structure and towards the micro-sociology of family values and classroom relationships and the macro-sociology of class formation. John and Elizabeth Newsom, of the Child Development Research Unit in Nottingham University, studied the influence of social class on early child-rearing.¹⁸³ J. B. Mays, of the Department of Social Science at Liverpool University, emphasised the cultural gap between the school and the working-class family.¹⁸⁴ Under the influence of these sorts of studies, sociologists increasingly insisted that the educability of different social groups was a function not of their postulated average innate capacities, frustrated or encouraged by their material environment, but instead of their attitudes and aspirations, their parents' educational backgrounds, and their responses to the ethos of their educational institutions. They demonstrated quite clearly that parental income and the social grading of the father's occupation were less important influences than more nebulous cultural factors, such as parents' attitudes towards their children's education and future occupations, the mother's educational achievements, and mother's occupation before marriage.¹⁸⁵

They also suggested that, within social class groups, the size of the family was the most important single index of the favourable or unfavourable influence of the home environment on educational prospects. Children from small families, at all social levels, tended to do better in intelligence tests, competitive examinations, and school records.¹⁸⁶ John Nisbet used this evidence to produce an ingenious explanation of the well-established inverse correlation between IQ and family size, arguing that children from large families gained only restricted contact with adults and so lagged behind in the development of verbal reasoning: a problem which had only seemed open to genetic explanation was now given an environmental interpretation.¹⁸⁷ The sociologists thus pointed to a number of non-genetic influences which made for educational success: small families, which promoted contacts between children and parents and so speeded up early learning; parental encouragement, which prodded children to pay attention at school and continue their studies at home; and a stable family environment, which removed distractions

¹⁸² Halsey (ed.), *Ability and Educational Opportunity*, p. 29.

¹⁸³ John and Elizabeth Newsom, *Infant Care in an Urban Community* (1963) and *Four Years Old in an Urban Community* (1968).

¹⁸⁴ J. B. Mays, *Education and the Urban Child* (Liverpool, 1962); *Growing up in the City. A Study of Juvenile Delinquency in an Urban Neighbourhood* (Liverpool, 1964); *The School in its Social Setting* (1967).

¹⁸⁵ Floud and Halsey, 'The Sociology of Education', p. 184.

¹⁸⁶ Floud (ed.), *Social Class and Educational Opportunity*, pp. 88, 90, 140; Floud and Halsey, 'The Sociology of Education', p. 185.

¹⁸⁷ John Nisbet, 'Family Environment and Intelligence', Halsey, Floud and Anderson, *Education, Economy and Society*, pp. 273-88.

and provided emotional security. They left little doubt that social groups which encouraged such families – the middle-classes, skilled and ambitious workers, the Jews, and committed non-conformists – provided their children with invaluable educational advantages, whatever their measured IQs.

These sociologists also began to develop an environmentalist interpretation of ‘educational wastage’. Throughout the century administrators had speculated that England was failing to exploit its potential human resources. Psychologists had been employed precisely to sift the population for able children hidden to more conventional methods of assessment. The sociologists added a new dimension to this tradition, arguing that educational selection helped to destroy potential ability by persuading those children who failed that they had little to gain from academic effort. Secondary modern children were ‘shades of the 11-plus’, labelled as failures after a few years formal schooling and deprived of motivation and encouragement. They lacked self-respect, performed well below their potential abilities, and put their efforts into disrupting a system which had treated them as rejects.¹⁸⁸

Under the pressure of such examples, post-war sociology became increasingly environmentalist in theory and egalitarian in inspiration, concentrating on the ways in which social pressures shaped, rather than encouraged or frustrated, individual abilities.¹⁸⁹ Developed within the tradition of political arithmetic, the sociology of talent had prepared the ground for a new radical sociology which dismissed genetic arguments and set as its goal not equality of opportunity but equality of outcome.

The National Foundation for Educational Research

These doubts about the accuracy of the 11-plus were amply confirmed by the National Foundation for Educational Research, an organisation which exercised a mounting influence over educational argument in the 1950s and 1960s. The Foundation grew out of an *ad hoc* committee which the Carnegie Corporation of New York set up in England as part of an international inquiry into scholastic examinations. (Other committees were established in Scotland, France, Germany, and Switzerland.¹⁹⁰) The inquiry proved to be so successful that several educationalists decided to create a permanent body charged with systematic educational research in England. The Carnegie Corporation provided \$10,000, various donors provided another \$10,000, and London University agreed to administer the funds through its Institute of Education. (Five years later the Foundation was turned into a self-governing body, no longer under the University’s

¹⁸⁸ See, for example, John Partridge, *Life in a Secondary Modern School* (Harmondsworth, 1966), p. 168. ¹⁸⁹ See, for example, Halsey (ed.), *Ability and Educational Opportunity*, pp. 18, 25.

¹⁹⁰ See International Institute Examinations Enquiry, *Essays on Examinations* (1936), esp. pp. vii–xii. The English committee included P. B. Ballard, Cyril Burt, Percy Nunn, Charles Spearman, Godfrey Thomson and C. W. Valentine.

tutelage.¹⁹¹) The Foundation met for the first time in January 1943 under the chairmanship of Fred Clarke.¹⁹² From the very beginning it developed close relations with the power brokers of the educational world, particularly the Ministry of Education, the Local Education Authorities, the universities and the teachers' unions. It devoted most of its resources to building up a national organisation, capable of undertaking large-scale and long-term research.¹⁹³

The Foundation took an immediate interest in mental measurement.¹⁹⁴ In 1948 it appointed A. F. Watts, an HMI who had specialised in psychology, to organise a long-term study of educational selection.¹⁹⁵ This long-term study resulted in a series of authoritative reports on selection. These reports were self-consciously cool in tone, attempting at once to note failings in the system while dispelling unwarranted anxieties about selection.¹⁹⁶ The Foundation insisted that selection was as fair as it could possibly be – indeed that selection was getting ever more efficient and that the 11-plus was perhaps the most accurate examination ever devised (and certainly more accurate than most traditional examinations).¹⁹⁷ But it added that a vast national examination inevitably produced injustices, some of them startling. The continuous distribution of abilities ensured that a sharp division of children between different kinds of school was inevitably unjust and arbitrary.

In 1952 the Foundation's three most active researchers, A. F. Watts, Douglas Pidgeon and Alfred Yates, argued that education has a marked influence on IQ. Far from being impervious to environmental influences, IQ tests were open to manipulation. Coaching – the widespread habit of preparing junior school children for the 11-plus – was distorting selection. Systematic coaching might raise the average IQ scores of a group of children by between five and nine points (although teachers varied widely in their success and children in their susceptibility).¹⁹⁸ The quality of the school also had a marked influence on children's performance. An inspiring headmaster, a skilful teacher, a rigorous atmosphere, a well-constructed curriculum: all these could make the difference between passing and failing.¹⁹⁹

The Foundation was particularly concerned with borderline candidates. The examination was highly successful in picking out children who were clearly suitable or clearly unsuitable for grammar school educations. But it was much less

¹⁹¹ The National Foundation for Educational Research, *Report for the Year Ended March 31, 1948*, p. 3.

¹⁹² The National Foundation for Educational Research, *Report for the Period to March 31, 1947*, p. 5.

¹⁹³ The National Foundation for Educational Research, *Report for the Year Ended March 31, 1950*, p. 5.

¹⁹⁴ The National Foundation for Educational Research, *Report for the Period to March 31, 1947*, p. 13.

¹⁹⁵ The National Foundation for Educational Research, *Report for the Year Ended March 31, 1948*, p. 3.

¹⁹⁶ The National Foundation for Educational Research, *Seventh Annual Report 1952–53*, p. 6.

¹⁹⁷ Yates and Pidgeon, *Admission to Grammar Schools*, p. 143.

¹⁹⁸ A. F. Watts, D. A. Pidgeon and Alfred A. Yates, *Secondary School Entrance Examinations. A Study of Some of the Factors Influencing Scores in Objective Tests with Particular Reference to Coaching and Practice*. National Foundation for Educational Research. *Second Interim Report on the Allocation of Primary School Leavers to Courses of Secondary Education* (1952), p. 15. ¹⁹⁹ *Ibid.*, p. 31.

successful in dealing with the numerous children who crowded around the borderline between success and failure. Educationalists simply lacked measuring devices sensitive enough to make fine distinctions between similar children. Yates and Pidgeon calculated that the 11-plus misallocated about 10 per cent of candidates – that is, between 78,000 and 60,000 children every year.²⁰⁰ They suggested that 122 out of every 1,000 11-plus candidates might be expected to be wrongly allocated, 61 to grammar schools and 61 to secondary moderns. In consequence, some 78,000 children were sent to the wrong schools every year. Few of these children were ever transferred between schools. Of the 39,000 children wrongly sent to secondary modern schools, fewer than 12,800 were likely to be promoted to grammar schools; and of the 39,000 wrongly admitted to grammar schools, fewer than 3,200 were likely to be demoted to secondary moderns.²⁰¹ Despite all efforts, it seemed to be virtually impossible to predict the future performance of these children with any degree of accuracy. Some successful children would inevitably be incapable of profiting from grammar school instruction and some unsuccessful children would undoubtedly be misplaced in secondary modern schools. Among borderline candidates, the 11-plus was systematically biased towards the older children in each age group and towards girls.²⁰² This problem was compounded by regional variations in the supply of grammar school places, with pass-marks varying from 96.9 points on a standardised test to 110.8 points.²⁰³

The 1944 Education Act was clearly not fulfilling its promise. The Act had envisaged a differentiated system, in which a variety of schools catered for children with differing abilities, differing interests, and differing destinations, in which children were guided to appropriate schools in the light of scientific evidence and through the use of prudential restraint, and in which wrongly allocated children were smoothly transferred to more suitable courses. The reality was very different. The 11-plus promoted a system not of guidance nor even of allocation but of *selection* – and rough and ruthless selection at that. In many parts of the country, and particularly in the rapidly growing suburbs around large cities, fine discriminations had to be made between highly-motivated children on the basis of imperfect tests. Parental anxiety was turning primary schools into factories where children were relentlessly coached for the 11-plus.²⁰⁴ The Foundation urged parents not to vent their frustration on IQ tests – for IQ tests were much more accurate and much less class-biased than any other forms of selection²⁰⁵ – but instead to question the system of selection.²⁰⁶ The Foundation urged that children should be selected on the basis of more than one set of tests; that examinations

²⁰⁰ Yates and Pidgeon, *Admission to Grammar Schools*, pp. 144–5.

²⁰¹ *Ibid.*, pp. 144–5.

²⁰² *Ibid.*, pp. 18–19.

²⁰³ *Ibid.*, p. 24.

²⁰⁴ Watts, Pidgeon and Yates, *Secondary School Entrance Examinations*, pp. 19–20.

²⁰⁵ Yates and Pidgeon, *Admission to Grammar Schools*, pp. 42–3, 47, 111, 164.

²⁰⁶ *Ibid.*, *Admission to Grammar Schools*, pp. 7, 12.

should be supplemented by other methods of selection; that all children should be given a certain amount of coaching; and that no sharp distinction should be made between children who had just passed and children who had just failed the 11-plus.²⁰⁷ More generally, the Foundation put its weight – albeit cautiously – behind the comprehensive movement:

We think that it is inconceivable that any form of selection could be devised which would justify the organisation of different types of secondary courses for children whose performances have placed them close together on opposite sides of the borderline between success and failure. The results of our work would seem to imply that we should think less in terms of sharply differentiated types of secondary school ...²⁰⁸

The decline of Galtonian orthodoxy

At the same time, developments within academic psychology weakened the psychometrists. The main growth areas within the discipline were in behavioural rather than hereditarian theory, in experimental rather than quantitative method, and in academic rather than applied work. Between the wars, psychologists had moved easily between educational administration and university teaching; the post-war period witnessed the construction of professional barriers between these two worlds, with a sharp distinction between developmental psychologists, who worked in university departments, and educational psychologists, who lacked higher academic qualifications and worked in the school psychological services. American psychology increasingly colonised English university departments, bringing with it assumptions and methods which would probably have been distasteful to many of the inter-war educational psychologists. L. S. Hearnshaw ended his account of the history of British psychology in 1940 for a reason which would have chilled Burt and his colleagues: ‘since 1940 British psychology has become much more fully merged with international, particularly American, movements, and the special characteristics which previously marked it have diminished in importance. Today the young British student is brought up largely on American textbooks, and his gods, if he has any, are probably American.’²⁰⁹ Educational psychology won only a marginal position within academic psychology departments. Liam Hudson, one of the most innovative of the post-war educational psychologists, recalled that in the 1950s ‘an interest in intelligence met none of the requirements of scientific respectability; it was macrocosmic rather than microcosmic; its techniques were paper and pencil rather than electronic; and it was tarred with the brush of “education”’. For fully a year he could not bring himself to confess to his peers what his PhD topic was.²¹⁰

²⁰⁷ Watts, Pidgeon and Yates, *Secondary School Entrance Examinations*, p. 32.

²⁰⁸ *Ibid.*, p. 33.

²⁰⁹ Hearnshaw, *A Short History of British Psychology*, pp. vi–viii. Cf. Liam Hudson, *The Cult of the Fact* (1972), pp. 41, 80.

²¹⁰ Hudson, *Cult of the Fact*, p. 58; see also p. 54.

Between the wars intelligence testers had shared several attractive and convenient assumptions: that 'intelligence' was an identifiable personal attribute which determined individual differences in cognitive capacity; that IQ tests could accurately measure 'intelligence', predict academic performance, and allocate children to an education appropriate to their abilities; that IQ was constant, so that the result of a valid test given in childhood indicated an individual's ideal vocational level; and that 'intelligence' was innate and developed automatically, regardless of the social environment.²¹¹ They had consequently brought an almost missionary enthusiasm to the practical business of testing. They hoped to replace 'the haphazard and unsystematic predictions of everyday life' with a scientific system of social selection.²¹² Their main failure was probably their over-confidence: many psychologists 'emphasised the value of tests without sufficiently drawing attention to their dangers and difficulties'.²¹³ But after the war they abandoned their assumptions and lost their self-confidence. Every aspect of psychometric orthodoxy was subjected to vigorous criticism; mass testing was met with widespread public hostility; and psychologists became increasingly cautious about the claims which they advanced on behalf of the tests.

Confronted with evidence of the misallocation of children between schools in the 11-plus examination, psychologists became sceptical of the ability of IQ tests to predict academic performance accurately. They conceded that a number of influences other than native ability determined children's performances in tests. Watts, Pidgeon and Yates argued that coaching and practice raised children's average scores in tests of intelligence, arithmetic and English by between 5 and 9 points.²¹⁴ Vernon suggested that only a limited amount of instruction in test-taking technique might increase IQ scores by as much as fourteen points.²¹⁵ It became increasingly evident that schooling itself could raise or depress IQ scores: educational selection was thus a self-confirming process. John Daniels discovered that streaming had a marked effect on IQs, significantly increasing the spread of scores during the primary school years. Whereas the average IQ of children in the A stream increased by 7.4 points over five years, that of children in the C stream declined by 12.3 points.²¹⁶ Vernon pointed out that in Southampton grammar school children improved their IQ scores by 4.9 points before they left school, whereas secondary modern school children found their scores deteriorating by 1.9 points.²¹⁷ Under the influence of these broad statistical inquiries, psychologists also

²¹¹ Philip Vernon, *Intelligence Testing 1928-1978. What Next?* (Edinburgh, 1978), pp. 1-2. A. D. B. Clarke, 'The Measurement of Intelligence: Its Validity and Reliability', in Ann M. Clarke and A. D. B. Clarke, *Mental Deficiency. The Changing Outlook* (1958; 1965 edn), pp. 71-92. Both sources summarise and criticize the inter-war consensus.

²¹² Philip Vernon and John Parry, *Personnel Selection in the British Forces* (1949), pp. 13-14.

²¹³ Vernon, *The Measurement of Abilities* (1940), p. viii.

²¹⁴ Watts, Pidgeon and Yates, *Secondary School Entrance Examinations*, p. 15.

²¹⁵ Vernon, *Intelligence Testing* (1952).

²¹⁶ *The Times Educational Supplement*, 29 July 1955, p. 815 (c).

²¹⁷ *Ibid.*, 6 May 1955, p. 447 (c).

admitted that emotional influences, such as mood, physical condition, fatigue, boredom, anxiety, incentives and misunderstanding of instructions, might seriously distort the examination results.²¹⁸

The case against testing was reinforced by the suspicion that innate ability was far from constant. Tests, it seemed, were unreliable not only because they failed to measure the same quality in the same way on different occasions, but also because the quality measured itself altered: people were unreliable.²¹⁹ 'From the wealth of available data', A. D. B. Clarke concluded in 1958, 'it is clear that, in the general population, the concept of a rigidly constant IQ is contradicted by the facts: IQ constancy over long periods of time during the years of mental growth is the exception rather than the rule.'²²⁰ Over several years, test retest correlations were usually much lower than 0.9. Honzik, Macfarlane, and Allen tested over 150 children at the ages of six and 18, and found that the IQs of 58 per cent changed by 15 or more points; the IQs of 35 per cent changed by 20 or more points; and the IQs of 9 per cent changed by 30 or more points. The maximum individual change was 50 points, while only 15 per cent of cases changed by less than ten points. The overall retest correlation was 0.6.²²¹ Ann Clarke and A. D. B. Clarke pointed out that the predictive value of IQ tests decreased as the interval between the tests lengthened²²² – a discovery which discredited the practice of sorting children into streams at the age of seven or less. Psychologists began to argue that, during childhood and adolescence, mental (like physical) growth did not proceed at a uniform rate, so that the individual's position with respect to others in his age group varied from year to year.²²³ The popular anxiety that the 11-plus dealt harshly with 'late developers' seemed to have some scientific validity: a relatively inflexible educational system could not do full justice to relatively flexible children.²²⁴

At the same time, professional opinion swung dramatically towards an environmentalist interpretation of individual differences. The post-war consensus insisted that 'intelligence' owed a great deal to environmental influences: nurture rather than nature was responsible for shaping human abilities. The evidence against the hereditarian position had already begun to accumulate in the late 1920s

²¹⁸ Clarke, 'The Measurement of Intelligence', p. 74.

²¹⁹ A. D. B. Clarke, A. M. Clarke and S. Reiman, 'Cognitive and Social Changes in the Feeble-Minded – Three Further Studies', *British Journal of Psychology* Vol. 49 (May 1958), p. 151.

²²⁰ Clarke, 'The Measurement of Intelligence', p. 81. Cf. Philip Vernon, *Intelligence and Attainment Tests* (1960), p. 186, and Philip Vernon, Georgina Adamson and Dorothy Vernon, *The Psychology and Education of Gifted Children* (1977), p. 16.

²²¹ M. P. Honzik, J. Macfarlane and C. Allen, 'The Stability of Mental Test Performance between Two and Eighteen years', *J. Exp. Educ.* Vol. 17 (1948), pp. 309–24. Quoted in Clarke, 'The Measurement of Intelligence', p. 78.

²²² Clarke and Clarke, 'How Constant is the IQ?', *Lancet* Vol. 11 (1953), pp. 877–80. Quoted in 'The Measurement of Intelligence', p. 77. See also C. L. Nemzek, 'The Constancy of the IQ', *Bull. Br. Psych. Soc.* Vol. 30 (1933), pp. 143–68, and R. L. Thorndike, '"Constancy" of the IQ', *Bull. Br. Psych. Soc.* Vol. 37 (1940), pp. 167–86.

²²³ Clarke, 'The Measurement of Intelligence', pp. 84, 90.

²²⁴ Philip Vernon, 'The Assessment of Children', *Studies in Education* (Univ. London) Vol. 7.

and 1930s, most notably in the United States.²²⁵ Franz Boas devoted his formidable intellectual energies to demolishing the intellectual foundations of racial science and establishing the primacy of culture over biology.²²⁶ Frank Freeman, Karl Holzinger and Blythe Mitchell, a team of psychologists based at the University of Chicago, discovered that orphaned children placed in superior foster homes gained some 10 points in IQ over four years, while those placed in average homes gained only five points. They also demonstrated that siblings raised together tended to be closer in IQ than those raised apart, while unrelated children raised together tended to be more similar in IQ than siblings raised apart.²²⁷ In a series of devastating criticisms of hereditarian theories of racial differences, Otto Klineberg argued that skill in IQ tests was heavily dependent on cultural conditions. Dismissing the conventional explanation for the fact that northern black Americans did better on average in IQ tests than their southern counterparts – that the more intelligent blacks migrated northwards – he demonstrated instead that residence in northern cities inculcated just those skills which were measured in IQ tests: IQ increased with length of time spent in the north.²²⁸ Hugh Gordon, one of HM Inspectors of elementary schools, compared the respective test performances of physically defective children, canal-boat children, gypsy children and backward children attending ordinary elementary schools – all over a number of years – and demonstrated that results were heavily influenced by schooling, with the influence increasing over time.²²⁹ Almost simultaneously, N. D. M. Hirsch argued that the poor test results of children brought up in isolated rural regions of Kentucky were more likely to have an environmental than a genetic explanation.²³⁰ A group of psychologists at the Iowa Child Welfare Research Station demonstrated that the IQs of children born to low-income, low-scoring parents could be raised significantly by improving their home conditions; more startlingly, they even claimed that ‘feble-mindedness’ was determined by the environment. If dull children were placed in stimulating environments, they argued, then they would register surprising increases in their IQs.²³¹

²²⁵ On Boas see Barkan, *Retreat of Scientific Racism*, pp. 76–95, 281–5, 310–18. For an explanation of the triumph of environmentalism in America, see Carl N. Degler, *In Search of Human Nature. The Decline and Revival of Darwinism in American Social Thought* (1991), pp. 187–211.

²²⁶ Degler, *In Search of Human Nature*, pp. 75–83.

²²⁷ F. N. Freeman, K. J. Holzinger and B. C. Mitchell, ‘The Influence of Environment on the Intelligence, School Achievement and Conduct of Foster Children’, *Yearbook of the National Society for Studies Education* Vol. 27 (1928), pp. 103–217; Kevles, *In the Name of Eugenics*, pp. 140–1. Clarke, ‘Genetic and Environmental Studies of Intelligence’, *Mental Deficiency. The Changing Outlook*, summarises the problems and virtues of this type of approach to the nature–nurture problem, and reviews the work of Freeman *et al.*, pp. 99–109. Hogben regarded Freeman’s study as a model of its kind.

²²⁸ Kevles, *In the Name of Eugenics*, pp. 135–8; Degler, *In Search of Human Nature*, pp. 179–86; Klineberg, *Negro Intelligence and Selective Migration*.

²²⁹ Board of Education Pamphlet No. 44, *Mental and Scholastic Tests Among Retarded Children* (1923).

²³⁰ Vernon, *Intelligence Testing*, p. 4.

²³¹ Kevles, *In the Name of Eugenics*, pp. 141–2; Degler, *In Search of Human Nature*, pp. 144–5.

Between the wars these environmentalists had been battling against a hostile establishment; after the war they captured power and turned themselves into a ruling party. They examined the numerous social pressures which might influence measured intelligence: intellectual stimulation during early childhood, emotional relationship with parents and siblings, the quality of educational facilities and the character of teachers, and the speech-patterns of the family circle.²³² They were only willing to concede that individual differences had a genetic explanation if the environmental circumstances were uniform – and then only with considerable reluctance. A. D. B. Clarke even pointed to the environmental origins of mental deficiency, arguing that cruelty and neglect in childhood (which affected about 40 per cent of institutionalised mental subnormals) retarded intellectual development by at least 16 IQ points, while unsatisfactory social conditions or life-long institutionalisation (characteristic of about 45–50 per cent of subnormals) retarded intellectual development by at least 10 points.²³³ In extreme cases, social isolation and personal deprivation might cause imbecility and speechlessness, which could be cured by improved conditions. John Bowlby emphasised the crucial importance of satisfactory bonds with the child's mother, pointing out that early separation might induce mental deficiency in a child who would otherwise have developed normally.²³⁴

Not surprisingly, post-war psychologists rapidly lost their confidence in mass intelligence testing. The ruthless operation of the 11-plus, which made dramatic distinctions between children of almost identical IQs, stimulated widespread guilt and scepticism within the profession. The inquiry into Secondary School Selection, prepared by Philip Vernon on behalf of the British Psychological Society in 1957, expressed this mood of disillusionment:

Psychologists themselves are far from complacent about the situation. The majority of them would probably gladly abolish the selection system if there were a practicable and just alternative. And many have gone so far as to advocate that their profession should 'contract out', and refuse to have anything to do with procedures that have such harmful effects on children's educational and emotional development.²³⁵

The report came down firmly on the side of comprehensive schooling, arguing that 'on psychological grounds, then, there would seem to be more to be said in favour of comprehensive schools than against'.²³⁶

Like most psychologists, Vernon became increasingly hostile to group in-

²³² Clarke, 'Genetic and Environmental Studies of Intelligence', pp. 127–30.

²³³ *Ibid.*, pp. 134–5.

²³⁴ John Bowlby, *Maternal Care and Mental Health. A Report prepared on behalf of the World Health Organisation as a Contribution to the United Nations Programme for the Welfare of Homeless Children* (Geneva, 1951).

²³⁵ P. E. Vernon (ed.), *Secondary School Selection. A British Psychological Society Inquiry* (1957), p. 35. Brian Simon described this report as 'the final blow to the 11-plus examination'. Caroline Benn and Brian Simon, *Half Way There. Report of the British Comprehensive School Reform* (1972 edn), p. 47.

²³⁶ *Ibid.*, p. 50.

telligence tests, suggesting that they should be abandoned as methods of streaming as well as selection. 'The most we can infer from psychometric evidence', he concluded in 1960, 'is that there should probably be less rather than more streaming within secondary, and even less within primary schools'.²³⁷ In 1978 he was even more direct: 'I will be neither surprised, nor sorry, if group tests of children's intelligence disappear, particularly within elementary or primary schools'.²³⁸

This crisis of professional confidence was reinforced by powerful public hostility. The controversy over the 11-plus generated a widespread suspicion of both educational psychology and educational measurement, leading many enthusiasts for comprehensives to dismiss all objective tests of ability and attainments as bankrupt in theory and dangerous in practice.²³⁹ In the United States, where testing had once flourished so luxuriantly, the reaction was even more dramatic. Some states passed, and even more considered, laws banning the use of tests in schools on the grounds that they were culturally biased; many parents successfully challenged in the courts the decision to allocate their children to special schools or classes on the basis of their IQs; and employers were banned from refusing to employ minorities who obtained low test scores unless they could show decisively that their suitability for the job depended on the qualities measured in the tests.²⁴⁰ On both sides of the Atlantic a growing number of parents agreed with Walter Lippmann's contention that psychometrists were bent on creating 'an intellectual caste system in which the task of education had given way to the doctrine of predestination and infant damnation'.²⁴¹

The post-war psychological establishment also rejected a constellation of arguments and beliefs which had been fundamental to the psychology of individual differences – notably, fear of a possible decline in national intelligence, enthusiasm for eugenics, faith in the élite of the gifted, and a biological approach to all social problems. This intellectual revolution was not, as is commonly supposed, nothing more than a mechanical response to the revelations about Nazi eugenics. Eugenacists continued to be outspoken throughout the war. Julian Huxley and Richard Titmuss warned that the slaughter might have a dysgenic influence.²⁴² The Beveridge Report contained several references to differential fertility and dwindling population. One of the main aims for family allowances was to make it easier to combine upward social mobility with child rearing.²⁴³ In his 1945 Galton Lecture, C. P. Blacker declared that the prospects of the Eugenics Society had never been better in its thirty-eight year history: its reactionary fringe had been

²³⁷ Vernon, *Intelligence and Attainment Tests* (1960), p. 188.

²³⁸ Vernon, *Intelligence Testing*, p. 19.

²³⁹ Stephen Wiseman, *Education and Environment* (Manchester, 1964), p. 152.

²⁴⁰ Vernon, *Intelligence Testing*, p. 2.

²⁴¹ Walter Lippmann, 'The Abuse of Tests', *New Republic*, 15 November 1922, p. 298.

²⁴² Ann Oakley, 'Eugenics, Social Medicine and the Career of Richard Titmuss', p. 171.

²⁴³ Soloway, *Demography and Degeneration*, pp. 312–14.

expelled and its image revamped; birth control had become at once more efficient and more popular; and the welfare state promised to remove anxieties which had previously discouraged the provident from having children.²⁴⁴ The Royal Commission on Population, which started reporting in 1949, preserved much of the pre-war interest in the quality of the population, taking careful note of the opinions of leading eugenicists and even including a section on the possible decline in the level of national intelligence.²⁴⁵

Psychologists lost interest in this issue for scientific as much as for emotional reasons. The Galtonian tradition began to be discredited by scientific evidence, and nowhere was this more clear than in the debate about the decline in national intelligence. Psychometrists repeatedly insisted that the negative correlation between intelligence and family size would lead to a long-term decline in 'the intellectual average of our race'. But expert opinion and empirical evidence increasingly contradicted them. Both J. B. S. Haldane and Lionel Penrose pointed out that the low fertility of the able was counterbalanced by the low fertility of the dull: idiots and imbeciles were shortlived and rarely bred, while the feeble-minded were less fertile than the moderately dull. The population consequently remained in genetic equilibrium.²⁴⁶ The 1947 Scottish Mental Survey, which repeated a survey made in 1932, demonstrated that, despite a continued negative correlation between family size and intelligence-test score, average IQ had actually *increased*. Attempts to explain this logically impossible but empirically incontrovertible result in terms of the increased 'test sophistication' of Scottish schoolchildren were unconvincing, as 'erstwhile "genetic determinists"' seemed 'suddenly, but lamely' to have turned to a grossly environmental explanation of the paradox of their results,²⁴⁷ and the principal result of the surveys was to 'cast serious doubt on the value of intelligence tests for the purpose of genetic investigations' and to reopen the vexed questions 'of the environmental ingredient in test scores and social factors in educability'.²⁴⁸ Otis Dudley Duncan pointed out that, since psychologists argued that intelligence was positively correlated with other desirable traits – such as vitality, personability and beauty – a decline in national intelligence would also be accompanied by the multiplication of the unhealthy and the decline

²⁴⁴ Blacker, *Eugenics in Prospect and Retrospect*, pp. 23–9.

²⁴⁵ *Royal Commission on Population. Report*, pp. 153–6. On the background to the commission, see Soloway, *Demography and Degeneration*, pp. 330–5.

²⁴⁶ *Memoranda Presented to the Royal Commission on Population* Vol. 5, Postscript to Comment by Professor J. B. S. Haldane, pp. 43–44; Otis Dudley Duncan, 'Is the Intelligence of the General Population Declining', *American Sociological Review* Vol. 17, No. 4 (August 1952), p. 405.

²⁴⁷ Godfrey Thomson summarised the findings of the Survey in *The Times*, 17 November 1948. For further evidence of the improvement in national intelligence, see Raymond B. Cattell, 'The Fate of National Intelligence: Test of a Thirteen-Year Prediction', *Eugenics Review* Vol. 42 (October 1950), pp. 136–48; W. G. Emmett, 'The Trend of Intelligence in Certain Districts of England', *Population Studies* Vol. 3 (March 1950), pp. 324–37. Cf. also Institut National d'Etudes Demographiques, *Le Niveau Intellectuel des Enfants d'Age Scolaire* (Paris, 1950).

²⁴⁸ Otis Dudley Duncan, 'Is the Intelligence of the General Population Declining', p. 406.

in the proportion of the physically attractive. But the post-war evidence strongly contradicted this hypothesis, since people were evidently living longer, becoming healthier, and growing to greater heights.²⁴⁹ At the same time, the post-war population boom and the diminishing gap between the family sizes of the middle classes and the working classes took the edge off public concern about the population.²⁵⁰

These criticisms of the technology and philosophy of mental measurement coincided with a revolution in the concept of mind fashionable with psychologists. Burt and his allies argued that intelligence was a general and unitary phenomenon: someone who excelled in one activity might just as easily have excelled in another. For them, the figures of innumerate humanists or illiterate mathematicians were just the products of popular fantasy. Dr Johnson once declared that, had Newton applied himself to poetry, he would have written a great epic. A critic immediately objected that one man might have great learning, another keen judgement, another a fine imagination. 'No Sir,' replied Dr. Johnson, 'it is only that one man has *more mind* than another. He may direct it differently; he may by accident desire to excel in this study or in that. Sir, the man who has vigour may walk to the east, just as well as to the west.'²⁵¹

In this, Burt and his followers were firmly on Johnson's side. After the war, however, the balance of advantage in the argument shifted from Johnson to his critic. The initial objections to the theory of general intelligence came from psychometrists. In Britain, Godfrey Thomson questioned the logic of Charles Spearman's argument; in the United States, psychologists set about subdividing the mind into a multitude of factors, arguing that intelligence is not a single unitary ability, but a miscellaneous collection of independent kinds of ability, such as verbal, spatial, numerical and mechanical.²⁵² Summarising the post-war consensus in 1969, Philip Vernon argued that 'we realise that mental abilities are much too varied to be adequately described in terms of a monolithic general intelligence of Spearman's *g* factor. There are many more specialised types of ability ... and the same individual may well be quite high in one, low in another, although on the whole they tend to correlate positively'.²⁵³

Even as psychometrists began to make concessions to their sympathetic critics, a series of far more searching criticisms of *g* were being advanced. Liam Hudson distinguished between two kinds of clever schoolboys, convergers and divergers, who differed not only in the bias of their mental abilities, but also in their personalities, interests and attitudes. The converger excelled in conventional

²⁴⁹ Jean Floud and A. H. Halsey, 'The Sociology of Education', p. 175.

²⁵⁰ Otis Dudley Duncan, 'General Population', p. 405; Floud and Halsey, 'The Sociology of Education', p. 175.

²⁵¹ Boswell, *Journal of a Tour to the Hebrides*, August 15 (Carruthers edn), p. 16. Quoted in *Board of Education: Report by the Consultative Committee on Psychological Tests of Educable Capacity*, pp. 14-15.

²⁵² Vernon, *Intelligence Testing*, p. 6.

²⁵³ Vernon, *Intelligence and Cultural Environment* (1969), p. 21.

intelligence tests; specialised in physical science or classics; held conventional attitudes and liked to conform; pursued technical and mechanical interests in his spare time; and was emotionally buttoned up. The diverger, by contrast, performed indifferently in intelligence tests but excelled in open-ended tests which did not have a single correct answer and rewarded imaginative virtuosity; specialised in the arts or biology; held unconventional attitudes and refused to conform; was more interested in people than mechanical processes; and was emotionally uninhibited.²⁵⁴ The 11-plus examination consequently promoted convergent thinkers and penalised those with a more divergent, imaginative and rambling turn of mind, leading to a massive waste of talent.²⁵⁵ He insisted that, instead of one hierarchy of merit in the population, there were several distinct hierarchies, ensuring that a child who was well placed in one might come near the bottom of another, and he added that intelligence testing seemed 'increasingly inapplicable in a culture that contains as many ladders as there are mini-cultures within it'.²⁵⁶

Stimulated by work in 'artificial intelligence', developmental psychologists increasingly argued that growth is uneven in different areas of thought, with some children learning to master numbers more easily than words, and others words more easily than numbers. In sharp contrast to their predecessors, that the 'mind' might consist of a set of 'organs', each specialised to deal with different cognitive processes, and that the development of each of these organs, rather than being programmed by nature, depended on interaction with the environment. Their preoccupations were with particular abilities and with the complex ways in which mental growth is determined by the situation and opportunities of the learner. Howard Gardner's *Frames of Mind: The Theory of Multiple Intelligences* (1984) summarises an increasingly popular position within developmental psychology. Based on a wide variety of sources – studies of prodigies, gifted individuals, brain-damaged patients, *idiots savants*, normal children and adults, assorted experts, and people from different cultures – it suggested that individuals may exhibit widely different varieties of intelligence, which are brought out by different cultural and occupational stimuli.²⁵⁷ IQ tests measured only one of a wide variety of

²⁵⁴ Liam Hudson, *Contrary Imaginations. A Psychological Study of the English Schoolboy* (Harmondsworth, 1967 edn), esp. pp. 49–67. Hudson's interest in divergent thinking was not as original as is sometimes supposed. Binet and others experimented with inkblots as tests of the fluency of imagination; and Burt included tests of creative thinking in his battery for vocational guidance. E.g. 'if everyone in the world suddenly doubled in height what consequences would follow?', Vernon *et al.*, *The Psychology and Education of the Gifted Child*, p. 85.

²⁵⁵ He did, however, concede that IQ tests are 'a useful technique for measuring a particular kind of reasoning, and tell us, cheaply and quite accurately, which members of the normal population are, broadly speaking, clever and which are not', *ibid.*, p. 126.

²⁵⁶ Hudson, *Intelligence and Scientism. Centre for Research in the Educational Sciences*, University of Edinburgh, Occasional Papers No. 4 (June 1972), p. 3.

²⁵⁷ Howard Gardner, *Frames of Mind: The Theory of Multiple Intelligences* (1992, 2nd edition). On the book's highly favourable reception, see Gardner's introduction to this edition. For a summary of his argument, see Howard Gardner, 'The Theory of Multiple Intelligences' in Noel Entwistle (ed.), *Handbook of Educational Ideas and Practices* (1990), pp. 930–8.

intelligences. 'There is more than one form of logic', he insisted, 'and each intelligence has an equally valid logic of its own.'²⁵⁸

This revolution in psychological thinking about the mind has done rather more than undermine the theory and practice of intelligence testing. It has questioned the idea, almost uniformly held until the post-war period, that mental development is a natural and uniform process, with children in all cultures passing through an inevitable process of mental and emotional development. Piaget's work is the most distinguished example of developmental universalism and, naturally, most of the attacks on it have concentrated on him. Yet the psychometrists also espoused a variant of this thesis, employing mental tests to expose the natural and, for them, smooth process of growth. For many, not only the technology, but also the deeper theory of psychometrics is now out of favour.

²⁵⁸ Gardner, 'The Theory of Multiple Intelligences', p. 933.

Equality and community versus merit

These anatomists of meritocracy were seldom egalitarians, criticising IQ tests not because they measured and classified, but because they failed to measure and classify with sufficient accuracy. Yet as the case against the 11-plus built up momentum, so an increasing number of intellectuals questioned not just the technology of measurement but the ideal of a meritocratic society. Marxists denounced psychometry as an instrument of class oppression; sociologists emphasised the numerous ways in which the environment shapes ability; and communitarians argued that relentless social mobility is incompatible with socialism. At the same time, many younger psychologists gave up defending IQ tests and started to question many of the basic tenets of their profession.

The socialist movement has always harboured out-and-out egalitarians: people who insist that men are created equal, intellectually as well as morally; that social inequalities are the products of convention and mental inequalities the results of circumstances; and that the highest aim of the socialist movement is to restore men to their natural equality.

These arguments, which rested on a firm belief in the plasticity of man, the all-importance of social circumstances, and the omnipotence of scientific reformers, were peculiarly popular in the century or so before the publication of Darwin's *Origin of Species* in 1859. Based on Locke's theory that the mind is a *tabula rasa*, and buttressed by David Hartley's associationist psychology, this belief held out the possibility not just of social improvement but even of human perfection. Improve the circumstances and you improve man: perfect the circumstances and you perfect man. Education was naturally central to this vision. Universal education, radicals argued, could eliminate human differences, bring out natural equalities, and set man on the road to perfection. Robert Owen, an enthusiastic exponent of this argument, believed that children possessed a 'plastic quality, which, by perseverance under judicious management, may be ultimately moulded into the very image of rational works and desires'.¹ The utilitarians provided valuable support for many of these arguments. James Mill argued that 'you may

¹ G. D. H. Cole (ed.), Robert Owen, *A New View of Society and Other Writings* (1927), p. 22.

regard the whole of this great mass of mankind as equally susceptible of mental excellence'² and insisted that 'all the difference which exists, or can be made to exist, between one *class* of men, and another, is wholly owing to education'.³ John Stuart Mill shared his belief in the power of the environment and the importance of education.

This root-and-branch egalitarianism was marginalised for almost a century after the publication of the *Origin of Species*. Socialists were increasingly drawn to various élitist theories. Their experience in running organisations and their observation of contemporary history persuaded them that the bulk of the working class was incapable of liberating itself without enlightened leadership. At the same time, scientists demonstrated what most observant people already suspected: that men are naturally unequal, endowed with vastly different mental abilities.

But in the 1950s and 1960s the intellectual climate began to change once again. Two groups played a particularly important role in reviving egalitarianism and, in the process, condemning psychometric theory: Marxist educationalists and radical sociologists.

Brian Simon and the new Marxist orthodoxy

In the aftermath of the war, the British Communist Party mounted a sustained attack on psychometric orthodoxy, arguing that it was helping to pervert the proper ends of the 1944 Education Act. Brian Simon, the Party's leading spokesman on education, produced a series of polemical books and articles against the tests, exposing what he took to be their theoretical weaknesses, condemning their practical consequences, and calling for the reorganisation of secondary education along comprehensive lines.

By birth Simon belonged to what might be termed 'the other labour aristocracy' – that small but influential group of left-wing activists who brought to the struggle for equality the useful resources of personal wealth and family connections. His father, a prosperous industrialist, served as Lord Mayor of Manchester, campaigned for slum clearance, town planning, smoke abatement and improved education, and in 1947 was elevated to the peerage, taking the title of Lord Simon of Wythenshawe.⁴ His mother also devoted most of her life to local and national politics, becoming Chairman of the Manchester Education Committee in 1932, serving on the Spens Committee in the late 1930s and writing a pioneering book on the case for the comprehensive (or 'omnibus') school, *Three Schools in One* (1948).⁵

² F. A. Cavenagh (ed.), James Mill and John Stuart Mill, *On Education* (1931), p. 27.

³ *Ibid.*, p. 29.

⁴ Mary Stocks, *Ernest Simon of Manchester* (Manchester, 1963); *The Times*, 4 October 1960.

⁵ *The Times*, 18 July 1972. His parents did not share his complete distrust for IQ testing. In planning his children's future careers Ernest Simon took into account their IQ scores, calculating Tony's as 145, Roger's as 130 and Brian's as 115 (Stocks, p. 80). He also became a close friend of C. P. Blacker

His own education followed a conventional upper-middle-class pattern, and he attended Gresham's School, Holt, Kurt Hahn's Schloss Schule, Salem, near lake Constance in Bavaria, and Trinity College, Cambridge. While at Cambridge and the Institute of Education in London he picked up his mother's interest in radical educational reform, becoming president of the National Union of Students in 1939–40 and writing a wholesale indictment of university education.⁶ His experience as a teacher in Manchester and Salford deepened his commitment to educational reform, convincing him of the evils of streaming and selection and turning him into an informed opponent of psychometrics. Disillusioned with his parents' Fabianism, he turned instead to Marxism, becoming an active member of the Communist Party: practical criticism of the working of the educational system was consequently linked in his mind to a philosophy of the capitalist economy and a vision of a socialist future.⁷

Simon argued that the psychometrists had helped to preserve an obsolete educational structure, provided a pseudo-scientific justification for 'blighting the prospects of innumerable children', and 'reduced the efficiency and dulled the enthusiasm of thousands of teachers'.⁸ They had exploited the Achilles heel of Labour's educational policy – its call for different types of secondary school to meet different needs – in order to transform secondary education for all from a means of opening opportunities into an excuse for closing doors. Under the pressure of this conviction he set about demolishing the standard claims made in favour of testing – that it was objective and culture-free, that it measured a fixed and inherited quality, and that it improved the educational opportunities of the able, but disadvantaged, working-class child.

Far from exposing 'pure intellectual power'⁹ or 'the supposed elusive inner essence of mind',¹⁰ he argued, IQ tests measured the child's learning and background. Their results were circular and self-validating; children who did well on the tests were given superior education and consequently did well on all future tests.¹¹ He questioned the idea that intellectual superiority in one field entailed superiority in all others, pointing to Lord Keynes as an example: 'on the basis of the assumptions of bourgeois economics his work was brilliant, and yet he was

after the Second World War, agreeing with him on the importance of population control (Stocks, pp. 114–5) and leaving almost £397,564 for research on population. His mother hoped that more use could be made of the tests in selection in Manchester. Gillian Sutherland, *Ability, Merit and Measurement* (Oxford, 1984), p. 235.

⁶ Brian Simon, *A Student's View of the Universities* (1943). See also Brian Simon, 'The Student Movement during the 1930s', *History of Education* Vol. 16, No. 3 (September 1987), pp. 190–1.

⁷ For an outline of his general political philosophy, see 'The Present Predicament', in Brian Simon (ed.), *The Challenges of Marxism* (1963), pp. 9–50.

⁸ Brian Simon, *Intelligence, Psychology and Education. A Marxist Critique*, p. 163 (first published in *Marxism Today*, January 1958); cf. p. 10.

⁹ Simon, *Intelligence, Psychology and Education*, p. 64 (first published as *Intelligence Testing and the Comprehensive School* in 1953).

¹⁰ *Ibid.*, p. 81.

¹¹ 'The Theory and Practice of Intelligence Testing', *Communist Review*, October 1949, p. 692.

apparently incapable of understanding the simplest theories of Marxism'.¹² Denying that 'intelligence' could be divorced from 'the whole personality' or from the emotional condition of the child, he emphasised the non-intellectual pressures, such as sickness, stress or family tensions, which could produce a poor test performance. In particular, he condemned the tests for judging children objectively in theory but discriminating against working-class children in practice; they measured not abstract ability but concrete knowledge of middle-class culture.¹³ This led him to conclude that their 'real' function was economic rather than educational: they had first made their appearance with the 'advent of imperialism',¹⁴ and they 'provided an apparently scientific foundation for social, and in particular educational policies of an extremely reactionary nature which militated against the working class'.¹⁵

Because it served the requirements of capitalism instead of the needs of children, testing was 'inherently anti-educational', the corollary of a mechanical and dehumanised style of teaching.¹⁶ The pressure of examinations meant that the key decision about a child's future was made not at eleven but at six or seven, when children were first placed into streams and trained for the scholarship examination.¹⁷ Instead of developing abilities to the full, the educational system was becoming little more than a vast sorting machine, directing children to their appropriate roles in the occupational hierarchy.

Convinced that education ought to be based on a scientific understanding of mental development, but repelled by the conclusions of the psychometrists, he turned instead to the work of Soviet psychologists. The rejection of testing in Russia, he argued, had freed scientists to examine the mental process involved in learning, while dialectical materialism had enabled them to escape both the idealism of 'bourgeois thinkers' and the reductionism of behaviourists: the rapid expansion of the Russian educational system was consequently built upon the foundations of a scientific pedagogy.¹⁸ He looked forward to a future of non-streamed schools presided over by an élite of psychologists and educationalists thoroughly versed in the 'laws' of dialectical materialism.

Simon's work set a fashion for attacking intelligence testing among Communist Party intellectuals. His wife, Joan Simon, insisted that the suggestion that intelligence is a fixed quality, measurable because immutable, was 'the main barrier to an understanding of human development and the learning process'.¹⁹ Psychometry served only to 'uphold and perpetuate class inequalities, and to spread reactionary views of "human nature" which vitiate educational theory,

¹² *Ibid.*

¹³ Simon, *Intelligence, Psychology and Education*, pp. 59–81.

¹⁴ *Ibid.*, p. 132 (first published in *The Marxist Quarterly* Vol. 3, No. 4 (1956)).

¹⁵ *Ibid.*, p. 273. He also argued that 'the "intelligence" of the working class is clearly of a different order and superior to the "intelligence" of the ruling class'. 'Theory and Practice of Intelligence Testing', p. 692.

¹⁶ Simon, *Intelligence, Psychology and Education*, pp. 16, 41.

¹⁷ *Ibid.*, pp. 33–4.

¹⁸ Simon (ed.), *Psychology in the Soviet Union* (1957), p. 25.

¹⁹ Joan Simon, 'Mental Testing', *The Modern Quarterly* Vol. 5, No. 1 (Winter 1949–50), p. 19.

undermine educational effort and dehumanise the educational process'.²⁰ She recommended instead the work of Soviet psychologists on the grounds that 'they outline a new departure in psychology comparable with that of the Lysenko school in biology'.²¹ Max Morris declared that 'we oppose root and branch the pernicious theory and practice of intelligence testing', arguing that the 'real aims' of the tests 'is to rigidify and preserve our class society by utilising the dogmas of a quack science'.²² In 1950, the Party organised an open conference on testing and its impact on schools, hoping both to coordinate and extend the campaign against psychometry.

It is now abundantly clear that the Marxists overestimated the importance of the tests to the practical working of selective education. In principle, selection depended on a wide range of arguments, not simply on the validity of psychometric orthodoxy; and in practice Local Education Authorities only made a limited and sporadic use of the tests. Why then did psychometry assume such an inflated role in the Marxist indictment of selective education?

The post-war case against intelligence testing originated in part in the Soviet Union, when, on 4 July 1936, the Central Committee of the Communist Party issued a decree against psychometry. During the 1920s psychometrists had been appointed to many Russian schools, testing the children on entry, dividing them into four streams according to ability, and retesting them at regular points in their educational careers. Despite the formal objectivity of the tests, it turned out that the majority of children placed in classes for the retarded came from lower-class backgrounds while the majority of the gifted came from the middle classes.²³ The Party concluded from this that the tests were 'quasi-scientific': the theory that children's abilities were fixed by biology was a 'deeply reactionary law' and 'in crying conflict with Marxism and with the whole practice of the socialist reconstruction, which successfully re-educates the people in the spirit of socialism and in the people's mind'.²⁴ Testing retained some supporters in the British Party in the late 1940s,²⁵ and it was in order to convert these to the Russian position that Joan Simon and Max Morris first took part in the debate.

Yet the split between the Marxists and the psychometrists also reflected irreconcilable intellectual differences. Both emphasised the value of science but disagreed about its methods and conclusions. The Marxists hoped to replace psychological atomism, which isolated the individual from his context in order to

²⁰ *Ibid.*, p. 37.

²¹ *Ibid.*, p. 21.

²² Max Morris, 'Intelligence Testing and the Class System of Education', *The Modern Quarterly* Vol. 6 (1951), p. 177.

²³ Ernest Simon, Shena Simon, W. A. Robson and J. Jewkes, *Moscow in the Making* (1937), p. 130.

²⁴ *Ibid.*, p. 133.

²⁵ Monte Shapiro, 'Some Notes on Mental Testing', *Communist Review*, January 1948, pp. 16–21; Mary Flanders, 'Intelligence Tests in Schools', *Communist Review*, Feb. 1948, pp. 58–62. 'It is inescapable fact that there are individual differences in this general ability, which need to be taken into account in deciding on the right kind of education for each child. Equality of opportunity does not mean uniformity of education', she argued on p. 58.

measure his 'inner essence', with a historical sociology capable of understanding the individual as both a product and producer of his circumstances: 'testers proceed to take the child apart in a search for the "factors" of the mind. In so doing they inevitably deal not with a living, growing functioning child, but with an abstract child, a kind of "child in general", who is torn from his concrete social context and whose activity is abstracted from all meaningful relations.'²⁶ They objected to the rigid limits which psychometry ascribed to human potential, contrasting the optimism of Soviet thought with the pessimism and fatalism of 'bourgeois' thought. Brian Simon argued that 'communists have an entirely different conception of the potentialities of human beings than that of the bourgeoisie',²⁷ while Max Morris suggested that 'Marxists aim at building a new society and a new man in the process. For socialist education there are no limits.'²⁸ They also objected to the principle of selection. Looking forward to a society which had done away with the division of labour, they denounced school streaming as a capitalist vice:

the whole problem of selection, it must be emphasised, only arises in conditions of capitalist class-restricted education. A society aiming at the full development on optimum conditions of its children is not faced with it. It is only when children are cribbed, cabined and confined by the bonds of the capitalist structure and content of education, when society aims at limiting not expanding the schools, that the problem has any meaning.²⁹

Looking back at the reception of this radical case against intelligence testing, Marxists have tended to present themselves as isolated and unpopular figures. Brian Simon recalled that 'when questioning did begin it seemed for all the world like heresy or hallucination' and he pointed to a reviewer of his book on *Intelligence Testing and the Comprehensive School* (1953) who suggested that it was 'too silly to merit rational discussion, except, perhaps, in the pages of a journal devoted to psychotherapy'.³⁰ But, in fact, Simon's arguments won considerable respect outside Communist circles. *The Times Educational Supplement* described *Intelligence Testing and the Comprehensive School* as a 'formidable indictment of the theory and practice of intelligence testing' and concluded that 'the case stands up'.³¹ *The New Statesman* suggested that the case 'deserves respect and demands an answer'.³² The psychological establishment took it seriously enough to devote a number of pages to it in *Secondary School Selection*, its official inquiry into the use of IQ testing in the 11-plus examination.

Published almost twenty years after one of the most typical products of the 'political arithmetic' tradition, J. L. Gray's *The Nation's Intelligence* (1936), and

²⁶ Morris, 'Intelligence Testing', p. 168.

²⁷ Simon, 'Theory and Practice of Intelligence Testing', p. 695.

²⁸ Morris, 'Intelligence Testing' p. 177.

²⁹ *Ibid.*, p. 165.

³⁰ Simon, *Education. The New Perspective* (Leicester, 1967), p. 11.

³¹ *The Times Educational Supplement*, 15 January 1954.

³² *New Statesman*, 27 March 1954.

characterised by a similar polemical tone, Simon's work nevertheless grew out of rather different intellectual preoccupations. Gray and his fellow political arithmeticians had hoped to eliminate the waste of ability which resulted from discrepancies between the distribution of test-intelligence and educational opportunity; intelligence testing thus had a crucial part to play in any survey of the human resources available to a planned society. Brian Simon dismissed the suggestion that men differed in their native capacities as a bourgeois illusion, arguing that all such differences were determined by environment – or, more precisely, by class. He felt that the school's job was not to cater for any supposed variety of aptitudes and abilities among its pupils – to do so would be simply to shore-up class-determined privilege – but instead to eliminate differences and transmit a minimum level of attainment and a common culture. Gray's interest in matching ability with opportunity and thus eliminating the wastage of human resources meant little to him. Instead, he thought almost exclusively in terms of equality of outcome and the environmental origins of all human differences.³³ Although Simon was on the far left of British politics, he was at the forefront of the sweep in post-war educational thought, and in twenty years' time much of the educational establishment was to accept his conclusions.

Egalitarianism, environmentalism, and the new sociology of education

The generation of educational sociologists who came to prominence in the 1960s and 1970s tended to be much more critical of the meritocratic calculus than the 'political arithmeticians' who preceded them. Many of them were thoroughgoing egalitarians, hostile to competition, worried about mobility, and bent on replacing equality of opportunity with equality of reward.

Much of their enthusiasm for root-and-branch egalitarianism resulted from disillusionment with the post-war welfare state. In the 1950s and 1960s sociologists were increasingly sceptical about commonplace claims that social reforms had eliminated inequality of opportunity and generated a juster social order. Social investigators produced a mountain of studies to prove that the welfare state had done little to promote equality and eliminate poverty. On the contrary, the middle classes did remarkably well out of the social services, while the poor remained to haunt the affluent society.³⁴ In particular, a vast expansion of educational institutions, coupled with a professed commitment to equal opportunity and

³³ J. Floud, review of Brian Simon's *Intelligence Testing and the Comprehensive School*, in *British Journal of Sociology* (1954), pp. 185–6. Floud rightly argued that Simon both overestimated the importance of IQ testing to the defence of selection and underestimated the extent to which it benefited working class children. Selection antedated psychometry and was capable of surviving without it. In those areas where testing had been abolished, the educational opportunities of working class children had been diminished.

³⁴ For a convenient summary of this evidence, see Julian Le Grand, *The Strategy of Equality. Redistribution and the Social Services* (1982).

upward mobility, had failed to alter the social composition of the élite. The life-chances of children continued to be determined by their class and home backgrounds, with middle-class children seizing the expanded opportunities and working-class children ignoring them.³⁵

Many radical academics argued that the welfare state had failed to produce a more equal society because of excessive caution. The problem with earlier reformers was that their aims were too modest and their sociology too crude. They 'failed to notice that the major determinants of educational attainment were not schoolmasters but social situations, not curriculum but motivation, not formal access to the school but support in the family and the community'. They rapidly developed a sociological explanation of educational failure. Halsey, for example, suggested that 'intelligence and other human capacities have to be seen less as the property of individuals and more as social and cultural products. It is not only that different societies, according to their values and their culture, will recognize and reward different kinds of abilities, but, what is of crucial significance in the present context, *a process of economic and social development is a process of creating ability*'.³⁶ This belief in the malleability of human abilities encouraged demands for more egalitarian social policies. 'As psychological and sociological study shows the influence of social factors on measured intelligence and on educational attainment', Halsey argued, 'so the moral conclusion is drawn that equality of opportunity must be redefined in a stronger sense to include also the opportunity to overcome such obstacles to the development of one's abilities'.³⁷ The logical conclusion of this position was affirmative action:

In this new interpretation a society affords equality of educational opportunity if the proportion of people from different social, economic or ethnic categories at all levels and in all types of education are more or less the same as the proportion of these people in the population at large. In other words, the goal should not be the liberal one of equality of access but equality of outcome for the median member of each identifiable non-educationally defined group ... If not there has been injustice.³⁸

Two related developments enabled Halsey and his younger colleagues to put their egalitarian theories into practice. The first was the American fashion for compensatory education programmes, most notably Head Start, which traced poor school performance to deprived home backgrounds and tried to compensate for those backgrounds by improved education, particularly in the early years. This popularised the study of primary and nursery education among British researchers, who had long been over-preoccupied with secondary school selection. The

³⁵ A. H. Halsey (ed.), *Department of Education and Science. Educational Priority Vol. 1, EPA, Problems and Policies* (HMSO, 1972), pp. 7–8. Between 1950 and the end of the 1960s, educational expenditure in the member countries of the Organisation for Economic Cooperation and Development increased at an average rate of over 10 per cent a year.

³⁶ Halsey (ed.), *Ability and Educational Opportunity*, p. 25.

³⁷ *Ibid.*, p. 18.

³⁸ *Ibid.*, p. 8. Both quotations are taken from the same page.

second was the Plowden Report on primary schools which, with Michael Young's vigorous encouragement, emphasised the importance of home background, sang the praises of positive discrimination, and called for the creation of Educational Priority Areas.³⁹ In 1968 Anthony Crosland asked Halsey, who had been his research advisor since 1965, to preside over an elaborate programme of action-research (the Department of Education and Science theoretically funded the action, the Social Science Research Council the research) which was intended to use a mixture of enriched instruction and social support to improve education and alleviate poverty in certain selected areas.⁴⁰ Halsey and his colleagues were nothing if not ambitious. They wanted to turn schools into instruments of social regeneration and local revival; and, more broadly, they wanted to use positive discrimination to produce a more egalitarian society.⁴¹

To many young radicals all this talk of compensatory education and educational priority areas smacked of naïve liberalism. Stimulated by the upsurge in student radicalism, excited by the intellectual revival of Western Marxism, and encouraged by the breakdown of the functionalist consensus among sociologists, several researchers began to emphasise the crudely ideological and coercive features of the educational system.⁴² They examined the connections between education and economic order, analysing the school's role in reproducing and legitimising capitalist society. Samuel Bowles and Herbert Gintis, for example, reiterated Christopher Jenck's conclusion that IQ is almost irrelevant to one's life-chances, adding that its main function was 'to legitimate an authoritarian, hierarchical, stratified and unequal economic system, and to reconcile individuals to their objective position in the system'.⁴³ They dismissed the meritocratic ideal, suggesting that it was no more than an ideological justification for 'alienated work and social stratification in capitalist society'.⁴⁴ Its emphasis on competition both reflected and reinforced the values of a commercial society, while its obsession with hierarchy reconciled children to their positions in a stratified community – or, as Bowles and Gintis put it, 'the predatory, competitive, and personally destructive way in which intellectual achievement is rewarded in U. S. schools and colleges is a monument not to creative rationality, but to the need of a privileged class to justify an irrational, exploitative, and undemocratic system'.⁴⁵ The idea that

³⁹ Harold and Pamela Silver, *An Educational War on Poverty*, p. 235.

⁴⁰ A. H. Halsey (ed.), *Department of Education and Science. Educational Priority* Vol. 1, EPA, *Problems and Policies* (HMSO, 1972); Silver and Silver, *An Educational War on Poverty*, pp. 287–317; George Smith and Teresa Smith, 'From Social Research to Educational Policy: 10/65 to the Education Reform Act 1988' in Colin Crouch and Anthony Heath (eds.), *Social Research and Social Reform. Essays in Honour of A. H. Halsey* (Oxford, 1992), pp. 251–2.

⁴¹ A. H. Halsey (ed.), *Educational Priority* Vol. 1, EPA, *Problems and Policies* (HMSO, 1972), pp. 7–8.

⁴² Jerome Karabel and A. H. Halsey (eds.), *Power and Ideology in Education* (1977), pp. 33–40, discuss the revival of Marxism.

⁴³ Samuel Bowles and Herbert Gintis, *Schooling in Capitalist America. Educational Reform and the Contradictions of Economic Life* (New York, 1977 edn).

⁴⁴ *Ibid.*, p. 105.

⁴⁵ *Ibid.*, p. 108.

individuals were rewarded according to their cognitive abilities both concealed the dominant part played by private capital in determining social inequality and put the blame for poverty on personal failure rather than economic necessity.⁴⁶

Bowles and Gintis were far from unusual in their loathing of what they called 'IQ-ism'. The belief that psychometric orthodoxy was a thinly disguised justification for the establishment social order was a commonplace among the campus radicals of the period. *Science for the People*, a magazine published by a group of Harvard radicals, was particularly insistent on this theme. 'The concept of intelligence', asserted Susie Orbach, Laura Schwartz, Mike Schwartz and Joe Schwartz, 'is a weapon of the ruling class. It validates the claim of élites to their position by supporting their claim to superior intellect. It is used to justify the resistance to the demands of working people, national minorities and women in the name of innate "capability"'.⁴⁷ Arguing that 'knowledge is *created* by a social process; it is only *stolen* by individuals', they went on to point out that 'the belief in genius is the linchpin of the myth of intelligence which is the linchpin of the myth of individual achievement, which in our present arrangement is the linchpin in the justification of the theft of social production by the ruling class'.⁴⁸ They also recommended that we give up using the word 'intelligent', quoting the feminist demand that people 'stop referring to women as being beautiful' as a useful precedent.⁴⁹ Another issue described the early intelligence testers as 'racist, anti-working-class, and pro-capitalist in their beliefs'⁵⁰ and called for articles which demonstrated how 'people – especially the poor and non-white people – can struggle against the class weapon of IQ'.⁵¹

Such rhetoric was more popular in the United States than Great Britain, gathering much of its vigour from a peculiarly American problem – the poor performance of blacks in the mental and scholastic tests which determined admissions to higher education. But hyperbole is infectious, and home-grown radicals soon began to quote these arguments, using them both to reinforce the conclusions of educationalists such as Brian Simon and to provide international evidence for the case against selective schooling.

The most characteristic British contribution to this wave of radical educational thought – the so-called 'new sociology of education' – was even more incompatible with the meritocratic tradition than was New Left Marxism. Inspired by a school of interpretative sociology which found its most influential expression in Peter Berger and Thomas Luckmann's *The Social Construction of Reality*, critical of both 'political arithmetic' in particular and macro-sociology in general, and sceptical about the impact of comprehensivisation on working-class life-chances, a number

⁴⁶ *Ibid.*, p. 114.

⁴⁷ Susie Orbach, Laura Schwartz, Mike Schwartz, Joe Schwartz, 'The Myth of Intelligence', *Science for the People*, March and April 1978, p. 12.

⁴⁸ *Ibid.*, p. 14.

⁴⁹ *Ibid.*, p. 12.

⁵⁰ 'What is the IQ Test', *Science for the People*, March 1974, p. 17.

⁵¹ 'Editorial', *Ibid.*, p. 3.

of sociologists, variously calling themselves ethnomethodologists, phenomenologists, and symbolic interactionists, turned their attention to the content of education and the internal operation of the schools.⁵² They insisted that 'what counts as educational knowledge' is a problem to be explained rather than a fact to be accepted, arguing that 'those in positions of power will attempt to define what is to be taken as knowledge, how accessible to different groups any knowledge is, and what are the acceptable relationships between different knowledge areas and between those who have access to them and make them available'.⁵³ The curriculum, with its emphasis on literacy, abstract reasoning and individual competition and its indifference to 'non-school knowledge', legitimised middle-class culture and forced working-class children to internalise a sense of their own incompetence. The organisation and reward system of the schools moulded the personalities and self-images of their pupils, preparing middle-class children for authority and working-class children for subordination.

The explanation of the poor intellectual performance of some working-class children, then, lay neither in their genes nor their environments, but in the class bias of the schools: educational failure might well be a form of concealed class struggle. 'If logic, "good" reasoning, asking questions, and all the various sets of activities prescribed for the learner, are conceived of from one perspective as sets of social conventions which have meanings common to the prescribers, then the failure to comply with the prescriptions can be conceived, not as in the everyday world of the teacher as "wrong", "bad spelling or grammar", or "poorly argued and expressed", but as forms of deviance': in resisting middle-class knowledge, working-class children were resisting middle-class control.⁵⁴ Not surprisingly, these sociologists dismissed the psychometric tradition. The tests, they argued, were arbitrary human constructs laden with so many class-biased assumptions that their results were essentially unrelated to children's native abilities; 'wrong' answers frequently resulted from more complex cognitive processes than 'right' ones. The test was a 'socially constructed situation', which appealed to middle-class children and intimidated their working-class contemporaries.⁵⁵

Perhaps the most fashionable contribution to this tradition of inquiry was made by Basil Bernstein, a contemporary of A. H. Halsey and eventually a professor of the sociology of education at the London Institute of Education. Bernstein worried that class affects 'not only the the level of educational attainment, but also the very

⁵² Karabel and Halsey (eds.), *Power and Ideology in Education* (1977), Introduction, pp. 44–6. See also Basil Bernstein, 'Sociology and the Sociology of Education', in John Rex (ed.), *Approaches to Sociology. An Introduction to Major Trends in British Sociology* (1974), pp. 145–159; George Smith and Teresa Smith, 'From Social Research to Educational Policy: 10/65 to the Education Reform Act 1988', in Colin Crouch and Anthony Heath (eds.), *Social Research and Social Reform*, pp. 258–9.

⁵³ Michael F. D. Young, 'An Approach to the Study of Curricula as Socially Organised Knowledge', in Michael F. D. Young (ed.), *Knowledge and Control. New Directions for the Sociology of Education* (1971), p. 32.

⁵⁴ Young, 'Introduction: Knowledge and Control', *ibid.*, p. 5.

⁵⁵ See, for example, Aaron V. Cicourel, *Language Use and School Performance* (1974).

structure of ability itself.⁵⁶ He pointed out that working-class children perform less well on verbal tests than on non-verbal tests whereas middle-class children are equally successful at either. The reason, he suggested, is that working-class children are confined to a 'restricted linguistic code' but middle-class children have access to an 'elaborate linguistic code'. (Burt had made a similar point in rather less pretentious language forty years earlier.) The forms of social relationship prevalent among the two groups are vastly different; and these forms shape the mode and content of communication. In the 'lower working-classes', with their tight social groups and narrow horizons, people communicate against a background of shared identification and communal empathy which removes the need for elaborate verbal expression and abstract analysis; slight shifts of pitch, stress and gesture are often enough to convey meaning; language is highly context-dependent. In the middle-classes, with their child-centred families and commitment to social advancement, parents introduce their children to formal, grammatical, and abstract language, preparing them for public education and vocational success. Working-class children are confused by the contrast between the languages of the home and of the school – between short, grammatically simple, often unfinished sentences, on the one hand, and elaborate, grammatically complex sentences, laden with abstract nouns, on the other. In order to succeed they must become 'bilingual', using a 'restricted code' with their relatives and an 'elaborated code' with their teachers; and more often than not they fail. The explanation for their educational failure, then, lies not in their innate abilities but in their 'culturally determined communication code'.⁵⁷ 'The genes of social class,' Bernstein argued, 'may well be carried less through a genetic code but far more through a communication code that social class itself promotes'.⁵⁸ the verbal skills of middle-class children guarantee them academic and vocational success while the linguistic habits of working-class children restrict their educational opportunities and direct them to low-paid jobs. The educational system thus legitimises inequalities rooted in the social structure, individualizing failure and robbing workers of their self-respect.⁵⁹

Yet Bernstein was careful to add that the restricted code was not inferior to the elaborated code; he did not want to encourage the working-classes to abandon their culture. The restricted code

contains its own aesthetic; a simplicity and directness of expression, emotionally virile, pithy and powerful and a metaphoric range of considerable force and appropriateness. Some examples taken from the schools of this country have a beauty which many writers might well envy. It is a language which symbolises a tradition and a form of social relationship in which the individual is treated as an end, not as a

⁵⁶ Quoted in Silver and Silver, *An Educational War on Poverty*, p. 179. For the Silvers on Bernstein, see, in particular, pp. 177–181.

⁵⁷ Basil Bernstein, 'A Socio-Linguistic Approach to Socialization: With Some Reference to Educability', *Class, Codes and Control, Vol. 1: Theoretical Studies towards a Sociology of Language* (1971), p. 151.

⁵⁸ *Ibid.*, p. 143.

⁵⁹ 'Some Sociological Determinants of Perception', *ibid.*, p. 38.

Measuring the mind

means to a further end. To simply substitute a *formal* language (which is necessarily a logical, impersonal, emotionally eviscerated language) is to cut off the individual from his traditional relationships and perhaps alienate him from them.⁶⁰

He insisted that 'we must ensure that the material conditions of the schools we offer, their values, social organization, forms of control and pedagogy, the skills and sensitivities of the teachers are refracted through an understanding of the culture the children bring to the school. After all, we do no less for the middle-class child.'⁶¹

Bernstein exercised a surprising amount of influence in official circles. HMI's consulted him and he acted as one of only six witnesses summoned to appear before the Newsom committee.⁶² But he recruited the majority of his acolytes from colleges of education rather than from Whitehall and Westminster. His work hypnotised teachers who were confronted with large numbers of pupils who were indifferent – or positively hostile – to the traditional syllabus, as selective schools were compelled to take non-academic pupils and as the raising of the school-leaving age forced a cohort of children to remain at school against their will. They also aroused the enthusiasm of primary school teachers, freed from the chore of preparing children for the 11-plus, and eager to experiment with progressive teaching.⁶³ For both intellectual and practical reasons many educators were convinced that the solution to apparently intractable educational problems lay not in perseverance and meritocratic classification, but in the abandonment of the syllabus and the celebration of working-class culture, and sometimes even of counter-cultural rebellion.⁶⁴

Richard Hoggart, Raymond Williams, and the Institute of Community Studies

In the 1950s and 1960s an influential group of socialist thinkers developed cogent cultural objections to allocating educational opportunities on the basis of measured intelligence. They extended the educational debate from a technical analysis of the working of the system of selection to an all-out attack on the idea of a meritocratic society.

There had always been a powerful communitarian tradition in left-wing thought. Drawing its inspiration from the romantic hunger for community, for *Gemeinschaft*, this tradition⁶⁵ exercised a particular fascination for middle-class *narodniks* – romantic socialists who disliked middle-class individualism and fantasised that the

⁶⁰ 'A Public Language: Some Sociological Implications of a Linguistic Form', *ibid.*, p. 54. Cf. p. 143.

⁶¹ Bernstein, 'A Socio-Linguistic Approach to Socialization', *ibid.*, p. 152.

⁶² Silver and Silver, *An Educational War On Poverty*, p. 196.

⁶³ Karabel and Halsey, *Power and Ideology in Education*, p. 45. ⁶⁴ Cf. *ibid.*, p. 49, n 66.

⁶⁵ Edward Shils, 'Plenitude and Scarcity. The Anatomy of an International Cultural Crisis', *Encounter*, May 1969, p. 46.

working-class embodied a collectivist ethic. Communitarian socialists reviled the meritocracy as the apotheosis of modernity. They wanted to do away with selection, not to improve it; to diminish the division of labour, not to refine it; to abolish social mobility, not to accelerate it. Determined to re-create society on a human scale, they advocated the dismantling of organisations, the decentralisation of power, and the recreation of small-scale organisations – organisations which ordinary men could understand, feel a part of, and control.

They felt that only the renewal of the ties of community could free man from the travails of modernity. The prototype of the redemptive community of the future was to be found in the past, preferably in the Middle Ages.⁶⁶ In the Middle Ages, they argued, men had been united to each other, and all mankind had been united to God, by mutual obligations derived from a common end. The harmony of local communities reflected the harmony of the created universe. In the eighteenth century men had been divorced from each other and alienated from God; a common end had been dissolved by individual egoisms, community ties had been replaced by mechanical relations. The task of socialism was to reconstruct communities and recreate the Great Chain of Being – albeit in an egalitarian form.

William Morris was the patron saint of this tradition. His view of history was pessimistic: everyday, capitalism was creating a more vulgar, more philistine, more unsatisfactory world. He wanted to recall the old world to redress the balance of the new, to replace large-scale organisations with small communes and the division of labour with voluntary association. This would render an old style ‘aristocracy of intellect’ redundant.⁶⁷ Convinced that ‘fellowship is heaven, and lack of fellowship is hell’, he wanted to tighten the bonds which bind the individual to the community.⁶⁸

Guild Socialism, which swept through the British Trade Union movement in the decade before 1925, propelled by its suspicion of impersonal bureaucracies and its commitment to worker’s control over their own industries, gave vigorous expression to this backward-looking tradition. A. J. Penty was perhaps the movement’s most vocal advocate. He hoped that ‘the reaction against capitalism to-day will carry us along to a future where the promise of the Middle Ages will be fulfilled’.⁶⁹ Capitalism brought disintegration and confusion. Socialism alone could bring unity and peace of mind – but only if it took as its touchstone not efficiency, but community.⁷⁰ People should be encouraged to abandon their differences – to submerge their selves into a communal identity – not judged on their individual merits: ‘Whereas a false culture like the academic one of today tends to separate

⁶⁶ A. J. Penty, *Old Worlds for New. A Study of the Post-Industrial State* (1917), p. 7.

⁶⁷ William Morris, *News From Nowhere or An Epoch at Rest. Being Some Chapters from a Utopian Romance* (1891), p. 99.

⁶⁸ See also Edward Carpenter, *Desirable Mansions* (1883). Quoted in Henry Pelling (ed.), *The Challenge of Socialism* (1954), p. 123.

⁶⁹ Penty, *A Guildsman’s Interpretation of History* (1920), p. 311.

⁷⁰ Penty, *Towards a Christian Sociology* (1923), p. 183.

people by dividing them into classes and groups and finally isolating them as individuals, a true culture like the great cultures of the past unites them by the creation of a common bond of sympathy and understanding between the various members of the community'.⁷¹

R. H. Tawney and G. D. H. Cole provided Guild Socialism with an aura of academic respectability. Cole was a self-consciously romantic socialist, a follower of William Morris rather than Karl Marx, and he insisted that his politics were based on moral outrage and aesthetic judgement rather than on the cult of efficiency or the worship of the proletariat.⁷² He hoped above all to restore the small-scale community to its central role in British life. R. H. Tawney envisaged a socialist society not as 'a herd of tame, well-nourished animals, with wise keepers in command' but as a community of responsible men and women working in comradeship for common ends.⁷³ He argued that education should act as a solvent of social divisions. The complicated business of democratic government, he argued, demanded a highly developed capacity of co-operation; and co-operation depended on mutual understanding, on a sense of community. Common schools advanced, and selective schools suppressed, this quality of mutual understanding.⁷⁴ He deprecated the competition and inequalities of the opportunity society:

Nothing could be more remote from Socialist ideals than the competitive scramble of a society which pays lip-service to equality, but too often means by it merely equal opportunities of becoming unequal. Our aim should be the opposite. It should be to effect a complete divorce between differences of pecuniary income and differences in respect of health, security, amenity or environment, culture, social status and esteem. Might it not, indeed, be beneficial, not only to destroy the connection between them existing today, but to reverse it, so as to make it contemptible to be rich and honourable to be poor?⁷⁵

Such communitarian arguments were not peculiar to the left. Between the wars cultural conservatives and intellectual élitists joined these socialist sentimentalists in denouncing meritocracy. T. S. Eliot, a self-proclaimed royalist, Anglo-Catholic and classicist, argued that meritocratic allocation would 'disorganise society and debase education'. More elaborately, F. R. Leavis and the *Scrutiny* group tried to defend minority culture from a mechanical and materialist civilisation.⁷⁶ Convinced that traditional organic society promoted cultural excellence, personal dignity, and psychological integration, they presented recent history in terms of decline, decay,

⁷¹ Penty, *Guilds and the Social Crisis* (1919), p. 57.

⁷² G. D. H. Cole, *British Labour Movement – Retrospect and Prospect* (Fabian Special No. 8) (1951), pp. 3–4.

⁷³ Tawney, 'British Socialism Today', *ibid.*, p. 176. This first appeared as an article in *Socialist Commentary*, June 1952.

⁷⁴ *Ibid.*, p. 64. See also *Equality* (1931), p. 30.

⁷⁵ 'British Socialism Today', *ibid.*, p. 187. He acknowledged the practical problems with this scheme, calling it a 'state of super-blessedness'.

⁷⁶ On Eliot and Leavis as 'concealed' sociologists, see Wolf Lepenies, *Between Literature and Science. The Rise of Sociology* (Cambridge, 1988), pp. 181–8, 191–5.

and debasement, as industrialisation atomised communities, standardised emotions, and trivialised culture. In particular, they loathed 'technico-Benthamism' – the scientific, quantitative and mechanical spirit of the modern world. They hoped that an educated minority, trained in literature and committed to cultural continuity, would revitalise memories of the organic community and act as a guide to the moral life of an aberrant society.⁷⁷ Naturally, they anathematised the psychometrists' preoccupation with mental measurement, vocational guidance, and industrial efficiency. D. W. Harding argued that intelligence tests failed to measure creative thought, rewarding instead the 'alertness and acuteness' valued by a technical and mechanical society.⁷⁸ F. R. Leavis insisted that education should turn out 'misfits' not 'spare parts' – humanised citizens rather than contented industrial workers.⁷⁹ Geoffrey Bantock polemicised against the mass, trivialised, standardised ethos of 'scientific' teaching.⁸⁰

In the 1950s Raymond Williams, Richard Hoggart and the members of the Institute of Community Studies reinvigorated the communitarian tradition. In doing so they relied as much on Eliot and Leavis as on Cole and Tawney, arguing that 'we can say of Eliot what Mill said of Coleridge, that "an enlightened Radical or Liberal" ought to "rejoice over such a Conservative"'.⁸¹ They shared the conservatives' contempt for the characteristic features of capitalist society – industrialism and commercialism, the despoliation of nature, mechanical social relations, calculative rationality, and the atrophy of organic 'wholeness' – but they lacked their faith in intellectual élites and cultural tradition. Instead, they turned to the working class for inspiration, treating it as an inverted clerisy, rooted in a traditional organic community, but threatened by a utilitarian and atomising state. They refused to think of society as an abstract regulating mechanism between atomised individuals and emphasised instead the organic nature of the community and the importance of popular cultural traditions. They felt that an industrial system which at every turn involved mutual understanding and continuous co-operation depended for its survival on the creation of a common culture, and argued that, as a result of their complex history and long-established Labour movement, the British possessed the materials out of which such a common culture might be created.

To this communitarian ideal the 11-plus posed a fundamental threat, as the most vivid expression of the meritocratic calculus. It biased the educational system towards the selection of able individuals for membership of established élites rather

⁷⁷ See, for example, F. R. Leavis and Denys Thompson, *Culture and Environment. The Training of Critical Awareness* (1933) and Leavis, *For Continuity* (1933), esp. 'Mass Civilisation and Minority Culture'.

⁷⁸ D. W. Harding, 'The Cultural Background of Intelligence Testing', *Scrutiny* Vol. 6 (1937–38), pp. 144–55.

⁷⁹ Leavis, 'Advertising God', *Scrutiny* Vol. 13 (1932), pp. 245–6.

⁸⁰ See, for example, G. H. Bantock, *Freedom and Authority in Education* (1952), *Education in an Industrial Society* (1963), and *Education, Culture and the Emotions* (1967).

⁸¹ Raymond Williams, *Culture and Society 1780–1950* (1959), p. 227.

than towards the creation of a common culture of educational equals. 'The privileges and barriers, of an inherited kind, will in any case go down,' argued Williams, 'it is only a question of whether we replace them by the free play of the market or by a public education designed to express and create the values of an educated democracy and a common culture.'⁸²

According to a new generation of social critics, the scholarship ladder was as damaging to the child as it was debilitating to his community. Richard Hoggart, a working-class boy who went from Leeds city schools to Leeds University, drew on his own experiences in describing scholarship winners as 'the uprooted and anxious'.⁸³ (Hoggart later noted that his chapter on the scholarship boy 'brought me more correspondence – both intimate and relieved ("so others have felt as I have!") – from all sorts of people, including civil servants at under-secretary level and above, than anything else I have written.'⁸⁴) They were progressively cut off from their local cultures whilst growing up, isolated from the 'intense gregariousness of the working-class family group'⁸⁵ and distant from the gangs which gathered around the lamp-posts in the evenings.⁸⁶ They spent more time with the women of the house than with the men, doing their home work in the kitchen while their brothers were in the streets or the pub.⁸⁷ They developed neither the 'palliness' of their peers nor the unconscious confidence of their public school contemporaries, and often became intensely shy with girls; their debunkers taunted them as 'sissies'.⁸⁸ Marked out by their possession of intelligence, they treated life as a succession of examinations to pass and prizes to win.⁸⁹ Given the middle-class ethos of grammar schools, they existed at the friction point between two hostile worlds, learning to use a pair of accents and adopt a dual set of characters and values.⁹⁰ Once they had completed their education they tended to run out of momentum, with their driving belt 'disconnected from the only machine it has so far served, the examination passing machine'.⁹¹ Expelled from their communities, and yet aliens within the middle-class world, they were anxiety-ridden men, prone to breakdown and never at ease.⁹²

Drawing on his own experience as a working-class scholarship winner, Raymond Williams also emphasised the personal strains involved in divorcing children from their families and communities and providing them with middle-class educations and professional careers. In his novel *Second Generation* Williams described his hero as 'a victim, like so many others, of a rapid educational mobility. He was

⁸² Raymond Williams, *The Long Revolution* (Harmondsworth, 1961), p. 176.

⁸³ Richard Hoggart, *The Uses of Literacy. Aspects of Working-Class Life with Special Reference to Publications and Entertainments* (Harmondsworth, 1959), p. 291. For his recollections of school and university, see *A Local Habitation. Life and Times Vol. 1: 1918–40* (1988), pp. 156–220.

⁸⁴ Richard Hoggart, *A Sort of Clowning. Life and Times Vol. 2: 1940–59* (1990), p. 140.

⁸⁵ Hoggart, *Uses of Literacy*, p. 294.

⁸⁶ *Ibid.*, p. 295.

⁸⁷ *Ibid.*, pp. 295–6. See also, *A Local Habitation*, pp. 88, 156.

⁸⁸ Hoggart, *Uses of Literacy*, p. 298.

⁸⁹ *Ibid.*, p. 297.

⁹⁰ *Ibid.*, p. 296.

⁹¹ *Ibid.*, p. 299.

⁹² *Ibid.*, p. 292.

anxious, irrationally anxious, because he did not altogether belong to his new world: educationally he did, but socially and personally it often seemed not.⁹³ This theme of a mobile individual mocking or raging at the institutions which a meritocratic scholarship system had made it possible for him to join, or else, if he acquiesced too uncritically in them, suffering rapid personal deterioration, was a common one in post-war fiction, providing the substance, for example, of John Braine's *Room at the Top* and Philip Larkin's *Jill*.

The Institute of Community Studies added a sociological dimension to the case against meritocracy.⁹⁴ Founded in 1954 by Michael Young and Peter Willmott, the Institute enjoyed an ambivalent relationship with academic sociology. It had no formal contacts with university sociology departments, supporting itself out of grants from charitable trusts and recruiting researchers without sociology degrees.⁹⁵ It attempted to use anthropological methods to study sociological problems,⁹⁶ focusing on a clearly defined community, using interviews to explore working-class lifestyles and opinions, and enlivening statistical analysis with impressionistic comment. It approached its subject polemically, arguing that middle-class administrators were often ignorant about the needs and opinions of working-class citizens, and calling for reforms in the style and content of social welfare. Yet it exercised a powerful influence over the development of British sociology. Its members went on to hold key posts in university sociology departments,⁹⁷ and its work was probably more widely known than that of any other social research institute, exciting public interest, attracting students into the discipline, and influencing official thinking. By the late 1960s the educated public's conception of sociology was largely based on the Institute's work.⁹⁸

The Institute owed much of its appeal to its enthusiasm for working-class culture and its hostility to middle-class values. It presented the working-class neighbourhood as an organic community, based on extended family ties, distinguished by intense sociability, and bound together by an ethic of mutual aid and social solidarity, and it repeatedly emphasised the tension between the needs of the working-class community and the demands of the middle-class state. It was highly critical of middle-class life, suggesting that it was atomistic, competitive and

⁹³ Raymond Williams, *Second Generation*, p. 305.

⁹⁴ On the Institute, see M. Young and P. Willmott, 'Institute of Community Studies, Bethnal Green', *Sociological Review* Vol. 9, No. 2 (1961), pp. 203–13; P. Willmott, 'The Institute of Community Studies', in Martin Bulmer (ed.), *Essays on the History of British Sociological Research* (Cambridge, 1985), pp. 137–51. For detailed criticisms see Jennifer Platt, *Social Research in Bethnal Green. An Evaluation of the Work of the Institute of Community Studies* (1971). Young and Willmott replied to Platt in 'On the Green', *New Society*, 28 October 1971.

⁹⁵ Young had an LSE degree in economics and a PhD in social administration. Townsend had a Cambridge degree in anthropology, Marsden in psychology. Willmott had no degree at the time.

⁹⁶ R. Firth (ed.), *Two Studies of Kinship in London* (1957) (London School of Economics, Monographs on Social Anthropology, no. 15) was something of a model.

⁹⁷ Willmott, 'The Institute of Community Studies', p. 144.

⁹⁸ Platt, *Social Research in Bethnal Green*, p. 1.

emotionally stultified, and it looked upon the state as a disruptive agency, activated by middle-class assumptions and insensitive to communal loyalties. In other words, it skilfully used an idealised version of working class life to attack a technocratic approach to socialism, in which planners manipulated consumers in the interests of national efficiency, and in which the interests and habits of citizens were ignored or misunderstood.⁹⁹ Socialism, it argued, should be based on social solidarity and community power rather than meritocratic allocation and large-scale planning.

The Institute interpreted grammar school education not as an avenue of opportunity but as an agency of social disruption – an interpretation which, it felt, reflected characteristic working-class opinions. The schools, it suggested, tried to inculcate middle-class values in their pupils, replacing the co-operation of the street with the competitiveness of the classroom; the children naturally reacted defensively, resisting the implied insult to their self-esteem, refusing to compete with their neighbours, and imposing fierce sanctions on those pupils who, by conforming, breached the solidarity of the community and declared a preference for another style of life. The schools offered, as a reward for social disruption, an avenue into a professional world which many working-class people despised. Michael Young and Peter Willmott pointed out that manual workers advanced a radically different conception of the status hierarchy from that of professional sociologists, placing productive labourers at the top and non-productive office workers at the bottom.¹⁰⁰ ‘I put builders at the top’, one man they interviewed argued. ‘They’re building houses and today houses are needed more than anything else. Builders are actually working, not like all those people in old collar-and-tie jobs. All they do is push a pen along or look at books.’¹⁰¹ This ‘labour theory of value’ led many workers to disparage educational achievement, suggesting that it encouraged children to leave the productive labour force and become social parasites. The educational wastage which struck middle-class administrators as such an obvious problem might, according to Young and Willmott, be interpreted as evidence for the vitality of working-class culture.

In *Family and Kinship in East London* (1957), Young and Willmott illustrated the part which the selective system of education played in breaking down established community ties in Bethnal Green. Those who passed the 11-plus became increasingly isolated within their communities. They lost the friends who had formerly been their classmates; there was probably no one else in the entire street going to the grammar school. They were expected to do homework in the evening instead of playing with their peers. Their uniform marked them out, declaring their educational superiority and arousing the scorn of their neighbours. As they grew older, they became even more isolated, staying at school when their contemporaries were working in manual jobs, and lacking both money and independence when

⁹⁹ *Ibid.*, p. 140.

¹⁰⁰ Young and Willmott, ‘Social Grading by Manual Workers’, *British Journal of Sociology* Vol. 8, No. 4 (1956), pp. 337–45.

¹⁰¹ *Ibid.*, p. 342.

their contemporaries were gaining admission into the adult world and commanding a considerable surplus income. Many working-class scholarship winners naturally felt an acute sense of isolation:

I felt an outcast in the street directly I started going to the new school. I used to pick the butcher's daughter up sometimes who went, but otherwise I was quite alone.

I was more or less ostracized by the other girls in the street. The other kids made fun of us secondary school girls. They would shout out something about being stuck up or 'swank pot'. It was not just that they made fun of us, we just didn't have much in common. They had different ideas and I had mine, going to a different school like that.¹⁰²

Both children and adults were hostile to the scholarship winners, sensing that they were trying to escape from a working-class community or feeling that they were self-interested and pushy 'snobs'. Once they had gone through the system, scholarship winners tended to move away from their home communities, seldom coming back to visit their parents. 'I'm sure higher education does break up the family', said one of Young and Willmott's interviewees 'It pushes you out geographically anyway. My mother used to envy the woman next door who had lots of children who visited her all the time with their children. But on the other hand my mother can sit back in comfort. We all contribute.'¹⁰³

Brian Jackson and Dennis Marsden¹⁰⁴ also examined the disruptive impact of grammar school education on working-class life.¹⁰⁵ Their study was based on interviews with eighty-eight men and women who, like the authors themselves, had gone to Huddersfield grammar schools from working-class homes in the years between 1946 and 1954, and who, by all normal criteria, had become highly successful school products. Although they made every effort to let their subjects speak for themselves, they interspersed their analysis with autobiographical reflection and political polemic, openly declaring their hostility to grammar school values.

Their subjects generally came from skilled and prosperous sections of the working class; most came from small families (38 per cent were only children and 36 per cent had only one sibling); and most found their parents desperately eager that they should seize the educational opportunities. A number belonged to the 'submerged middle-class', with connections with more affluent families and access to information about education which was more characteristic of middle-class

¹⁰² Michael Young and Peter Willmott, *Family and Kinship in East London* (1957; Harmondsworth, 1964), p. 176.

¹⁰³ *Ibid.*, p. 182.

¹⁰⁴ Brian Jackson was born in Huddersfield in 1932. He came from a working-class home, went to the local grammar school and then to Cambridge, where he received a first in English. Dennis Marsden was born in 1933 and followed the same educational pattern as Jackson, reading natural sciences at Cambridge. On Marsden, see Ronald Goldman (ed.), *Breakthrough Autobiographical Accounts of the Education of Some Socially Disadvantaged Children* (1968), pp. 106–23.

¹⁰⁵ Brian Jackson and Dennis Marsden, *Education and the Working-Class. Some General Themes raised by a Study of 88 Working-Class Children in a Northern Industrial City* (1962, Harmondsworth, 1966).

parents.¹⁰⁶ But they all found themselves out of place in grammar schools. Equal in intelligence with their peers (and, in many cases, more able), they were social outcasts, perplexed by the rituals of the school, conscious about their vulgar origins, and unable to turn to their parents for explanation and advice. At first they felt lonely; and as they adjusted themselves to the demands of the school they drew further and further away from their parents, their childhood friends, and the working-class community. They 'lost in some measure that mesh of securities, expectations, recognitions, that we have called "neighbourhood"'.¹⁰⁷ In particular, their homework 'cut into the vital centres of family life, dislocated the whole household's living. It could generate hostility, misunderstanding, irritation, jealousy ...'¹⁰⁸ Isolated from their neighbourhoods, they turned in upon themselves, measuring their lives in terms of schoolwork, marks, and qualifications (Dennis Marsden recalled that during his own adolescence, 'I had no friends other than those I saw in class each day. And here the field of friendship was limited by a sort of jealous competition for the attention of masters and for the reassurance of academic superiority.'¹⁰⁹) They gradually lost their emotional links with their parents. 'I thought my parents were terrible,' one of them recalled, 'and very badly educated. They were always doing the *wrong* things.'¹¹⁰ Another confessed that she came to regard her parents as 'specimens'.¹¹¹ The parents themselves were torn between eagerness for their children to 'better' themselves and a growing feeling of bewilderment and resentment as they saw their offspring turning into strangers (Marsden recalled that as his father, a mill hand, 'saw his children enter (as he thought) a less socially-trammelled world by means of education, his own confidence ebbed and his sense of imprisonment grew.'¹¹²) Education tugged the child away first from the neighbourhood and then from family life, turning him into a rigidly orthodox middle-class citizen and failing to foster those emotional impulses which could bridge the widening social gulf.¹¹³

Jackson and Marsden had no doubts that these children had lost more than they had gained. They reflected that 'there is something infinitely pathetic in these former working-class children who lost their roots young, and who now with their rigid middle-class accent preserve "The stability of all our institutions, temporal and spiritual" by avariciously reading the lives of Top People, or covet the public schools and glancing back at the society from which they came see no more there than "the dim" or the "specimens"'.¹¹⁴ They denounced grammar schools for 'offering a complex training in approved images of dominance and deference', arguing that they were intent on suppressing the emotions and training for conformity.¹¹⁵ They lamented 'the failure of education to address the whole being,

¹⁰⁶ *Ibid.*, pp. 28–58.

¹⁰⁷ *Ibid.*, p. 110.

¹⁰⁸ *Ibid.*, p. 118.

¹⁰⁹ Ronald Goldman (ed.), *Autobiographical Accounts*, p. 116.

¹¹⁰ Jackson and Marsden, *Education and the Working-Class*, p. 153.

¹¹¹ *Ibid.*, p. 209.

¹¹² Ronald Goldman (ed.), *Autobiographical Accounts*, p. 109.

¹¹³ Jackson and Marsden, *Education and the Working-Class*, p. 202.

¹¹⁴ *Ibid.*, p. 241.

¹¹⁵ *Ibid.*, pp. 241–2.

not merely the apt and cognitive self; and the failure to accept that self without divesting it of the most enriching parts of family and social life'.¹¹⁶ 'We hope our voice is the voice of the last grammar school generations', they concluded. 'For something better can be done.'¹¹⁷

In *The Rise of the Meritocracy 1870–2033* (1958), Michael Young went on to present a full-blown attack on the ideal of a meritocratic selection, arguing that it was transforming equality of opportunity into an opportunity only to become unequal.¹¹⁸ The principle advanced only at the cost of considerable human misery, since 'such widespread recognition of merit as the arbiter may condemn to helpless despair the many who have no merit, and do so all the more surely because the person so condemned, having too little wit to make his protest against society, may turn his anger against, and so cripple, himself'.¹¹⁹ Merit had perverted the socialist ideal, into which it had been smuggled between the wars, and promised to produce a hierarchical, élitist, and mechanical society.

Educational psychology: expansion and self-doubt

Intelligence testing should have had no shortage of supporters. In the aftermath of the Second World War, educational psychology turned itself into a recognised and expanding profession, with more and more local educational authorities employing psychologists, the Ministry of Education emphasising the importance of their work, and the profession demanding higher degrees and specialised qualifications from its recruits.

The 1944 Education Act laid the foundations for this expansion by obliging local education authorities to provide suitable education for the subnormal and maladjusted as well as for the physically handicapped. The disorganised and improvised system of treatment which prevailed at the time, usually based on common sense and personal experience, could hardly cope with the demands created by the new legislation. Both the medical and educational services recognised the need for help from professional psychologists, who were trained to deal with children at the extreme ends of the range of abilities.¹²⁰ In 1955, the Underwood Committee emphasised the importance of providing adequate guidance facilities for the maladjusted and drew attention to the ways in which educational psychologists worked, to the need for an acceleration in their recruitment, and to the deployment of their services by local educational authorities in child guidance clinics and the school psychological services.¹²¹

¹¹⁶ *Ibid.*, p. 242.

¹¹⁷ *Ibid.*, p. 247.

¹¹⁸ This was not the first science fiction to satirize scientifically selected mandarins. See also Gerald Heard, *Doppelgangers* (1948), C. H. Sisson, *An Asiatic Romance* (1953) and David Karp, *One* (1954).

¹¹⁹ Michael Young, *The Rise of the Meritocracy 1870–2033: An Essay on Education and Equality* (1958; Harmondsworth, 1961), p. 24.

¹²⁰ C. Burt, *The Subnormal Mind* (1955 edn), p. vi.

¹²¹ *Report of the Committee on Maladjusted Children* (Underwood Report) (HMSO 1955), paras. 166–19, 179, 180, 368, 379–82, 423, 401–26. Recommendations 12, 19, 20–32.

The number of educational psychologists increased from 140 full-time workers in England and Wales in 1955 to 640 in 1972. Even so, supply failed to satisfy demand. Training centres were unable to attract enough recruits to fill the available vacancies; and an increasing number of qualified psychologists left the profession, usually for posts in universities, in colleges of education, or in educational administration.¹²² In 1965 the Department of Education and Science established a working party to review the work and training of educational psychologists employed by the local educational authorities and to estimate the increased number of psychologists required in the future. The resulting report, the *Summerfield Report* (1968), praised their work and laid down official guidelines for their conduct; it also recommended a minimum psychologist: pupil ratio of 1:10,000 – a considerable improvement on the ratio of 1:23,000 recommended by the Underwood Committee.¹²³

Based on a detailed survey of the 326 educational psychologists who were working in England and Wales on 1 May 1965, the Report conveys an impression of a buoyant and expanding profession. Almost all of the 326 held a university graduate qualification in psychology; two-thirds had trained as teachers; a third held a higher degree in psychology or education, and nine-tenths had taught in schools (the median length of teaching experience within the profession was three to four years). About 60 per cent of them had also gained a post-graduate training in educational psychology. The typical educational psychologist was thus a person of considerable training and experience – an honours graduate in psychology with a teacher-training qualification, some years of teaching experience, and a postgraduate qualification in educational psychology. In 1975 educational psychologists finally won their long-standing battle with the medical profession for control over the certification of mentally defective children; Circular 2/75 of the Department of Education and Science outlined the importance of the psychological contribution to identifying children's special needs and suggested some improved procedures for recording them.¹²⁴

As well as a ballooning demand for their services, they were confronted with a burgeoning specialist literature. Publications on educational psychology multiplied more rapidly than that on any other area of the discipline. Between 1967 and 1971 the number of abstracts published on the specialism in *Psychological Abstracts* doubled; and the literature on developmental psychology – a closely connected sub-discipline – grew almost as rapidly, increasing by 90 per cent.¹²⁵ The demands

¹²² Philip Williams, 'Future Developments', in Chazan, Moore, Williams and Wright (eds.), *The Practice of Educational Psychology* (1974), p. 343.

¹²³ Department of Education and Science, *Psychologists in the Education Services (Summerfield Report)* (HMSO, 1968).

¹²⁴ Department of Education and Science, 'The Discovery of Children Requiring Special Education and the Assessment of Their Needs'. Circular 2/75 (HMSO, 1975).

¹²⁵ S. S. Dubin, 'Obsolescence or Lifelong Education: A Choice for the Professional', *American Psychologist*, May 1972, pp. 486–98.

for their services from local educational authorities also increased dramatically. Although the service expanded considerably in size, the waiting lists in 1974 were as long as they were in 1954.¹²⁶ The variety of tasks they were expected to perform also widened, ensuring that educational psychologists had to make decisions for which they were unqualified.¹²⁷

Expansion coincided with the spread of introspection and self-criticism within the profession. Psychologists were increasingly critical of their vocation, cautious about their expertise, sceptical about their usefulness and cynical about their intellectual inheritance. In general, they rejected the psychometric tradition, questioning intelligence tests and abandoning hereditarian explanations of individual differences.¹²⁸ Although they continued to use intelligence tests as one of their main intellectual tools, they did so out of habit rather than conviction; they had no alternative devices at hand and were publicly associated with testing.¹²⁹ 'In the late seventies', one of them has confessed, 'few psychologists give an intelligence test without a sense of unease, without a note of apology (or defensiveness) as if engaging in some shameful act.'¹³⁰ They abandoned hereditarianism for behaviourism and English psychologists such as Burt or Galton for continental and American thinkers such as Piaget and Skinner. John Quicke's survey of attitudes and beliefs among educational psychologists, which he carried out in March 1978, revealed that behaviourism was the third most popular theoretical position, that Skinner was the most regularly used psychologist, and that Tansley, who advocated a behavioural approach to learning difficulties, was the most regularly used educationalist. Only 13 per cent of those who replied said that they regularly used Burt's work. As Liam Hudson emphasised, the social philosophy which underlay the work of Galton and his followers seemed alien to the post-war generation.¹³¹

The rejection of psychometrics coincided with a widespread questioning of child guidance and individual therapy; psychologists admitted the ineffectiveness of much of their work, rejected a medical approach to behaviour problems, and insisted on regarding 'illness' and 'maladjustment' in the social contexts of the school and the family. Many educational psychologists would agree with Jack Tizzard's argument that child guidance was quite simply 'wrongly conceived'.¹³²

¹²⁶ Philip Williams, 'Future Developments', in *The Practice of Educational Psychology* (1974), p. 339.

¹²⁷ Jack Tizard, Foreword to Gillham (ed.), *Reconstructing Educational Psychology* (1978).

¹²⁸ For criticisms of intelligence testing from educational psychologists working within the school psychological services see, for example, 'Purposes and Principles of Assessment', in P. Mittler (ed.), *Assessment for Learning in the Mentally Handicapped* (1973); R. L. Burden, 'If We Throw the Tests Out of the Window What Is There Left to Do?', *Journal of the Association of Educational Psychologists* Vol. 3, (1973), pp. 6-9; W. E. C. Gillham, 'The British Intelligence Scale: à la recherche du temps perdu', *Bull. Brit. Psych. Soc.* Vol. 42, No. 2 (1974); Gillham, 'The Failure of Psychometrics', in Gillham (ed.), *Reconstructing Educational Psychology* (1978).

¹²⁹ John Quicke, *The Cautious Expert: A Social Analysis of Development* (Milton Keynes, 1982), p. 83.

¹³⁰ Gillham, 'The Failure of Psychometrics', p. 82. ¹³¹ Hudson, *The Cult of the Fact*, p. 94.

¹³² Cyril Burt, *The Subnormal Mind* (1955 edn), p. vi.

Disillusioned with both intelligence testing and child guidance, many psychologists refused to see themselves as disinterested scientific experts capable of solving educational problems; instead they emphasised the importance of open negotiations with teachers, almost admitting that one man's opinion is as good as another's. One admitted that he never gave an opinion without 'at the same time making it clear that the opinion might be rejected'.¹³³ Another said that when he was confronted with teachers who believed that he could give definitive scientific advice on educational problems, he tried 'to knock that idea down immediately'. A third confessed that he regarded teacher's expectations as 'one of the biggest hassles of the job' and complained that 'you are regarded as an expert who can supply an answer to every situation'.¹³⁴ This mood of caution and humility was particularly marked in their dealings with the severely mentally subnormal. A leading educational psychologist even opposed special education for the mentally deficient on the grounds that the profession is too ignorant to be able to sanction it: 'separating children from their peers, labelling them as deficient, and inadequate, and denying their parents rights over choice of schooling is a fairly dramatic procedure. In order for it to be justified, the evidence that children benefit from the process must be unequivocal, and obviously not only to teachers and administrators, but to the parents and children themselves. This evidence appears to be lacking.'¹³⁵

All the leading members of the profession agreed in rejecting the traditional model of the psychologist as a dispassionate expert in both psychometrics and therapy, capable of allocating children to educational positions and occupations suited to their innate abilities, and skilled in adjusting those who fail to conform to their logical social roles. The contemporary crisis of confidence in educational psychology is a product of the widespread rejection, both inside and outside the profession, of the ideal of a meritocratic society which had so obsessed the leading psychologists between the wars.

¹³³ *Ibid.*, p. 78.

¹³⁴ *Ibid.*, p. 77.

¹³⁵ P. Miller, 'All Children are Special', *Journal of the Association of Educational Psychologists* Vol. 3, No. 3 (1973), pp. 40-6. Quoted in Gervase Leyden, 'The Process of Reconstruction: An Overview', in Gillham (ed.), *Reconstructing Educational Psychology*, p. 168.

Egalitarianism triumphant

For a time it looked as if the 1964 Labour government would ignore these siren voices and consummate the love-affair between the left and the meritocracy. Harold Wilson was an archetypal scholarship boy: the son of a self-educated textile chemist, he climbed the educational ladder from his local council school, via grammar schools, to Oxford, won a clutch of university prizes, including the Gladstone Memorial Prize, took an outstanding first in PPE (local legend has it that he got *alphas* on all his papers except moral philosophy), obtained a research fellowship on graduation, and became President of the Board of Trade before his thirtieth birthday.¹ Many commentators in the mid-1960s presented the conflict between Labour under Wilson and the Conservatives under Alec Douglas-Home as nothing less than a conflict between a scientific meritocracy and a snobbish and ignorant old-boy network. The choice confronting the electorate was simple: amateurism and decline with the fourteenth Earl of Hume or expertise and modernisation with the fourteenth Mr Wilson.² Wilson did his best to cash in on this mood, emphasising his humble origins and plain tastes, preaching the importance of self-help and technical know-how, pooh-poohing aristocratic pretension and social snobbery, and presenting politics as a struggle between gentlemen and players.³ He made the point brilliantly in his speech to the 1963 Party Conference: 'For the commanding heights of British industry to be controlled today by men whose only claim is their aristocratic connection or the power of inherited wealth or speculative finance is as irrelevant to the twentieth century as would be the continued purchase of commissions in the armed forces by lordly amateurs.'⁴ In the same speech he triumphantly replaced the cloth cap with the white laboratory coat as the symbol of the Labour movement.⁵

Unfortunately, the meritocratic ideal proved to be much more troublesome for

¹ Ben Pimlott, *Harold Wilson* (1992), esp. pp. 15, 26–9, 50–9. Pimlott (pp. 33–6) points to the similarity in the backgrounds of Wilson and Thatcher.

² Pimlott, *Harold Wilson*, pp. 300–1. One of the books which best caught the mood of the moment was Michael Shanks, *The Stagnant Society* (1961). ³ Pimlott, *Harold Wilson*, pp. 266–8.

⁴ Quoted in Pimlott, *Harold Wilson*, p. 304.

⁵ Pimlott, *Harold Wilson*, pp. 274–6. See also McCulloch, *Philosophers and Kings* (Cambridge, 1991), p. 108.

Wilson than it had been for Attlee. Much as he might have liked to, he could not just sit back and watch while the Department of Education strengthened the scholarship ladder and grammar-school products replaced Old Etonians in Whitehall and the boardroom. A growing number of left-wing intellectuals, some of them in the parliamentary Labour Party, argued that the proper aim of the Labour Party should not be meritocracy but equality; and a series of official reports emphasised that the 11-plus was an imperfect capacity-catching machine, misallocating many children and de-motivating even more.

The Labour intelligentsia and the reinvention of socialism

The post-war Labour intelligentsia was increasingly convinced that meritocracy is repugnant in theory and unworkable in practice. The Fabian Society, which revived as a think-tank-cum-pressure-group in 1939, and regained prominence with the publication of *New Fabian Essays* in 1952, was highly critical of the meritocracy, voicing some of the first doubts on the subject to be heard in responsible left-wing circles and orchestrating a campaign of anti-meritocratic polemic. Much of its mounting support resulted from widespread dissatisfaction with the 1945–51 Labour government.

The New Fabians identified the managerial society as the main enemy of socialism. In *Plato Today* (1937) Richard Crossman had denounced the British taste for rule by all-powerful administrators;⁶ and in *The New Fabian Essays* (1952) he and his fellow contributors elaborated and reinforced his argument. Far from being the solution, the managerial society was the problem, making the concentration of capital and the ravages of inflation seem minor by comparison. Richard Crossman characterised the managerial society as a veiled form of totalitarianism, in which remote élites manipulated a passive and alienated population for the sake of abstract goals and instrumental values:

In a world organised in ever larger and more inhuman units, the task of socialism is to prevent managerial responsibility degenerating into privilege. This can only be achieved by increasing, even at the cost of 'efficiency', the citizen's right to participate in the control not only of government and industry, but of the party for which he votes, and of the trade union whose card he carries. After all, it is not the pursuit of happiness but the enlargement of freedom which is socialism's highest aim.⁷

He argued that intelligent Conservatives, and most notably R. A. Butler, had welcomed the managerial society because it preserved the power of an élite – albeit

⁶ R. H. S. Crossman, *Plato Today* (1937). See esp. pp. 92, 175, 176, 178. See also his 'British Political Thought in the European Tradition', in J. P. Mayer, *Political Thought: The European Tradition* (1939), p. 198.

⁷ R. H. Crossman, 'Towards a Philosophy of Socialism', in R. H. Crossman (ed.), *New Fabian Essays* (1952), p. 29. See also G. D. H. Cole, *Fabian Socialism* (1943), p. v.

a reformed élite – and a commitment to inequality – albeit a more open inequality.⁸ The main task of socialism, Crossman insisted, is to prevent the concentration of power in the hands of *either* industrial management *or* the state bureaucracy – in brief, to distribute responsibility and so to enlarge freedom of choice.⁹

The New Fabians argued that meritocratic inequality was in many ways as objectionable as non-meritocratic inequality. Sharp inequalities of wealth and power were repugnant – even if wealth and power were distributed as fairly and as efficiently as possible. Meritocratic allocation brought a more efficient economy only at the expense of a less cohesive, less participatory, and less humane society. It encouraged competition and insecurity, and forced the failures to feel a sense of personal worthlessness which could not be mitigated by blaming the system.¹⁰ They anathematised the tripartite system of education, a system which, they argued, was more responsible than anything else for the propagation of class feeling and the segregation of élites.¹¹ Margaret Cole insisted that, by providing special training for future leaders, professors and managers, selective education would simply promote ‘the totalitarian managerial type of society’;¹² education should be a solvent not an agent of social divisions.

Why did the Fabians turn against the meritocracy? On the face of it their decision is difficult to explain. Middle-class intellectuals to a man, they had a vested interest in the rule of what the Webbs called Knowledge and Capacity.¹³ Some (notably Roy Jenkins) had climbed the scholarship ladder; some (particularly Richard Crossman) had enjoyed illustrious careers at public school and Oxbridge. In private some of them were just as happy as their Fabian predecessors to enthuse about meritocracy. One of Crossman’s Winchester contemporaries describes him as an unreconstructed meritocrat:

Power: the exuberant awareness of power in himself, the conception of power – benevolent and just in the Platonic sense – as a proper instrument, wielded by a meritocracy, for achieving the coherence of society and the improvement of its weaker members ... was the reason, no doubt, rather than opportunism, why he associated himself with the Labour Party.¹⁴

Their collective rejection of the meritocracy owes as much to political manoeuvring as to intellectual conviction. There were four main reasons for their position.

⁸ R. H. Crossman, ‘Rab Butler. Ideologist of Inequality’ in *The Charm of Politics and Other Essays in Political Criticism* (1958), esp. pp. 58, 61, 62.

⁹ Crossman, ‘Towards a Philosophy of Socialism’, *New Fabian Essays*, p. 27.

¹⁰ W. T. Rogers, *About Equality* (Fabian Society Study Guide) (1955), p. 1.

¹¹ C. A. R. Crosland, ‘The Transition from Capitalism’, *New Fabian Essays*, p. 65.

¹² Margaret Cole, ‘Education and Social Democracy’, *New Fabian Essays*, p. 109. Austen Albu was unconventional. ‘One of the objects of the educational changes must be to find out the best brains in the community, to give them the fullest opportunities and to allow them to earn the highest rewards. ‘The Organisation of Industry’, *ibid.*, pp. 130–1.

¹³ The phrase is from Sidney and Beatrice Webb, *Industrial Democracy* (1902 edn), p. 844.

¹⁴ Quoted in A. F. Thompson, ‘Winchester and the Labour Party: Three “Gentlemanly Rebels”’, Roger Cusance (ed.), *Winchester College. Sixth-Centenary Essays* (Oxford, 1982), p. 495.

Measuring the mind

The first was disillusion with the 1945 Labour Government. The Fabians wanted at once to explain Labour's defeat in 1951 and ensure its victory in future elections. They also wanted to present a philosophy which would distance them from the old guard which had dominated the party until the 1950s. The rejection of managerialism and meritocracy served all of these functions. Crossman argued that Attlee's government had done nothing to democratise the nationalised industries or to encourage popular participation in the welfare state. It was content to leave management in the hands of remote meritocrats.

The impression was given that socialism was an affair of the Cabinet acting through the existing Civil Service. The rest of the nation was to carry on as before, while benefits were bestowed from above upon some, and taken from others. Thus the first stage of socialism was executed primarily by anti-socialist managers and neutral Civil Servants.¹⁵

This had naturally created popular disillusion with state socialism. Future policy should be *democratic* not *managerial*. The masses should not be passive instruments of enlightened reformers but active agents of their own fates.

The second was anti-communism. The Fabians wanted to demonstrate that socialism did not stop them from being as anti-communist as the next man. The Webbs had argued that the Soviet Union was a meritocracy *par excellence*; the new Fabians accepted their assertion but used it to castigate, rather than to praise, the workers' state. The Soviet Union was an extreme example of managerialism, dominated by a dedicated élite hungry for power and unchecked by moral scruples or popular control.¹⁶

The third was fear of 'betrayal', a long-standing obsession on the left.¹⁷ Between the wars, Labour supporters got into the habit of explaining their Party's problems by the fact that two of their anointed leaders had betrayed them: Ramsay MacDonald, because he succumbed to the establishment embrace, and Oswald Mosley, because he put power above principle. In the 1950s they began to worry that betrayal was being institutionalised. In the 1920s educated workers had become leaders of their own class; after the war they routinely joined the middle class. Roy Jenkins warned that equality of opportunity was stripping the working class of its talented members. Bright working-class children who, had they been born in an earlier generation, might have become Hendersons or Bevins, were being sifted out and turned into 'middle-class intellectuals' – the comfortable and complacent citizens of the opportunity society. Soon the trade union movement would lack people with the ability to challenge the existing distribution of wealth or allocation of power.¹⁸ Indeed, the rise of the meritocracy had already gone too

¹⁵ Crossman, 'Towards a Philosophy of Socialism', *New Fabian Essays*, p. 28.

¹⁶ Crossman, 'Towards a Philosophy of Socialism', *ibid.*, pp. 12–13.

¹⁷ I owe this point to McCulloch, *Philosophers and Kings*, pp. 115–17.

¹⁸ Roy Jenkins, 'Equality', *New Fabian Essays*, pp. 85–6.

far, robbing the working-class of its most competent members: 'It thus becomes more difficult to throw a problem to a gang of men and ask them both to provide an answer and do the job. The man who, some time ago, would have provided the leadership may now have been creamed off to act either in a managerial or a representative capacity.'¹⁹ The memory of notorious defections in the past, and the promise of millions of defections in the future, as the grammar schools did their work, produced a renewed emphasis on solidarity and equality.

The fourth was worry about clause four. With the notable exception of Crossman, the contributors to *The New Fabian Essays* were destined to be Gaitskellites rather than Bevanites. They wanted socialism without further nationalisation. Socialism, they argued, was quite compatible with private ownership of the means of production. Social privilege and class hierarchy could be abolished without destroying private enterprise. To keep their radical credentials these revisionists needed an issue – a left-wing crusade with a progressive constituency. The selective system of education, together with the meritocratic philosophy which justified it, provided them with just what they needed. The abolition of selection would do away with class divisions and create a socialist society.

But the Labour intellectual who did most to convert the Party from meritocracy to egalitarianism was not Richard Crossman but Anthony Crosland, an Oxford don turned politician who was on close personal terms with such educational luminaries as A. H. Halsey and Michael Young.²⁰ In *The Future of Socialism* Crosland dismissed the established system as 'the most divisive, unjust, and wasteful of all the aspects of social inequality',²¹ and argued that it distinguished between 'the unselected goats and the carefully selected sheep'²² on the basis of tests which measured home backgrounds as much as innate abilities.²³ Some of his criticisms of selection were thoroughly meritocratic. He felt that early failure persuaded many children to give up trying²⁴ and confessed that he had never been able 'to understand why socialists have been so obsessed with the question of the grammar schools, and so indifferent to the much more glaring injustice of the independent schools'.²⁵ (Ironically enough, he even argued that it would be 'absurd' to abolish the grammar schools without reforming the public schools, since this would simply intensify class cleavage and increase the *disparity* of educational esteem.²⁶) Lamenting the low academic standards of American high schools, he insisted that,

¹⁹ *Ibid.*, p. 86.

²⁰ Harry Judge, *A Generation of Schooling. English Secondary Schools Since 1944* (Oxford, 1984), p. 89.

²¹ C. A. R. Crosland, *The Future of Socialism* (1956), p. 258; cf. with *Socialism Now* (1974), pp. 194–5.

²² *Socialism Now*, p. 195.

²³ *Ibid.*, p. 196.

²⁴ *Ibid.*, p. 201.

²⁵ Crosland, *The Future of Socialism*, p. 261.

²⁶ *Ibid.*, p. 275. For a full exposition of Crosland's views on public schools, see *The Conservative Enemy: A Programme of Radical Reform for the 1960s* (1962), pp. 167–82. Hugh Gaitskell agreed with him on the danger of abolishing the grammar schools and leaving the public schools intact. See Philip M. Williams, *Hugh Gaitskell. A Political Biography* (1979), p. 783.

even after comprehensive reorganisation, 'division into streams, according to ability, remains essential'.²⁷

Having said that, he made it clear that equality of opportunity was only one stage on the road to equality of outcome. As an end in itself, it was fraught with problems. It promoted 'insecurity and ferocious competition'; threatened to 'replace one remote élite (based on lineage) by a new one (based on ability and intelligence)';²⁸ induced a total sense of inferiority in those who failed, since they could no longer blame the system;²⁹ and robbed the labour movement of their natural leaders, pointing to a future in which 'the Trade Unions will be led by the indifferent residue, and the Labour Party entirely by Old Etonians'.³⁰ He insisted that the public schools should not be turned into 'super schools', open to competitive intelligence tests, since 'Dr Young's dreaded "meritocrats" would then finally have their fingers at our throats'.³¹ Above all, he felt that 'when socialists speak of "equal opportunity" in terms of a narrow ladder up which only a few exceptional individuals, hauled out of their class by society's talent-scouts, can ever climb, they concede the narrow, reactionary interpretation of their opponents'.³² He hoped that a common school would be the harbinger of a common culture and a classless society. 'Gradually, the schools which children go to will become, as in the United States, not an automatic function of brains or class location, but a matter of personal preference and local accident ... Then, very slowly, Britain may cease to be the most class-ridden country in the world'.³³

The revisionists were not as naïve as this makes them sound. Their breezy rhetoric conceals a shrewd analysis of the British social hierarchy. They felt that Britain suffered from a surplus of status divisions, as pre-industrial social snobberies reinforced new economic divisions. Managers and workers distrusted each other not because their economic interests were opposed but because they belonged to different social worlds. Educated in different schools and socialised into different cultures, they behaved as though they belonged to different species, with no common points of reference. The revisionists wanted to create equality of status rather than of wealth – to break down social barriers and fabricate a sense of community. They hoped that common schools would act as a solvent of outdated divisions and a cement of vital loyalties, promoting easy, natural and unself-conscious contact between people from different backgrounds and varying traditions. They repeatedly pointed to the United States as an example of a capitalist country in which common schools produced a common culture and harmonious industrial relations.

²⁷ Crosland, *The Future of Socialism*, p. 272.

²⁸ *Ibid.*, p. 233.

²⁹ *Ibid.*, p. 235. Crosland acknowledged that his views on this point owed much to discussions with Michael Young.

³⁰ *Ibid.*, p. 237.

³¹ Crosland, *Conservative Enemy*, p. 181.

³² *Ibid.*, pp. 173–4.

³³ Crosland, *The Future of Socialism*, p. 277.

The official mind rejects selection

The Central Advisory Council, set up by the 1944 Education Act to replace the Consultative Committee in offering advice to the Minister on educational theory and practice, played a crucial role in legitimising and popularising the case against selection, lending it powerful support in a cycle of reports on every aspect of English education. Thanks to the Council, the preoccupations of academia became the problems of politicians.

The Council concluded that the organisation of English schooling, with its emphasis on early selection and precocious academic excellence, was highly wasteful of the abilities of the nation's children. In *Early Leaving* (1954), it emphasised the wastage of both talent and grammar-school places which resulted from the failure of a substantial number of pupils to complete their grammar-school courses. This was largely a class problem, with the bulk of early leavers coming from working-class homes: social pressures were clearly distorting and frustrating education. Of roughly 16,000 children of semi-skilled and unskilled parents who entered grammar schools in 1946, about 9,000 failed to get three O-level passes, with 5,000 of these leaving school before the end of their fifth year.³⁴ The problem seemed even more dramatic when the children of unskilled workers were looked at separately. Of about 4,360 such children who went to grammar schools only about 1,500 obtained 3 O-level passes, and only 230, or 1 in 20, obtained 2 A-level passes.³⁵

Problems started early in these children's school careers, and continued to deepen as they moved from form to form. Throughout school life educational selection was a process of social selection, so that objective tests at eleven failed to function as reliable indicators of future performance. Of children who raised their ranking from the bottom of the selection group at eleven to the highest academic groups at sixteen, 48.3 per cent came from the professional and managerial classes, whereas 54 per cent who fell from the top of the selection group at eleven to the bottom of the academic group at sixteen came from the unskilled classes, and 37.9 per cent from the semi-skilled classes.³⁶ The report explained academic deterioration and early leaving in terms of over-crowding in the home, which made homework burdensome, and the social assumptions of the family, which discouraged academic success.³⁷ It also suggested that the social isolation of working-class children within the grammar schools promoted restlessness. Boys and girls who came from streets and schools which rarely sent more than a solitary pupil to a grammar school felt lonely and out of place in a form where other pupils had ready-made friends.³⁸

The Crowther Report, *15 to 18* (1963), produced further evidence of the wastage

³⁴ Ministry of Education, *Early Leaving, A Report of the Central Advisory Council for Education (England)* (HMSO, 1954), para. 90.

³⁵ *Ibid.*, para. 91.

³⁶ *Ibid.*, para. 42.

³⁷ *Ibid.*, paras. 92–9.

³⁸ *Ibid.*, para. 83.

of able children. A survey of the ability and education of a cohort of National Service recruits indicated that 42 per cent of men in the top 10 per cent of the ability range left school by sixteen, failing to attempt a sixth-form course, while 66 per cent of men in the next ability group left school as soon as they were allowed to. Inevitably, most of this wastage affected working-class children.³⁹ The Report also emphasised the loss of ability caused by the discouragement of able pupils in the highly competitive atmosphere of the grammar schools. Lacking the advantages of an educated home culture, they fell into the lower streams of the school, lost their enthusiasm, and failed to do justice to their innate abilities.⁴⁰ They might have done better in a less highly selective environment, where their natural abilities might have won them more recognition.

Yet this problem was repeated in the secondary-modern schools. The Newsom Report, *Half Our Future* (1963), pointed to the 'unexpected reserves of talent among the abler pupils in the modern schools', arguing that a much higher proportion of school-leavers could go on to take up skilled work if the opportunities for training and apprenticeships were made available to them.⁴¹ Once again, it emphasised the handicaps which home backgrounds imposed on able working-class children, remarking that 23 per cent of skilled manual workers' children and 34 per cent of semi-skilled manual workers' children who were in the top 10 per cent of the ability range nevertheless failed to pass 4 GCE O-levels.⁴²

The Robbins Report, *Higher Education* (1963), extended this argument further up the educational ladder, arguing that higher education was failing to draw fully on the ability of the population. It noted that only 4 per cent of the children of skilled manual workers entered higher education as compared with 45 per cent of the children of higher professionals,⁴³ and it dismissed attempts to explain this disparity in terms of differences in the average innate intelligence of members of these classes.⁴⁴ Examining the educational careers of children with IQs between 115 and 129, it found that 34 per cent of middle-class children went on to higher education as compared with only 15 per cent of working-class children.⁴⁵ It also argued that the number of grammar school places in different areas had a dramatic influence on children's educational futures. In areas where more than 23 per cent of children went to grammar schools, 11 per cent entered full-time higher education, compared with only 7.5 per cent in areas where grammar-school places were provided for 18 per cent or less of the children.⁴⁶ Clearly, IQ was only one of

³⁹ Ministry of Education, *15 to 18, Report of the Central Advisory Council for Education (England) (The Crowther Report)* (HMSO, 1963), para. 102. ⁴⁰ *Ibid.*, paras. 308, 312.

⁴¹ Ministry of Education, *Half Our Future, Report of the Central Advisory Council for Education (England) (The Newsom Report)*, (HMSO, 1963), para. 102. ⁴² *Ibid.*, para. 557.

⁴³ Committee on Higher Education, *Higher Education, Report of the Committee appointed by the Prime Minister under the Chairmanship of Lord Robbins 1961-63, (The Robbins Report)* (HMSO, 1963), para. 139. ⁴⁴ *Ibid.*, Appendix 1, part 2, para. 8.

⁴⁵ *Ibid.*, Appendix 1, part 2, para. 8 and table 4 on p. 42.

⁴⁶ *Ibid.*, Appendix 1, part 2, para. 53.

several influences which made for academic success; children's life chances could be altered drastically by parental background and place of residence.

One of the main causes of this wastage lay in the inexactness of the system of selection. The Crowther report pointed out that the requirements for admission to grammar-school varied from region to region, depending on the supply of places; that many grammar school pupils failed to live up to their initial promise while a minority of rejected pupils developed into able scholars; and that the children who were so rigidly separated at the age of eleven went on to intermingle in their later educations and employments.⁴⁷ Furthermore, the order of merit among eleven-year-olds failed to hold constant throughout the rest of their careers: a fresh classification after four years – that is at the school-leaving age of fifteen – would have redistributed about 14 per cent of them between selective and non-selective schools. By the time they joined up for National Service this 14 per cent had swollen to 22 per cent among Army recruits and 29 per cent among RAF recruits. The report concluded pessimistically that 'it seems increasingly clear that we cannot hope to avoid error by further refinements in the process of selection'.⁴⁸

The Plowden report extended this argument to primary schools, pointing to the frequency of errors in the classification of young children and suggesting that the existing system of streaming should be loosened, or even abolished. It affirmed bluntly that 'selection will inevitably be inaccurate', since the experts possessed no method for assigning seven-year-olds to classes graded by attainment or ability.⁴⁹ If predictions made at eleven turned out to be incorrect in 10 to 20 per cent of cases, then predictions at seven would be even more misleading, since children of that age tended to cluster together in the middle ranges of ability. It warned against substituting the tensions of a seven-plus for those of the eleven-plus.⁵⁰ It also emphasised that streaming served as a means of social selection, with more middle-class children in the upper streams and fewer in the lower streams than might be predicted from the results of objective tests.⁵¹ The report concluded that 'we welcome unstreaming in the infant or first school and hope that it will continue to spread through the age groups of the junior or middle schools'.⁵² Although it recognised that there had to be groups, it hoped that these would be fluid affairs, changing with subject matter and interest.⁵³

This concern with educational wastage and administrative inefficiency tended to defuse earlier anxieties about the genetic limits to educability. An optimistic belief in an untapped pool of talent replaced the pessimistic obsession with the limited and diminishing supply of the gifted which had characterised debates in the 1930s. This change in intellectual fashion reflected an improvement in the nation's economic fortunes, as steady growth and full employment replaced economic

⁴⁷ *Crowther Report*, para. 35.

⁴⁸ *Ibid.*, para. 107.

⁴⁹ Department of Education and Science, *Children and their Primary Schools. Report of the Central Advisory Council for Education (England) (The Plowden Report)*. (HMSO, 1967), para. 816.

⁵⁰ *Ibid.*, para. 811.

⁵¹ *Ibid.*, para. 815.

⁵² *Ibid.*, para. 819.

⁵³ *Ibid.*, para. 824.

stagnation and high unemployment. In his foreword to *Early Leaving*, for example, David Eccles argued that 'now that our manpower is fully stretched and the demand for trained men and women exceeds the supply everyone can see the importance, if our standard of life is to be raised, of developing to the full the talent we have'.⁵⁴ The Newsom report set the tone of the post-war debate, arguing that 'intellectual talent is not a fixed quantity with which we have to work but a variable modified by social policy and educational approaches': new opportunities would generate new abilities. It quoted Macaulay, one of the inventors of the meritocracy, to good effect: 'genius is subject to the same laws which regulate the production of cotton and molasses. The supply adjusts itself to the demand. The quantity may be diminished by restrictions and multiplied by bounties.'⁵⁵

The Robbins Report dismissed out of hand the fear that the expansion of higher education would soon be halted by the exhaustion of the 'so-called pool of ability', arguing that there were many children who still did not receive an education commensurate with their talents.⁵⁶ It suggested that recent improvements in the school performance of children of professional parents, where the pool of ability might have been thought to be nearly exhausted, indicated that there were large reserves of untapped ability in the general population. These reserves, the report argued, were concentrated mainly among the working classes, females, and the inhabitants of regions with a low provision of grammar school places,⁵⁷ and added that fears that expansion would be accompanied by a lowering of the average abilities of students and a debasement of their intellectual qualities – that more would mean worse – were without foundation. The measured ability of students had remained constant; their performance in standard academic tests was as good as ever; and the number of drop-outs had remained steady.⁵⁸ Warning that 'pool of ability calculations are thus always in danger of being confounded by the speed of change',⁵⁹ it concluded optimistically that 'it is certain that much untapped ability exists at present in this country. But little is known about ultimate human capacities. The levels of education already achieved would have surprised those alive a hundred or even fifty years ago, and it is impossible to circumscribe with a formula the potentialities of the future.'⁶⁰ The amount of ability available was a function not only of heredity but also of a complex of social traditions and demands: school provision, family expectations, economic opportunities, and the educational level of the population. 'If there is to be talk of a pool of ability', it argued, 'it must be of a pool which surpasses the widow's cruise in the Old Testament, in that when more is taken for higher education in one generation more will tend to be available in the next.'⁶¹

⁵⁴ *Early Leaving*, p. v.

⁵⁵ *The Newsom Report*, para. 15. The quotation is from 'On the Athenian Orators' (1824).

⁵⁶ *Robbins Report*, para. 137.

⁵⁷ *Ibid.*, para. 142.

⁵⁸ *Ibid.*, para. 145; Appendix 1, part 3, paras. 1–29.

⁵⁹ *Ibid.*, Appendix 1, part 3, para. 18.

⁶⁰ *Ibid.*, Appendix 1, part 3, para. 28.

⁶¹ *Ibid.*, para. 146.

The Council repeatedly endorsed the environmentalist interpretation of IQ scores. 'The kind of intelligence which is measured by the tests so far applied', the Newsom Report insisted, 'is largely an acquired characteristic.' The report did not go so far as to deny the existence of a basic genetic endowment; but it suggested that, whereas this endowment had proved to be impossible to isolate, the influences which governed the expression of intelligence – the social and physical environment – had been carefully investigated. It added that 'since these are susceptible to modification, they may well prove educationally more important'.⁶²

The Robbins Report agreed that intelligence tests were incapable of distinguishing between inherited and acquired abilities. 'Years ago, performance in "general intelligence tests" was thought to be relatively independent of earlier experience', it reasoned. 'It is now known that in fact it is dependent upon previous experience to a degree sufficiently large to be of greater relevance.'⁶³ It also dismissed the idea that intelligence is a single quality, pervading every mental act and differing in quantity from person to person. Instead, it suggested that 'intelligence' was divided into a number of distinguishable components, each requiring a measurement of its own; an able scientist might well be a dull classicist.⁶⁴

The Plowden Report included a rather more detailed and sophisticated discussion of intelligence testing, and once again warned against the hardline hereditarian position. It suggested that 'intelligence', like any other biological quality, was the product of the ceaseless interaction of inheritance and environment; attempts to determine the exact importance of each element – to give so much weight to one and so much to another – rested on a misunderstanding of genetics.⁶⁵ It insisted that 'any IQ score represents an interaction between hereditary endowment and environmental circumstances'.⁶⁶ although the tests had their uses they were incapable of isolating the individual's genetic endowment from his acquired learning.⁶⁷ It also emphasised the strong support it had encountered among its witnesses for arguments that linguistic poverty underlay the poor test performance of many working-class children.⁶⁸ Insisting that 'the notion of the constancy of the IQ is biologically self-exploding as well as educationally explosive',⁶⁹ it pointed out that 'if the IQ had been made the single criterion at nine or ten for sorting the children into sheep and goats, and if the same criterion had been used again at nineteen, it would have been found that a mistake had been made in 20 per cent of the cases'.⁷⁰

The Council was rapidly converted to the comprehensive cause. The Crowther Report argued that the abolition of selection would help to give each pupil an education suited to his needs, ridding the schools of the hitherto endemic problems

⁶² *Newsom Report*, para. 16.

⁶⁴ *Ibid.*, Appendix 1, part 3, para. 3.

⁶⁶ *Ibid.*, para. 56.

⁷⁰ *Ibid.*, para. 59.

⁶⁷ *Ibid.*, para. 60.

⁶³ *Robbins Report*, para. 137.

⁶⁵ *Plowden Report*, paras. 29–75.

⁶⁸ *Ibid.*, para. 302.

⁶⁹ *Ibid.*, para. 60.

of misallocation and educational wastage. It would also make it easier to transfer late developers between streams,⁷¹ as well as helping able working-class children who fell to the bottom of intensely competitive grammar schools.⁷² Finally, the Plowden Report emphasised that it welcomed the ending of selection at eleven, pointing to the difficulty of getting selection right and emphasising the debilitating effects of competition on primary-school life.⁷³

The comprehensive school movement

The job of putting these egalitarian ideals into practice fell to Anthony Crosland, when, in January 1965, Harold Wilson invited him to become Minister of Education and Science. (Richard Crossman, a fellow critic of the meritocracy, had also been in the running for the job.⁷⁴) Crosland immediately set about abolishing the grammar schools – ‘if it’s the last thing I do’, he told his wife, ‘I’m going to destroy every fucking grammar school in England. And Wales. And Northern Ireland’⁷⁵ – and founding spanking new comprehensives. (He seems to have forgotten his own strictures about the dangers of closing down the grammar schools while leaving public schools intact.) On 12 July 1965, Crosland issued Circular 10/65, describing schemes for secondary school reorganisation which would be acceptable to the Ministry, and asking LEAs to submit blueprints within a year. This circular immediately turned comprehensive education into the most divisive issue in domestic politics.⁷⁶

The Crosland crusade for comprehensives was helped enormously by four developments. First, supporters of comprehensive schools won control of the Labour Party in both parliament and the country. Until the 1950s educational reorganisation had been the passion of a sectarian minority. The National Association of Labour Teachers championed multi-lateral schools from its foundation in 1929, but it was a small organisation, drawing most of its members from London and Wales, particularly the Rhondda.⁷⁷ In the 1930s only one or two Labour MPs raised doubts about selection. In 1931 Leah Manning argued that the 11-plus was unfair because it was impossible to predict how a young child would turn out. Six years later Lees-Smith argued that ‘we talk of class distinctions and how to get rid of them, but a new class distinction is arising, namely, the distinction between those who pass an academic examination at the age of eleven and those who do not pass it.’⁷⁸ After the war half a dozen pro-comprehensive MPs led by W.

⁷¹ *Crowther Report*, para. 36. ⁷² *Ibid.*, paras. 308, 392. ⁷³ *Plowden Report*, para. 418.

⁷⁴ Pimlott, *Wilson*, p. 328; Anthony Howard, *Crossman. The Pursuit of Power* (1990), pp. 260, 265.

⁷⁵ Susan Crosland, *Crosland*, p. 148. He promised too much when he included Northern Ireland, where the comprehensive movement has had little impact.

⁷⁶ Harold and Pamela Silver, *An Educational War on Poverty. American and British Policy-Making 1960–1980* (Cambridge, 1991), p. 170. ⁷⁷ Stephen Brooke, *Labour’s War*, pp. 116–17.

⁷⁸ Quoted in Silver and Silver, *An Educational War on Poverty*, pp. 162–3.

G. Cove made a good deal of noise – Cove pledged that ‘we shall never let this issue die; we shall always raise it’⁷⁹ – but had little practical impact.⁸⁰ The pro-comprehensive lobby aroused general scorn when it suggested that Ellen Wilkinson’s salary should be cut in protest against her tripartite philosophy. But the return of a Conservative Government in 1951 discredited the likes of Ellen Wilkinson and enabled the left to gain a mounting influence over educational policy-making.⁸¹ The Party’s 1951 policy-statement, *A Policy for Secondary Education*, came down (albeit rather vaguely) on the side of the comprehensive school.⁸²

Second, more and more parents began to find the 11-plus intolerable. Upwardly mobile people were not willing to see their children consigned to second-rate schools – particularly if the examination which was doing the consigning was widely known to be fallible. Support for comprehensivisation was particularly strong in dormitory towns populated by the newly affluent and underendowed with grammar schools.⁸³ By 1964 opinion polls ranked education second only to the cost-of-living in the public’s list of worries.⁸⁴

Third, several LEAs proved that comprehensive schools were a practical possibility, not just an idealistic dream. In 1944 the LCC announced that it wanted to create a system of ‘comprehensive high schools.’⁸⁵ After the war, the Isle of Man and Anglesey both introduced fully-fledged comprehensive systems,⁸⁶ and Coventry, where most of the secondary schools had been destroyed by wartime bombing, also opted for comprehensives. Staffordshire, West Yorkshire and Manchester all drew up plans for comprehensives, largely to cater for their rapidly growing new suburbs.⁸⁷ Several rural LEAs – Staffordshire, Leicestershire, and Oxfordshire were the most notable examples – introduced comprehensive schools because their sparsely scattered populations could not support a divided school system.⁸⁸

Fourth, the Conservative Party failed to organise a vigorous defence of the grammar schools. Most Tory MPs were public school products who cared little about how state education was organised,⁸⁹ while those few who did care were

⁷⁹ *Hansard*, Vol. 474, 4 May 1950, 2021–2.

⁸⁰ Vernon, *Ellen Wilkinson*, pp. 218–19. Cove was an ex-President of the National Union of Teachers.

⁸¹ Keith Fenwick, *The Comprehensive School, 1944–1970. The Politics of Secondary School Re-organisation* (1976), pp. 61, 73, 81.

⁸² *Ibid.*, p. 73.

⁸³ Low, *Education in the Post-War Years*, p. 148. See also pp. 71–151.

⁸⁴ Fenwick, *The Comprehensive School*, p. 129.

⁸⁵ Silver and Silver, *An Educational War on Poverty*, p. 163; Simon, *Education and the Social Order 1940–1990*, p. 131. The best contemporary account of the London comprehensives is Margaret Cole, *What is a Comprehensive School? The London School Plan in Practice* (n.d.).

⁸⁶ Silver and Silver, *An Educational War on Poverty*, p. 170.

⁸⁷ Low, *Education in the Post-War Years*, p. 135.

⁸⁸ Fenwick, *The Comprehensive School*, p. 222.

⁸⁹ See, for example, Christopher Chataway, ‘At the Education Ministry: His Junior Minister’s View’, in Ann Gold (ed.), *Edward Boyle. His Life by his Friends* (1991), p. 108.

sharply divided over the 11-plus. Though some (particularly those who had been educated in grammar schools) were bitterly opposed to reorganisation, these die-hards were an ill-organised and uninspiring minority until the 1970s.⁹⁰ Other Tories argued that educational organisation was a matter for LEAs as much as central government; Florence Horsburgh, for example, said that she were willing to consider reorganisation plans on their intrinsic merits.⁹¹

But from the mid-1950s onwards the Party élite became increasingly nervous about selection. Though they habitually praised grammar schools, high-flying Tories also talked of delaying selection, upgrading modern schools, encouraging comprehensive experiments, and merging or eliminating smaller grammar schools.⁹² By 1955 David Eccles had come to the conclusion that the Party risked unpopularity if it identified itself with uncritical support for the 11-plus: the examination was unpopular, and selection was incompatible with a philosophy of self-reliance and upward mobility.⁹³ Geoffrey Lloyd, his successor, admitted that 'the bipartite system had been found wanting and was out of favour with the educationalists'.⁹⁴ The 1958 White Paper, *Secondary Education for All: A New Drive*, stressed the difficulty of distinguishing between children and argued for a much more flexible arrangement.⁹⁵

In particular, Edward Boyle was convinced that the comprehensive revolution was not only inevitable but also desirable.⁹⁶ In 1963 he made an eloquent speech against the tripartite system:

none of us believe in pre-war terms that children can be sharply differentiated into various types or levels of ability; and I certainly would not wish to advance the view that the tripartite system, as it is often called, should be regarded as the right and normal way of organising secondary education, compared with which everything else must be stigmatised as experimental.

Boyle was worried that the Party would lose middle-class votes if it identified itself with the 11-plus. The educational regime solidified in 1944 was incompatible with the affluent society. 'the shape of Britain's social structure was becoming less of a pyramid, and more like a diamond, just when it was also increasingly apparent that the 1944 ideal of "parity of esteem" for different kinds of secondary school had proved a delusion.'⁹⁷ The expanding and aspiring middle class would not long tolerate an educational system which might consign their eleven-year-old children to inferior schools and dead-end jobs.⁹⁸ For Boyle, the beginning of political

⁹⁰ See below, pp. 363–79.

⁹¹ Fenwick, *The Comprehensive School*, pp. 72–3.

⁹² Denis Dean, 'Preservation or Renovation: The Dilemmas of Conservative Educational Policy 1955–1960', *Twentieth-Century British History* Vol. 3, No. 1 (1992), p. 30.

⁹³ *Ibid.*, pp. 14–15.

⁹⁴ Quoted in *Ibid.*, p. 23.

⁹⁵ *Ibid.*, p. 30.

⁹⁶ See David Crook, 'Edward Boyle: Conservative Champion of Comprehensives?', *History of Education* Vol. 22, No. 1 (March, 1993), pp. 49–62.

⁹⁷ Edward Boyle, 'The Politics of Secondary School Reorganisation: Some Reflections', *Journal of Educational Administration and History* Vol. 4, No. 2 (June, 1972), p. 30. See also p. 33.

⁹⁸ *Ibid.*, p. 33.

wisdom lay in narrowing the gap 'between the value which individual men and women set on their own personalities, and the value set on them by the institutional framework within which we live'.⁹⁹

The most important battles over comprehensive schools were fought in LEAs rather than Westminster. Circular 10/65 certainly accelerated comprehensivisation¹⁰⁰ – by the early 1970s the proportion of pupils in comprehensive schools had jumped from 10 per cent to 32 per cent – but it no more created the movement than its withdrawal by Margaret Thatcher killed it. MPs did little more than give national expression to a reorganisation which was driven by the aspirations of thousands of parents and rooted in the politics of hundreds of communities.¹⁰¹ The pace of this reorganisation varied with the politics of particular LEAs. Some rushed to reorganise; some reorganised steadily; the more Tory-inclined LEAs dithered or prevaricated. But a combination of central pressure and local agitation pushed the educational system in a comprehensive direction.

The supporters of comprehensive schools were not necessarily enemies of the meritocracy. Many of them agreed that individuals differed in their innate abilities and tolerated unequal rewards for unequal effort. Convinced that the crudities and biases of the selective system inevitably destroyed ability, they hoped that reorganisation would lead to a more meritocratic educational system, uncovering hidden talent and spreading a commitment to effort. They argued that the new schools should encourage achievement and hard work; that their classes should be streamed and their ethos formal, competitive and academic; that they should measure their performance in examination results; and that they should try to produce trained and useful manpower for the economy. Harold Wilson summed up this position by describing comprehensives as 'grammar schools for all'.

Yet many advocates of reorganisation were out-and-out egalitarians, convinced that individual differences are a product of circumstances and repulsed by wide inequalities of reward. They argued that comprehensive schools should minimise the inequalities of ability between pupils; that their classes should be unstreamed and their ethos permissive, co-operative and pluralistic; and that they should try to become solvents of social inequalities and class tensions, creating 'a more equal, more peaceful society', and forging a common democratic culture. They should be 'equality machines', not training camps for the workforce.¹⁰² There was a permanent tension within the comprehensive movement between these two positions; but as the sixties wore on the egalitarians began to get the upper hand.

Encouraged by success, the egalitarians extended their polemic from selection to streaming. Streaming, they insisted, rested on a discredited theory of mental

⁹⁹ *Ibid.*, p. 35.

¹⁰⁰ Fenwick, *The Comprehensive School*, p. 149.

¹⁰¹ Caroline Benn and Brian Simon, *Half Way There. Report on the British Comprehensive School Reform* (1972 edn), p. 79.

¹⁰² Denis Marsden, 'Which Comprehensive Principle?', *Comprehensive Education* No. 13 (Autumn 1969), pp. 2–5.

development, misallocated children irreversibly at an early age, and led to a massive wastage of talent. Based on imperfect and often impressionistic methods of classification,¹⁰³ it was systematically biased against the working-classes: A-streams were populated by the children of professionals, C-streams by the children of manual workers. It was also influenced by irrelevant factors such as the child's date of birth.¹⁰⁴ Children born between September and December had a one-in-two chance of being placed in an A-stream, whereas those born during the rest of the year had only a one-in-three or a one-in-four chance. In schools with four streams, almost twice as many summer-born as winter-born children entered the D-stream.¹⁰⁵ Yet streaming rapidly translated these social and accidental differences into educational and personal differences, turning out two quite different kinds of pupils: self-confident A-stream pupils and self-doubting C-stream pupils, trapped perpetually in 'the net of minimum expectations'.¹⁰⁶ Like selection, streaming was a self-confirming process, with the chosen few surging ahead and the rejected many falling behind, losing forever the chance to show their true merits.¹⁰⁷ It also legitimised widespread educational wastage, persuading teachers that the poor performance of the majority of children was the inescapable consequence of their lack of innate ability.¹⁰⁸ More importantly, it transformed schools from communities of co-operative individuals into battle grounds of competing scholars, breaking down personal relations, imposing huge burdens of anxiety on children and teachers and suppressing individual development.¹⁰⁹ Predicated on the notion that life consisted in a perpetual struggle for limited rewards, with victory going to the most intelligent, it justified and reinforced the English class structure, 'steering the child into appropriate position for the mass media to take over'.¹¹⁰ In contrast, non-streaming offered immense possibilities for social solidarity and personal development. 'The non-streamed school', argued the editors of *Forum*,

is a unity, in which children can be treated alike as children, not as units driven by an engine of a particular and unalterable horsepower. The school's activities can be directed towards social aims, instead of becoming the means of creating divisions among both children and staff. The school is now seen as a unity in which groups of children participate in learning activities under the guidance and direction of the teachers. No child is labelled, nor are any staff. Each child can now be treated as a unique personality, an individual capable of learning, whose potential, though

¹⁰³ Fewer than half of the 660 schools in Brian Jackson's survey employed intelligence tests for streaming. See Jackson, *Streaming: An Educational System in Miniature* (1964), p. 18.

¹⁰⁴ *Ibid.*, pp. 20–1.

¹⁰⁵ *Ibid.*, pp. 23–6. H. Clark, 'The Effect of a Candidate's Age upon Teacher's Estimates and Upon his Chances of Gaining a Grammar School Place', *Brit. J. Educ. Psych.* (1956) Vol. 26, pp. 207–17. Jackson pointed out on p. 28 that intelligence tests had a mild equalising effect because they took age into account.

¹⁰⁶ Jackson, *Streaming*, p. 88.

¹⁰⁷ P. Vernon (ed.), *Secondary School Selection. A British Psychological Society Inquiry* (1957), pp. 42–5.

¹⁰⁸ Brian Simon (ed.), *Non-Streaming in the Junior School. A Symposium* (1964).

¹⁰⁹ Jackson, *Streaming*, p. 141.

¹¹⁰ *Ibid.*, p. 69.

unknown, is to a considerable extent the function of his experience in the school itself.¹¹¹

Naturally, the anti-streaming movement enjoyed its earliest successes in the infant and junior schools. Convinced that streaming was an unfortunate legacy of educational selection, the egalitarians urged teachers to exploit the opportunity offered by the abolition of the 11-plus to unstream their classes, abandon cramming, and experiment with progressive education. Many found such arguments convincing, and professional opinion on the subject changed rapidly. In 1962, 85 per cent of primary teachers favoured streaming, 6 per cent had mixed views, and 9 per cent opposed it; in 1967 only 34 per cent approved of streaming for all or most junior children, 25 per cent approved of it for older pupils, and 30 per cent opposed it.¹¹² Encouraged by their success, the egalitarians agitated for unstreamed comprehensive schools, and again they shifted professional opinion to their cause. In 1954 all the existing comprehensives took pains to test, classify and label their pupils, allocating them to homogeneous streams. In 1961 the London County Council's *Survey of Sixteen Schools* boasted that 'none of the schools bases its organisation on the impracticable assumption that teaching groups covering the whole range of ability are suitable or desirable'. In 1965 only 4 per cent of comprehensives were unstreamed, yet by 1968 about 22 per cent of schools were organised into mixed-ability classes: non-streaming was effecting an educational revolution.¹¹³ Egalitarian theory insisted, and practical experience seemed to confirm, that meritocratic comprehensive schools, organised hierarchically and preoccupied with academic results, were only a passing phase: the logic of reorganisation was to create 'equality machines'.

The revolt against the 11-plus was just one aspect of a more general revolt against classification and segregation. Not content with rejecting the categorisation of normal children, progressive educationalists went on to argue that even the handicapped should be brought into the ordinary school system. In order to achieve their goal of integration, they felt that it was necessary to reject the body of psychological theory which seemed to underpin it. In this, their reasoning was mistaken but their practical instincts were sound. The psychology of individual differences had been responsible for breaking down the crude categories into which the handicapped had been lumped and for emphasising the continuity of the variations in individual abilities. The Wood Committee argued for the unity of normal and special education and suggested that, wherever possible, handicapped children should be brought back into mainstream schools. Segregation owed much more to the preferences of teachers, reinforced by the prejudices of lawyers, than it did to the theories of psychologists. The Mental Deficiency Acts of 1913 and 1914 distinguished sharply between the normal and the subnormal, adding legal support

¹¹¹ Simon (ed.), *Non-Streaming in the Junior School*, p. 20.

¹¹² *Plowden Report*, para. 807.

¹¹³ Benn and Simon, *Half-Way There*, p. 223.

to contemporary medical arguments, and compelled local authorities to remove the severely mentally deficient from the system altogether, certifying and institutionalising them and placing them under the care of the Health Department. IQ tests thus provided a solution to the problem of dividing children into categories which had been devised by doctors and underwritten by lawyers. The constraints of finance ensured that the policy of segregation did not have a major impact on education between the wars – 77 per cent of the defective children surveyed by the Wood Committee were in ordinary school – but the philosophy of segregation continued to have a powerful influence on educational theory and practice.¹¹⁴

Segregating the handicapped became increasingly unpopular after the Second World War. A wide variety of groups – doctors and psychologists, pressure groups and politicians, even the patients themselves – argued that the legal and administrative legacy of segregationist thinking needed to be swept away.¹¹⁵ Parents were increasingly unwilling to see their children classified as ‘ineducable’. In the year ending 31 March 1955, for example, such classification attracted 319 parental appeals, more than any other aspect of the Ministry of Education’s business; and doctors became understandably reluctant to certify children.¹¹⁶ The worries were not confined to the young. In 1951 a National Council for Civil Liberties pamphlet, *50,000 Outside the Law*, drew attention to the legal status of the handicapped and emphasised the inadequacies and abuses of the existing system.¹¹⁷ The Council also brought a spate of legal actions, intended to release ‘high grade’ adolescent inmates from mental deficiency institutions.¹¹⁸ A Royal Commission established in 1954 and chaired by Lord Eustace Percy recommended that the existing legalistic basis of the services for the handicapped should be abolished, with the law only being used in the last resort. It also introduced important changes into the legal classification of the handicapped, replacing the various types of mental defect with the categories of mental subnormality and severe mental subnormality, and tried to remove the taint of criminality from mental handicap. It emphasised the importance of community care and hoped that services within the wider community would develop to supplement and support services within the institutions.¹¹⁹ The Commission’s recommendations were embodied, in slightly modified form, in the 1959 Mental Health Act.

¹¹⁴ *Board of Education and Board of Control: Report of the Mental Deficiency Committee* (HMSO, 1929), pp. 157–62. Cf. *Report of the Committee of Enquiry into the Education of Handicapped Children and Young People (Warnock Report)* (HMSO, 1978), p. 32; G. Sutherland ‘Endpiece. Integrating Historical and Contemporary Studies on Special Education Policy’, *Oxford Review of Education* Vol. 9, No. 3 (1983), pp. 278–9.

¹¹⁵ See Clive Unsworth, *The Politics of Mental Health Legislation* (Oxford, 1987), pp. 253–8.

¹¹⁶ Hurt, *Outside the Mainstream*, p. 180.

¹¹⁷ National Council for Civil Liberties, *50,000 Outside the Law: Report on the Treatment of Those Certified as Mental Defectives* (1951).

¹¹⁸ Unsworth, *Politics of Mental Health Legislation*, pp. 253–4.

¹¹⁹ *Royal Commission on the Law Relating to Mental Illness and Mental Deficiency 1954–57, Report*, Cmnd 169 (HMSO, 1957). For a detailed discussion of Commission, see Unsworth.

A series of scandals in the late 1960s about hospitals for the handicapped initiated the next cycle of policy making. The inquiry at Ely Hospital in Cardiff¹²⁰ persuaded Richard Crossman to reform the services for the handicapped, encouraging their integration into the community.¹²¹ He was shocked to find that 'there are no less than 250,000 people in long-stay, subnormal, psychiatric or geriatric hospitals, cooped up in these old public assistance buildings with no adequate inspectorate'¹²² and concluded that 'the vast majority of these unfortunate people are not ill in that sense, merely subnormal or old, and what they need is to live at home or in hostels or old people's homes and for this we need far better local authority services'.¹²³ At the same time, a number of powerful arguments were marshalled against educational segregation for the handicapped – that it pins a single label on a disabled child and tends to define him for life; that a medical disability may not present an educational problem; that a child may suffer from more than one disability and may therefore escape proper classification; that children with disabilities differ as much from each other as they do from normal children and do not profit from being lumped together; and that special schools are over-protective of their inmates, doing little to prepare them for the world they will have to face at the age of sixteen.

The Warnock Report, *Special Educational Needs* (1978), provided powerful official support for the philosophy of integration. The report swept away the idea that the mentally handicapped are a peculiar category of the population, permanently condemned to their condition, and substituted instead the concept of special educational needs, which affected as many as one-in-five children but were frequently shortlived. (The report comes to strikingly similar conclusions as a 1946 Ministry of Education pamphlet, *Special Education Treatment*.¹²⁴) Mary Warnock based her arguments on three fundamental principles – that mentally handicapped people have a right to enjoy a normal life; that they have a right to be treated as individuals rather than as representatives of categories; and that they require special help, voluntary and professional, to develop their full potentials. The report insisted that, wherever possible, handicapped children should be educated within ordinary schools.

Warnock was undoubtedly swimming with the educational tide. Since the issue of Circular 10/65, which signalled the comprehensive revolution, official documents had trumpeted, and local education authorities had increasingly accepted, the case for providing special education in ordinary schools.¹²⁵ The Chronically Sick and Disabled Persons Act (particularly sections 25 to 27) required local educational authorities to educate deaf, blind, autistic and acutely dyslexic children

¹²⁰ *Report of the Committee of Inquiry into Allegations of Ill-Treatment of Patients and other Irregularities at the Ely Hospital, Cardiff*, Cmnd 3975 (HMSO, 1969).

¹²¹ Richard Crossman, *The Diaries of a Cabinet Minister Vol. 3, Secretary of State for Social Services 1968–70*, pp. 408–9, 410–11, 412–13, 418, 419, 420, 425–6, 427–8, 429. ¹²² *Ibid.*, p. 410.

¹²³ *Ibid.*, p. 413.

¹²⁴ Hurt, *Outside the Mainstream*, p. 187.

¹²⁵ DES Circular 10/65, *The Organisation of Secondary Education* (12 July 1965).

in state schools, if it was at all possible. In Scotland, the McCann Committee urged ordinary schools to take on physically handicapped children.¹²⁶ Finally, the 1976 Education Act (particularly section ten) required local education authorities to ensure that special education for all handicapped pupils was provided by voluntary and county schools, except where this was impractical, incompatible with efficient instruction, or unreasonably expensive. Whereas the 1944 Education Act had permitted integration, so long as the child's disabilities were not too serious, the 1976 Act made integration the norm.¹²⁷

The culture of egalitarianism

This rejection of classification embodied a deeper rejection of the culture of merit. With its emphasis on 'character', self-help and moral responsibility, and its distaste for dependence, self-gratification, and moral laxity, the meritocratic ideal was rooted in secularised evangelical values. The meritocrats preserved the evangelical conscience, censorious, priggish, but committed to self-improvement, social reform, and public service. Convinced that success should be purchased at the cost of effort and self-indulgence punished by economic failure, they were wedded to an austere ideal of the social order, which placed the able and industrious at the top and the malignant and idle at the bottom, and provided a generous but well-regulated path for social mobility. The psychometrists added to this moral vision a commitment to the authority of science, the wisdom of measurement, and the efficacy of therapy. But the post-war cultural revolution brought a widespread reaction against such evangelical values. Inaugurated by rising living standards, encouraged by the mass media, reinforced by a dissident youth culture, and defended by numerous *avant-garde* intellectuals, this revolution undermined the moral basis of meritocratic allocation.

Egalitarians tended to be antinomians, rejecting institutional restrictions and organisational discipline, demanding self-expression and personal involvement, and hoping to dismantle – or at least to loosen – the whole apparatus of order, gradation and personal distinction. They anathematised categories and boundaries, since these threatened to classify and divide individuals and to restrict the expression of feeling and the fulfilment of desires. Their favoured thinkers – Michael Foucault, R. D. Laing, Herbert Marcuse, Ivan Illich and Norman O. Brown – specialised in the subversion of received categories, tracing their contingent historical development, emphasising their links with 'power' (conveniently left undefined) and sympathising with those, such as criminals, lunatics or homosexuals, who seemed to have been the victims of an official conspiracy to classify and institutionalise.

¹²⁶ *The Secondary Education of Physically Handicapped Children in Scotland. Report of the Committee appointed by the Secretary of State for Scotland* (HMSO, 1975).

¹²⁷ Hurt, *Outside the Mainstream*, p. 186.

In politics they drew their inspiration from the romantic hunger for community, for *Gemeinschaft*.¹²⁸ Disillusioned with social selection and individual effort, they turned to collective struggle for the rights of groups, and insisted that élites, if élites there must be, should mirror the social composition of the population, granting membership on the basis of social origins and racial and sexual characteristics. Their characteristic political movements fused individuals together in a common struggle for collective rights; and their habitual rhetoric insisted that virtue was a property not of individuals but of categories. Their claims were reinforced by a shift in the nature of the liberal state, as it ceased simply to provide a framework for individuals to seek their own ends and instead became an arena within which interest groups fought for the rewards of an increasingly managed economy.

Above all, the egalitarian case against meritocratic allocation was rooted in the conviction that a regime of plenty was replacing one of scarcity. The meritocrats had provided a mechanism for the just distribution of limited educational resources and occupational positions. They assumed that the supply of desirable opportunities would always be outstripped by the demand and set about making hard decisions between rival claimants; their moral probity lay in their austerity. But the egalitarians assumed a regime of plenty. Brought up during the post-war efflorescence of material well-being, and encouraged to expect expanding opportunities for interesting employment and personal fulfilment, they refused to reconcile themselves to scarcity, competition and the disciplined rationing of opportunities.¹²⁹ Brian Jackson could not have put it better:

Our society is one of opportunity and possibly plenty. We reduce its potentialities by an educational sieve designed for a society of scarcity. In the past the sieve served well enough ... It was not just, but it was the nearest to justice that circumstances allowed. Today it's absurd. It limits us, occupying our attention with the tiny details that divide and label us – draining our energies away from the colossal opportunities for human development that our wealth and knowledge promise.¹³⁰

It was impossible to re-evaluate this 'educational sieve' without re-evaluating the sieve's most passionate supporter, Sir Cyril Burt.

¹²⁸ Edward Shils, 'Plenitude and Scarcity. The Anatomy of an International Cultural Crisis', *Encounter*, May 1969, p. 46.

¹²⁹ *Ibid.*, pp. 37–57, especially pp. 43–5.

¹³⁰ Jackson, *Streaming* (1964), p. 141.

Cyril Burt and the politics of an academic reputation

Upon his death in October 1971 Cyril Burt reaped the rewards of a lifetime's dedication to science. Leslie Hearnshaw called him 'a great figure in twentieth century psychology',¹ 'as nearly a polymath as it is possible to be in this age of inevitable specialisation'.² Arthur Jensen recalled that 'his fine, sturdy appearance; his aura of vitality; his urbane manner; his unflagging enthusiasm for research, analysis and criticism ... and, of course, especially his notably sharp intellect and vast erudition – all together leave a total impression of immense quality, of a born nobleman'.³ Hans Eysenck argued that his 'critical faculty, combined with his outstanding originality, his great insight, and his profound mathematical knowledge, makes him a truly great psychologist; his place in the history books of our science is assured'. He made no bones about regarding Burt as 'Britain's outstanding psychologist for many years' and hoped that 'modern workers would follow his example'.⁴

Within a decade of his death, however, his reputation had been turned upside down, his name reduced to a by-word for scientific deceit. The *Sunday Times* labelled the case against Burt 'the most sensational charge of scientific fraud this century'.⁵ William Broad and Nicholas Wade, in a popular polemic on 'fraud and deceit in the halls of science', found Burt an almost ideal target.⁶ He dealt in nothing more than 'dogma masquerading as objective truth';⁷ 'he used his mastery of statistics and gift for lucid exposition to bamboozle alike his bitterest detractors and those who acclaimed his greatness as a psychologist';⁸ and he 'hoodwinked the community of educational psychologists for some thirty years'.⁹ Even his disciples

¹ L. S. Hearnshaw, 'Cyril Lodowic Burt 1883–1971', *Proceedings of the British Academy* Vol. 48 (1972), p. 492.

² *Ibid.*, p. 490.

³ Arthur R. Jensen, 'Sir Cyril Burt (1883–1971)', *Psychometrika* Vol. 37, No. 2 (June 1972), p. 116.

⁴ H. J. Eysenck, 'Sir Cyril Burt (1883–1971): Obituary', *British Journal of Mathematical and Statistical Psychology*, Vol. 25, part 1 (May 1972), p. iv.

⁵ O. Gillie, 'Crucial Data was Faked by Eminent Psychologist', *Sunday Times*, 14 October 1976. See also O. Gillie, 'Sir Cyril Burt and the Great IQ Fraud', *New Statesman*, 24 November 1978, p. 694 (c).

⁶ William Broad and Nicholas Wade, *Betrayers of the Truth: Fraud and Deceit in the Halls of Science* (1982).

⁷ *Ibid.*, p. 203.

⁸ *Ibid.*, p. 204.

⁹ *Ibid.*, p. 216.

gave up defending him. Jensen conceded that his twin data was 'useless for hypothesis testing',¹⁰ and Eysenck, labelling his former tutor a psychopath, speculated that 'Burt's warped personality led inevitably to fraud'.¹¹

The destruction of Burt's reputation

The case against Burt was launched by Leon Kamin, a Princeton psychologist. In a paper read to a colloquium held in the psychology department in Princeton University in April 1972, and subsequently read to psychologists in universities throughout America, Kamin argued that Burt's twin studies are just too good to be true. They fail to give precise details about the methods used to collect the evidence or about the populations which had been tested; contain conflicting and contradictory statements in their various versions; include a large number of careless errors; and, above all, produce remarkable consistencies in correlation coefficients derived from changing sample sizes. The number of pairs of twins cited varied from twenty-one, to more than thirty, to fifty-three; yet, despite these different samples, Burt contrived to get exactly the same calculation of inheritance to three decimal places – a correlation of IQ of 0.771 for twins raised separately, and of 0.944 for twins raised together. Incredibly precise numbers had been produced by procedural bungling and methodological sleight-of-hand.

At first Kamin addressed professional psychologists, repeating his arguments at a number of American universities, allowing thousands of mimeographed and xeroxed copies of his talks to be circulated, and, in May 1973, addressing the Eastern Psychological Association in Washington D.C.¹² His next move was to widen his audience, and in 1974 he published a polemical book on *The Science and Politics of IQ*.¹³ His target was the entire psychometric tradition, which he regarded as scientifically worthless and politically pernicious, and he concluded, with an uncompromising flourish, that 'the assumption of genetic determination of IQ variation in any degree is unwarranted'.¹⁴ Burt was just a walk-on villain in *The Science and Politics of IQ*, not the central character. 'The numbers left behind by Professor Burt', Kamin concluded, before moving on to lambast other hereditarians, 'are simply not worthy of our current scientific attention'.¹⁵

At exactly the same time that Kamin was preparing his onslaught, one of Burt's most distinguished allies was beginning to get worried. A convinced hereditarian, Arthur Jensen regarded Burt as 'one of the world's great psychologists' and looked

¹⁰ Jensen, 'Kinship Correlation Reported by Sir Cyril Burt', *Behaviour Genetics* Vol. 4, No. 1 (1974), p. 24. The text of this paper was received in April 1973. See also Jensen, 'Sir Cyril Burt in Perspective', *American Psychologist* Vol. 33, No. 5 (May 1978), pp. 499–502.

¹¹ Hans Eysenck, 'Burt's Warped Personality Led Inevitably to Fraud', *The Listener*, 29 April 1982, pp. 2–3.

¹² See Leon Kamin, 'Heredity, Intelligence, Politics and Psychology', in Ned Block and Gerald Dworkin (eds), *The IQ Controversy: Critical Readings* (1977), pp. 242–62 and 374–81 for the texts of these talks.

¹⁴ *Ibid.*, pp. 225–30.

¹⁵ *Ibid.*, p. 71.

to him for inspiration and advice. He enjoyed long discussions with Burt in the summers of 1970 and 1971,¹⁶ and leaned heavily on his twin data in his highly controversial essay on race and intelligence, published in the *Harvard Education Review* for 1969.¹⁷ But, after subjecting Burt's kinship correlations to a sceptical examination, he conceded that they were riddled with inaccuracies, improbabilities and straightforward errors.¹⁸ He noted 'the higher than ordinary rate of misprints in Burt's published tables'. Above all, he conceded Kamin's case about the impossibility of preserving a correlation fixed to three decimal figures based on changing sample sizes. The result of these 'rather puzzling discrepancies and ambiguities', Jensen argued, is that 'the correlations are useless for hypothesis testing'. 'Error there must surely be', he concluded.¹⁹ But he continued to maintain that there was no evidence for anything more sinister than error: Burt was guilty of carelessness rather than fraud.²⁰

Meanwhile, in England, two of Eysenck's pupils,²¹ Alan and Ann Clarke, were beginning to take a closer look at Burt's work. In the third edition of their textbook on *Mental Deficiency*, also published in 1974, they commented on 'a number of puzzling features' in his twin studies and pointed to the suspiciously perfect regression to the mean in his parent-child IQ results: suspicious because such a regression made sense in conditions of random mating, whereas in human populations assortive mating is the rule.²² Like Kamin, they stopped short of using the explosive word, fraud.²³ But the argument had now been extended from the American to the English academic world.

The honour of turning an academic puzzle into a full-blown scandal, emblazoned on the front page of newspapers and discussed around the world, belonged to Oliver Gillie, a science journalist with a PhD in genetics. Gillie changed the arena of the argument, writing in *The Sunday Times* rather than an obscure academic periodical, and turned a technical squabble into an electrifying story. He added the standard ingredients of a literary thriller – non-existent twins, missing ladies, scientists and politicians bamboozled by a deranged professor – and he threw in emotive words like 'faked', 'plagiarist' and 'scandal'. Hitherto only Burt's technical competence as a psychologist had been questioned in public; now

¹⁶ Jensen, 'Sir Cyril Burt (1883–1971)', *Psychometrika* Vol. 37, No. 2 (June 1972), pp. 115.

¹⁷ Jensen, 'How Much can We Boost IQ and Scholastic Achievement?', *Harvard Educational Review* Vol. 39 (1969), pp. 1–123.

¹⁸ Jensen, 'Kinship Correlation Reported by Sir Cyril Burt', *Behaviour Genetics* Vol. 4, No. 1 (1974), pp. 1–28. It is worth noting that the journal received the text of this paper in April 1973.

¹⁹ Jensen, 'Kinship Correlation Reported by Sir Cyril Burt', p. 24.

²⁰ Jensen, 'Sir Cyril Burt in Perspective', *American Psychologist* Vol. 33, No. 5 (May 1978), pp. 499–502; letter to *The Times*, 9 December 1976, p. 11.

²¹ On the strained relations between Burt and the Clarkes, see Hearnshaw, *Cyril Burt*, p. 148.

²² A. D. B. Clarke and Ann M. Clarke, *Mental Deficiency* (3rd edn, 1974), ch. 7.

²³ Ann M. Clarke and A. D. B. Clarke, 'Comments on Professor Hearnshaw's "Balance Sheet on Burt"', H. Beloff (ed.), *Supplement to the Bulletin of the British Psychological Society* Vol. 33 (1980), p. 17 a.

attention shifted to his personal and professional honesty. Gillie felt certain that Burt's alleged assistants in his twin studies, Margaret Howard and Jane Conway, had either never existed or, at the very least, had not been in contact with Burt when he wrote the papers bearing their names. Added to Kamin's findings, this seemed to Gillie to constitute convincing evidence of forgery. In *The Sunday Times* for 24 October he published an article on Burt entitled 'Crucial Data was Faked by Eminent Psychologist'. 'The most sensational charge of scientific fraud this century', the article began, 'is being levelled against the late Sir Cyril Burt, father of British educational psychology. Leading scientists are convinced that Burt published false data and invented crucial facts to support his controversial theory that intelligence is largely inherited.' He substantiated this argument with three subsidiary claims: that Burt often guessed parental IQs and treated such guesses as hard experimental data; that the all-too-perfect correlation noted by Kamin could only have been arrived at by massaging the facts to fit a preconceived theory; and that he was guilty of fabricating evidence to sustain his prejudice in favour of genetic explanations.²⁴

These arguments were immediately taken up by the press. Burt was now front-page news; his reputation would never be the same again. *The Times* amplified the story on the following day, with the headline 'Theories of IQ Pioneer Completely Discredited' and with the suggestion that Burt's earlier work was just as suspect as his later work.²⁵ *The Times Educational Supplement* added to the list of charges the allegation that he had mismanaged the *British Journal of Statistical Psychology* while he was editor of it.

The result was a savage public controversy over Burt's reputation. Periodicals as diverse as *Encounter*, *The New Statesman*, *The Economist*, *The New Scientist*, *The Times Educational Supplement* all included articles which in their turn generated correspondence.²⁶ In just six weeks *The Times* carried no fewer than fifty-two letters on the subject.²⁷ The tone of the public exchanges became less restrained: personal animosity infused intellectual disagreement. Incommensurable claims were hurled by one side at the other. Before Gillie's intervention, psychologists of diametrically opposed intellectual persuasions such as Kamin and Jensen had managed to reach a measure of agreement on Burt; after Gillie's intervention all the grounds for agreement between the two sides disappeared.

²⁴ O. Gillie, 'Crucial Data was Faked by Eminent Psychologist', *Sunday Times*, 14 October 1976. I am most grateful to Dr. Gillie for talking to me about Burt and allowing me to read his correspondence on the subject.

²⁵ *The Times*, 25 October 1976.

²⁶ J. Cohen, 'After the Cyril Burt Case: The Detractors', *Encounter* Vol. 48, No. 3 (1977), pp. 86–90; O. Gillie, 'Sir Cyril Burt and the Great IQ Fraud', *New Statesman*, 1978, pp. 692–94; 'Who's fault I'm f'ck', *Economist*, 6–12 November 1976, p. 30; 'IQ Theory in the Balance', *New Scientist*, 28 October 1976, pp. 330–1.

²⁷ The correspondents included J. A. Fraser Roberts, Jack Tizard, L. S. Hearnshaw, Michael McAskie, Ann Clarke, A. D. B. Clarke, Arthur Jensen, H. J. Eysenck, C. D. Darlington, John Cohen, J. A. Gray and P. B. Medawar. There was also a sprinkling of letters on inheritance in cows and cuckoos.

Outraged Burtians leapt to his defence. Richard Herrnstein, a Harvard psychologist, thought the attack 'so outrageous I find it hard to stay in my chair. Burt was a towering figure in 20th century psychology. I think it is crime to cast doubt over a man's career.'²⁸ Hans Eysenck, writing in *Encounter*,²⁹ levelled a charge of dishonesty against Burt's critics: 'looking closer ... one gets a whiff of McCarthyism, of notorious smear campaigns, and of what used to be known as character assassination'.³⁰ Their motive, he insisted, was personal profit rather than intellectual discovery: journalists profit from sensationalising issues and from denigrating the lives of others. Gillie published his attack on Burt to publicise his own popular book on 'the genetic controversy';³¹ he was supported by 'a well-orchestrated chorus of condemnation of Burt by various psychologists, none of whom had actually worked in the behavioural field'.³² He conceded that Burt had been careless over his figures, but argued that carelessness has nothing to do with fraud. He accused Gillie of 'merely sensationalising, in a particularly nasty and suggestive form, facts which had been brought out in a dignified and reasonable way by Professor Jensen'.³³ His treatment of Burt was 'unspeakably mean and senselessly derogatory'.³⁴ The charge of fraud might be 'rejected out of hand'.³⁵ The flaws in Burt's figures did nothing to damage the status of the hereditarian position: his argument, rather than being unique, simply coincided with all the other respectable tests on the subject.³⁶ Eysenck was particularly enraged that a journalist had 'dragged what should have been a proper scientific controversy, conducted with appropriate calm and reasonableness, into a public market place which does not understand the issues and cannot follow the arguments'.³⁷

Writing first in *The Times*³⁸ and then, at greater length, in *Encounter*, another of Burt's pupils, John Cohen, produced both evidence and rhetoric against Burt's detractors. He described Burt as 'an illustrious scholar, a polymath of renaissance dimensions',³⁹ and asserted that 'no one would have dared, while Burt was alive, to cast such suspicions on his character, for, with his mind as sharp as a razor blade and with his unrivalled mastery of disparate disciplines, he would easily have made short shrift of his critics'.⁴⁰ He insisted that Burt's work was 'meticulous, thorough and painstaking' and rejected the charge of fraud 'lock, stock and barrel'. He simply could not imagine that 'this man, who spared himself no pains to check

²⁸ Quoted in Nicholas Wade, 'IQ and Heredity: Suspicion of Fraud Beclouds Classic Experiment', *Science* Vol. 194 (26 November 1976), pp. 916-17.

²⁹ H. J. Eysenck, 'The Case of Sir Cyril Burt: On Fraud and Prejudice in a Scientific Controversy', *Encounter* Vol. 48, No. 1 (1977), pp. 19-24. ³⁰ *Ibid.*, p. 19 b. ³¹ *Ibid.*, p. 19 a.

³² *Ibid.*, p. 19 c.

³³ *Ibid.*, p. 21 b; cf. Eysenck's foreword to Cyril Burt, *The Subnormal Mind* (3rd edn, Oxford, 1977), p. xv. ³⁴ *Ibid.*, p. 24 b. ³⁵ *Ibid.*, p. 24 a.

³⁶ *Ibid.*, p. 22; Letter on Burt's IQ data in *Science* Vol. 195 (21 January 1977), pp. 246-8.

³⁷ Eysenck, letter, *Encounter* Vol. 48, No. 2 (May 1977), p. 93.

³⁸ John Cohen, letter, *The Times*, 10 November 1976.

³⁹ John Cohen, 'The Detractors', *Encounter* Vol. 48, No. 1 (March 1977), p. 86.

⁴⁰ *Ibid.*, p. 87.

every figure, every statement and every source, should stoop to the base and silly strategies of which he is accused'. His trump card was his personal recollection of Burt's supposedly mythical assistant, Margaret Howard. He had met her in the late 1930s and 'her roundish face, her pleasing smile, her brown eyes and bobbed auburn hair, her slightly tinted spectacles, and her competence in mathematics' had made a lasting impression on his memory. As a final flourish, he confessed that he had little faith in either the theory of the inheritance of intelligence or the technique of mental testing.

The response of the anti-Burt faction was to reiterate its arguments and to reinforce its position. Kamin upped his charge from carelessness to fraud, insisting that 'the charges of scientific fraud clearly have some substantial basis' and adding that even Burt's earliest work was insubstantial and prejudiced. Alan and Ann Clarke joined Kamin in accusing Burt of fraud, and described him as a 'rogue' and a 'con man' for good measure.⁴¹ Gillie extended the range of his case, arguing that the unmasking of Burt had the same effect on hereditarian psychology as 'the finding that the Piltdown skull was a forgery had on paleontology'.⁴² *The New Scientist* announced that the revelations about Burt had swept away 'the major prop to the theory that IQ levels are largely inherited'.⁴³ Steven Rose dismissed Burtian psychology as nothing more than a biological rationale for the capitalist status quo: 'the hereditarian position would have us believe that the working-class, the Blacks, the Irish, are genetically stupider than the middle class, the Whites, the English; that women have genes for being secretaries and men for being executives – and therefore that the explanation and justification of a class bound, racially and sexually divided society, lies *not* in social institutions and structures (which we can change) but in our genes (which we cannot)'.⁴⁴

Rather more damagingly, two more academics produced evidence against Burt. D. D. Dorfman castigated the ideologically motivated campaign on the part of some environmentalists to discredit the entire tradition of hereditarian psychology.⁴⁵ But in his examination of Burt's study of 'Intelligence and Social Mobility' he was forced to admit that Burt's figures were worthless. Burt provided no details about the testing of fathers and sons; did nothing to take into account the changing social composition of a 'representative' London borough; and yet, using data which even he conceded were 'crude and limited', managed to produce a perfect 'normal distribution curve'. Dorfman did not hesitate to draw the obvious conclusion: 'these findings show, beyond any reasonable doubt, that Burt fixed the row and column totals of the tables in his highly acclaimed 1961 study'. His proof

⁴¹ Ann M. Clarke and A. D. B. Clarke, 'Comments on Professor Hearnshaw's "Balance Sheet on Burt"', p. 17 a. ⁴² *The Times*, 25 October 1976, p. 3(c).

⁴³ *New Scientist*, 28 October, 1976, p. 197.

⁴⁴ Steven Rose, *The Times*, 9 November 1976, p. 17. Cf. J. A. Gray's demolition of this argument in his letter to *The Times*, 12 November 1976.

⁴⁵ D. D. Dorfman, 'The Cyril Burt Question: New Findings', *Science* Vol. 201 (1978), p. 1178.

was nothing more than a 'systematic construction'.⁴⁶ Michael McAskie went through a sample of Burt's references and discovered that at least 20 per cent contained one or more numerical errors.⁴⁷

The most serious blow to Burt's reputation, however, was Leslie Hearnshaw's official biography, based on unique access to the archives and published in 1979. Hearnshaw hardly looked like a witch-hunter. He shared many of his subject's sympathies;⁴⁸ spoke eloquently at his funeral service;⁴⁹ contributed a laudatory obituary of him to the *Proceedings of the British Academy*; and acknowledged Burt's central role in the creation of British psychology.⁵⁰ His biography had originally been commissioned by Burt's sister, Marion.⁵¹ And yet he concluded that the major accusations levelled against Burt were true and added further crimes to the list. Because his account is such an influential one, and because it is based on such extensive documentation from secondary and primary sources, it is worth summarising in some detail.

Hearnshaw agreed that Burt had fabricated some of his twin data, and added circumstantial arguments to existing arguments based on the internal coherence of the evidence. Burt had failed to apply to any of the main grant-giving bodies – the Medical Research Council, the Leverhulme Trust, and the Nuffield Foundation – for financial support to help him with his twin studies.⁵² It seems unlikely that he had any serious intention of collecting further original material after his retirement. His extensive and chronologically complete diaries record nothing about the collection and processing of twin data;⁵³ and he consistently side-stepped William Shockley's requests to be allowed to see his original twin material.⁵⁴ Hearnshaw agreed that Burt could not have been in personal contact with Howard and Conway at the time when their joint articles were written. Both women may have existed; but by the 1950s they were simply being used as names of convenience by an isolated academic.⁵⁵ Hearnshaw also agreed that Burt's material on parent-child intelligence correlations in his article on 'Intelligence and Social Mobility' and his material on declining educational standards were extremely weak. He had no right of entry into London schools to carry out the necessary programme of testing; and he had neither funds nor assistants to help him with the many hundreds of hours of educational research upon which he claimed his arguments rested. No London schools preserve records of visits by Burt in either 1955 or 1965.⁵⁶

Hearnshaw also added a new element to the debate, accusing Burt of distorting

⁴⁶ *Ibid.*, p. 1184 b.

⁴⁷ M. McAskie, 'Carelessness or Fraud in Sir Cyril Burt's Kinship Data? A Critique of Jensen's Analysis', *American Psychologist* Vol. 33, No. 5 (May 1978), p. 497.

⁴⁸ Hearnshaw, 'Balance Sheet on Burt', in H. Beloff (ed.), *A Balance Sheet on Burt, Supplement to the Bulletin of the British Psychological Society*, p. 2 b.

⁴⁹ Hearnshaw, 'Obituary: Sir Cyril Burt', *Bull. Br. Psych. Soc.* Vol. 25 (1972), p. 86 reprints the text of this oration.

⁵⁰ Hearnshaw, 'Cyril Lodowic Burt, 1883–1971', *Proceedings of the British Academy* Vol. 58 (1972), pp. 475–92.

⁵¹ Hearnshaw, *Cyril Burt*, (1979), p. vii.

⁵² *Ibid.*, p. 239

⁵³ *Ibid.*, pp. 240–1.

⁵⁴ *Ibid.*, pp. 247–8.

⁵⁵ *Ibid.*, pp. 242–5.

⁵⁶ *Ibid.*, pp. 253–9.

the early history of factor analysis. He argued that Burt rewrote the history of the subject in order to do down Charles Spearman and to elevate himself. In 1940 Burt had given full recognition to Spearman's pioneering role in the preface to his book *Factors of the Mind*; but from 1947 onwards he began to tell a very different story. He dismissed Spearman's role; asserted bluntly that Karl Pearson had anticipated him by three years; and presented himself as Pearson's direct successor. Burt thus gained the credit for first introducing factor analysis into English psychology. All these arguments, Hearnshaw insisted, were utterly without foundation.⁵⁷

Burt emerges from Hearnshaw's biography as a rogue as well as a fraud. He was a Machiavellian academic politician, 'high-handed, devious, and corrupt.'⁵⁸ He deceived his pupils and academic clients – for example, he published an article by Alan and Ann Clarke which he himself altered in a number of significant ways in order to turn it into an attack on their practicing supervisor, Hans Eysenck⁵⁹ – and ran the *British Journal of Statistical Psychology* as a personal and corrupt fief.⁶⁰

With the publication of *Cyril Burt, Psychologist*, the case against Burt was consolidated. Professional psychologists accepted the charges and sanctioned his expulsion from the republic of science; Burt's old defenders abandoned their positions and began to disassociate themselves from their master. The professional organisation of British psychologists, the British Psychological Society, which had held aloof from the Burt affair until late in 1980, took the opportunity provided by Hearnshaw's book to publish its own *Balance Sheet of Burt*. (The *Balance Sheet* was, in fact, anything but balanced: Tizard and Alan Clarke both sat on the BPS council and the majority of the contributors were anti-Burtians.⁶¹) Hearnshaw introduced the pamphlet with a careful summary of his case, and his tone was markedly defensive. He acknowledged Burt's faults but tried to salvage something of his reputation; the proper response to a tragedy such as this, he argued, was not triumph but pity.⁶² His tone was justified: the consensus among the other official contributors was that the case against Burt needed to be extended rather than qualified. Gillie castigated Burt's 'monstrous egotism and intellectual dishonesty', and challenged Hearnshaw's distinction between the early and the late Burt, suggesting that throughout his life his work had been second-rate, derivative, and biased. He argued that 'the Burt affair has highlighted the dangers which occur when science takes second place to propaganda'; and he asserted that, as a result of Burt's dishonesty, 'a generation of students and schoolchildren have been cheated if not victimised'.⁶³ Alan and Ann Clarke suggested that, from the very start of his career, Burt had been little more than a confidence trickster.⁶⁴ His life was a record of 'cutting corners', 'active deception of honest and trusting

⁵⁷ *Ibid.*, pp. 169–80.

⁵⁹ Hearnshaw, *Cyril Burt*, p. 148.

⁶¹ Joynson, *The Burt Affair* (1989), pp. 316–22.

⁶³ O. Gillie, 'Burt: The Scandal and Cover Up', *ibid.*, pp. 9–16.

⁶⁴ Ann M. Clarke and A. D. B. Clarke, 'Comments on Professor Hearnshaw's "Balance sheet on Burt"', p. 17 b.

⁵⁸ Hearnshaw, 'Balance Sheet on Burt', p. 1 b.

⁶⁰ *Ibid.*, pp. 192, 287.

⁶² L. S. Hearnshaw in *ibid.*, p. 7.

colleagues', and 'shoddy work'. They made 'no secret of our distaste for Burt, now that the truth about him is known'.⁶⁵ Although some contributors – notably Paul Kline⁶⁶ – were less critical, the consensus had clearly shifted.

The reviews of Hearnshaw's book confirmed this trend. None presented the case for the defence; several suggested that the case for the prosecution had been too equivocal.⁶⁷ The Clarkes, Gillie, and Kamin used the opportunity to reiterate their case. Halsey suspected that Hearnshaw's tone was 'reluctantly muted and still kindly'; speculated that we still did not know the full extent of Burt's dishonesty; and challenged the thesis of a sharp break in Burt's life: Burt may well have been 'a young as well as an old delinquent'. Michael McAskie supported this suspicion, arguing that his description of his methods in his early work was 'vague, minimal, or elusive' and that his early references 'do not yield the promised information'.⁶⁸ Steven Rose suggested that Burt's work needed to be subjected to even more wholesale criticism: his fundamental intellectual convictions, not just his honesty as a research scientist, needed to be treated with contempt.

This may strike us as little more than a change in rhetorical fashion. But two independent developments ensured that it would have a profound impact on Burt's historical reputation. Further critical studies by psychologists and historians reiterated Hearnshaw's doubts,⁶⁹ and Burt's admirers began to abandon their defence. Eysenck, hitherto Burt's most formidable defender, has admitted that 'Burt's warped personality led inevitably to fraud'. He is convinced by Hearnshaw's account of Burt's career, but he seeks the explanation in purely personal matters. 'His tragedy', according to Eysenck, 'was that the superior quality of his mind was not supported by a character of even average strength and quality; truly a case of an idol with feet of clay'.⁷⁰

A reputation revived?

By the beginning of the 1980s the case against Burt looked unanswerable, endorsed by an official biography, accepted by a galaxy of scholars, and amplified by the media, broadcast as well as written.⁷¹ His presumed crimes were formidable: fabricating sensational research material and inventing collaborators to add credibility to his fabrications; guessing the IQs of his subjects and treating his

⁶⁵ *Ibid.*, p. 18 a.

⁶⁶ Paul Kline, 'Burt's False Results and Modern Psychometrics: A Comparison', *ibid.*, pp. 20–3.

⁶⁷ Hearnshaw, 'Balance Sheet on Burt', p. 2 a.

⁶⁸ Michael McAskie, *The Guardian*, 20 July 1979, p. 8.

⁶⁹ B. Evans and B. Waits, *IQ and Mental Testing: An Unnatural Science and its Social History* (1981); Stephen Jay Gould, *The Mismeasure of Man* (New York, 1981), pp. 234–320; Broad and Wade, *Betrayers of the Truth*, pp. 203–11; Steven Rose, R. C. Lewontin, and Leon J. Kamin, *Not In Our Genes. Biology, Ideology and Human Nature* (Harmondsworth, 1984), pp. 101–6.

⁷⁰ Eysenck, 'Burt's Warped Personality Led Inevitably to Fraud', p. 3.

⁷¹ The worst case of amplification was a BBC television programme, broadcast in January 1984. See Fletcher, *Science, Ideology and the Media*, pp. 23–39.

guesses as hard evidence; producing shoddy books and supplementing them with slapdash articles; bullying and bamboozling his colleagues.

For all this, the anti-Burt case was much less solid than it first seemed. For the most part, it was nothing more than a tissue of speculative inferences woven from circumstantial evidence. Some of the most sensational charges had already been exploded. As well as John Cohen, Donald MacRae, an LSE sociologist, had met one of the missing research assistants, Margaret Howard.⁷² 'The fantasy of an aging professor who became increasingly lonely and deaf' turned out to be 'a vivacious and pleasant young woman of flesh and blood, and mathematically competent.'⁷³ In a devastating correspondence, D. B. Rubin, a Harvard statistician, and S. M. Stigler, a Chicago statistician, demonstrated that Dorfman's argument rested on a failure to read the disputed article carefully (Burt made it quite clear that he was normalising his data) and a misunderstanding of scientific method. 'Using Dorfman's inappropriate statistical techniques to detect fraudulent data would be to condemn a major portion, if not all, of empirical science as fabrication.'⁷⁴ Other charges seemed to depend upon a mixture of naivety and sensationalism. Burt may have been an unscrupulous politician, proud of his achievements, jealous of his rivals, hard on his critics. But so what? Such people are two a penny in the universities. And there is a world of difference between a taste for controversy and a predilection for deceit.

More surprisingly still, Hearnshaw's official biography hardly stands up to careful scrutiny. The account of Burt's supposed character weaknesses is a nonsense: a farrago of racial stereotypes (he was an unstable mixture of Saxon and Celtic stocks),⁷⁵ social snobbery (growing up in a socially-mixed area of London, he learned bad habits from his cockney chums),⁷⁶ eccentric speculation (his classical education taught him to 'fake' essays in the manner of Demosthenes or Cicero)⁷⁷ and psycho-babble (he suffered from marginal paranoia).⁷⁸ Hearnshaw made much too much of his belief that Burt had distorted the history of factor analysis. Even if Hearnshaw was right – and not everybody agreed that he was⁷⁹ – his discovery hardly constituted firm evidence that Burt was capable of scientific fraud. Squabbling about priority is a common enough sport in academia; Spearman and Pearson had been at each other's throats about factor analysis for almost half a century; and, besides, there is a major difference between claiming priority in an arcane area of statistics and inventing research findings.

⁷² Donald MacRae, letter, *New Statesman*, 1978, p. 820.

⁷³ John Cohen in a letter to *The Times*, 10 November 1976, reprinted in Fletcher, *Science, Ideology and the Media*, pp. 392–3.

⁷⁴ D. B. Rubin and S. M. Stigler, correspondence, *Science* Vol. 205 (1979), p. 1,206. See also, D. B. Rubin, correspondence, *Science* Vol. 204 (1979), pp. 245–6.

⁷⁵ Hearnshaw, *Cyril Burt*, p. 271.

⁷⁶ *Ibid.*, pp. 272–3.

⁷⁷ *Ibid.*, pp. 263–4.

⁷⁸ *Ibid.*, pp. 284–31; cf. Joynson, *The Burt Affair*, pp. 219–22, 230–4.

⁷⁹ Fletcher, *Science, Ideology and the Media*, Appendix 2 ('Dr Banks's criticisms of Hearnshaw'), pp. 375–7; Lee J. Cronbach, 'Hearnshaw on Burt', *Science* Vol. 206 (1979), pp. 1,392–94.

The Burt case was clearly ripe for re-examination. But the sheer scale and panache of that re-examination surprised even those who suspected that an injustice had been done. By the mid-1980s the late professor had found not one but two indefatigable champions, Robert Joynton, a psychologist, and Ronald Fletcher, a sociologist. Neither man knew Burt personally or had any previous connection with the IQ controversy: Fletcher was a sceptic about comprehensive schools, Joynton a supporter of the nurture side of the nature–nurture debate. The two men worked entirely separately, and devoted several years to their researches, delving in the archives, cross-examining the participants, testing claim against counter-claim, probing the evidence for signs of weakness and illogicality. The result was two books, Joynton's *The Burt Affair* (1989) and Fletcher's *Science, Ideology and the Media. The Cyril Burt Scandal* (1991), containing over 750 pages of closely-reasoned argument, and contending that the anti-Burt case was a cocktail of lousy history, unsubstantiated tittle-tattle, exaggerated stories, political propaganda, and purple prose. The two men approached their subject from different perspectives – Joynton was an environmentalist, Fletcher a supporter of selection – and had little to do with each other while they pursued their researches. But they agreed on many details and came to the same general conclusion. For the sake of simplicity it is worth adding their arguments together and seeing what difference they make, thus combined, to Burt's reputation.

First, they demonstrated that one of the most eye-catching charges against Burt – that some of his most important research assistants were figments of his imagination – was simply false.⁸⁰ It is hardly surprising that, after more than twenty years, the missing assistants proved hard to find. Burt had an army of assistants, most obscure, most involved in psychological research only temporarily, most female.⁸¹ Yet after a prolonged search the two missing women turned up. Both John Cohen and Donald MacRae remembered meeting Margaret Howard. A glance at the list of members of the British Psychological Society for 1924 revealed a Miss M. A. Howard. William Hamilton remembered being tested by a Miss Howard and a 'Miss C'.⁸² Ronald Fletcher traced a Miss J. Conway, who took a teacher's diploma from King's College, London, and worked in the child care department of the LCC before the war.⁸³ After the two books were published, the widow of one of Margaret Howard's collaborators spoke up, as did the son and daughter of Jane Conway.⁸⁴

Second, they demonstrated that the most substantial charge against Burt – that he made up data about identical twins reared apart – was open to doubt. Crucial to the anti-Burt case was the fact that, in a succession of papers, the size of his twin samples changed but intelligence correlations remained the same. But one of these

⁸⁰ Joynton, *The Burt Affair*, pp. 168–70; Fletcher, *Science, Ideology and the Media*, pp. 266–76.

⁸¹ On the difficulties of tracing early psychologists and their assistants, see Fletcher, *Science, Ideology and the Media*, p. 92–4.

⁸² *Ibid.*, pp. 99, 266–8.

⁸³ *Ibid.*, pp. 269–72.

⁸⁴ Nigel Hawkes, 'Not Fraud at All', *The Times*, 18 February 1992.

supposed new studies (Burt 1958)⁸⁵ was nothing of the sort: it was simply a semi-popular lecture (the Bingham lecture) in which Burt quoted the results of his previous studies. The correlations are the same because the example is the same. The fact that the correlations in the other two studies remained the same might be explained by coincidence rather than calumny. Arthur Jensen came across two other twin studies, entirely independent of Burt's, which both reported correlations of exactly 0.77.⁸⁶ Joynson and Fletcher also demonstrated that Burt continued to collect twin data after his retirement, advertising for twins regularly, following up leads assiduously, and increasing his sample size gradually but persistently.⁸⁷ Shields even came across a number of twins who claimed to have been tested by Burt.⁸⁸

Third, they discredited the minor charges against Burt. The critics accused Burt of adjusting his test scores. But Burt was quite open about this. He adjusted scores because he regarded IQ tests as a rough guide, to be used alongside other evidence, rather than a magic measuring stick.⁹⁰ (The fact that he was a practical psychologist, charged with deciding whether to send children to special schools, made him all the more sceptical about any one method.) The critics accused Burt of guessing the IQs of adults in various occupational gradings and then treating his guesses as hard evidence. But Burt stated his methods thoroughly and made his estimates carefully. He compared his results with those of other researchers and, far from putting them forward as hard psychometric data, made their shortcomings clear.⁸⁹ The critics accused Burt of being sloppy over details and elusive about sources. In fact, he was meticulous in providing details about the kinds of tests he used, the people he tested, the methods he adopted, the sources he consulted, and the assistants he relied on.⁹¹ He also emphasised the provisional status of his conclusions. He might not live up to the sophisticated standards of modern science. But for his time he was a paragon, almost, indeed, a pedant.

The Sunday Times insisted (and Hearnshaw accepted) that Burt had not published the detailed evidence which underpinned his claims, made in the *Black Papers*, that some school standards were falling. But in fact the evidence appeared in the *Irish Journal*. The Clarkes accused Burt of publishing rogue articles, ascribed to them but in fact written by him, which belittled Eysenck and puffed Burt. But the rogue articles were in fact abstracts of their PhD theses, prepared by them, and polished by Burt, in accordance with the regulations of London University.⁹²

The pro-Burtians made short shrift of the official biography. Hearnshaw argued

⁸⁵ Burt, 'Intelligence and Social Mobility', *American Psychologist* Vol. 13 (1958), pp. 1-15.

⁸⁶ A. R. Jensen, 'Kinship Correlations Reported by Sir Cyril Burt', pp. 1-28 and 'Sir Cyril Burt in Perspective', *American Psychologist* Vol. 33 (1978), pp. 499-503; Joynson, *The Burt Affair*, pp. 130-64.

⁸⁷ Fletcher, *Science, Ideology and the Media*, p. 76, 314.

⁸⁸ Joynson, *The Burt Affair*, p. 301.

⁸⁹ *Ibid.*, p. 213; Fletcher, *Science, Ideology and the Media*, pp. 259-60.

⁹⁰ Fletcher, *Science, Ideology and the Media*, pp. 65-6.

⁹¹ *Ibid.*, p. 255.

⁹² *Ibid.*, pp. 118-27. Fletcher reproduces the offending articles.

that Burt's detailed and chronologically complete diaries proved, by their silence, that he had neither located identical twins nor collected material on educational standards after his retirement. In fact, the diaries are sketchy and incomplete, making no mention of major events and containing no entries for months on end. Silence was the norm rather than the exception.⁹³ Hearnshaw made great play with his accusation that Burt had distorted the history of factor analysis. Joynson countered that this argument rested on a misreading of Burt and a cavalier use of the evidence.⁹⁴

The anatomy of a scientific scandal

The two books inevitably produced a re-evaluation of Burt's reputation. The press coverage was surprisingly favourable.⁹⁵ So, on the whole, were the reviews, through Franz Samelson did raise some troubling questions about the revisionists'⁹⁶ methods and tone. Hereditarians such as Jensen took the opportunity to praise their fallen idol and lambast his critics. Burt's leading detractors failed to produce a convincing refutation of the Joynson-Fletcher case, preferring, if they bothered to reply at all, to discuss the nature-nurture debate in general, rather than engaging with the details of the case.⁹⁷ Of the original participants in the debate, only Hearnshaw produced a sustained argument, and that was far from convincing.⁹⁸ A vocal minority of BPS members, led by W. D. Wall, emeritus professor of educational psychology at London University, Clare Burstall, director of the National Foundation for Educational Research, and Robert Joynson himself,

⁹³ Joynson, *The Burt Affair*, pp. 69–129; Fletcher, *Science, Ideology and the Media*, pp. 150–2.

⁹⁴ Joynson, *The Burt Affair*, pp. 69–129. But cf A. D. Lovie and P. Lovie, 'Charles Spearman, Cyril Burt and the Origins of Factor Analysis', *Journal of the History of the Behavioural Sciences*, Vol. 29 (Oct, 1993), pp. 308–21.

⁹⁵ Stuart Maclure, 'Inquest Resumed on the IQ Man: An Attempt to Rebuild the Reputation of Sir Cyril Burt', *The Times*, 5 August 1987; Clare Burstall, 'Arise Again, Sir Cyril', *The Guardian*, 9 July 1991; C. B. Goodhart, 'Sir Cyril Burt Rehabilitated?', *Oxford Magazine* No. 70 (2nd Week, Trinity Term, 1991), pp. 8–9; Judith Judd, 'Fresh test for IQ "Con Man"', *Independent on Sunday*, 8 September 1991; John Davison, '"Great Fraudster" may have been right after all', *The Sunday Times*, 23 February 1992; Nigel Hawkes, 'Not Fraud at All', *The Times*, 18 February 1992; Stephen Bates, 'Sir Cyril Burt...', *The Guardian*, 18 July 1992. Joynson and Fletcher also published a number of popular summaries of their views. See Ronald Fletcher, 'The Progressive Vendetta against the IQ Man, Sir Cyril Burt', *The Sunday Telegraph*, 2 August 1987, and 'The Burt Affair', *Salisbury Review*, March 1990, pp. 39–41.

⁹⁶ Franz Samelson, 'Rescuing the Reputation of Sir Cyril [Burt]', *Journal of the History of the Behavioural Sciences*, Vol. 28 (July 1992), pp. 221–33. For more favourable reviews, see, for example, Clare Burstall, 'Boffin Passes New IQ test', *The Guardian*, 15 August 1989, p. 21; Stephen Blinkhorn, *Nature* Vol. 340 (1989), pp. 430–40.

⁹⁷ Steven Rose, 'The Burt Business: Another View', *The Times Literary Supplement*, 18 September 1992, p. 14.

⁹⁸ See the exchange between Hearnshaw and Joynson in the *Psychologist* (Bulletin of the British Psychological Society) (1990), pp. 61–8.

campaigns for the Society to clear Burt's name. (So far the Society has preferred fence-sitting, claiming that it no longer has an official position on Burt.⁹⁹) At the very least, Fletcher and Joynson have clearly obliged us to rethink Burt's reputation.

We must guard against swinging too far with the pendulum. Burt was clearly innocent of many of the charges, major and minor, which have been levelled against him. But on the biggest charge of all – did he invent identical twins? – it is impossible to reach a firm judgement. The crucial research material, two large tea chests full of data, is lost, destroyed shortly after Burt's death by his secretary, Gretel Archer, who was anxious to vacate his flat and clear up his affairs.¹⁰⁰ Even so, there are clearly some problems with Burt's work. The twin studies fail to comply with the elevated standards of modern research science. Burt increases the number of twin pairs in successive papers without supplying sufficient information. He also throws in important references to twins in papers discussing other issues. The sudden appearance of another eleven pairs of twins in his 1966 paper is puzzling, and the paper contains a striking number of errors and inconsistencies.¹⁰¹

The reason for the problems with the twin studies is that Burt did not approach his subject like a modern research scientist, gathering a team of professional colleagues, planning a precise research project, contacting twins, subjecting them to a battery of tests, then publishing his results, meticulously documented and carefully tabulated, in an independently refereed scientific journal.¹⁰² His early career was as a practical psychologist to the LCC, and he wrote primarily for teachers and administrators rather than research scientists.¹⁰³ He had to provide sensible answers to pressing questions: should a promising child be given a scholarship? Should a trouble-causer be sent to a child guidance clinic or dispatched to a special school? Was a child falling behind his school-fellows because he lacked ability or because his home life was in turmoil? He habitually – and rightly – adjusted his test results in the light of his clinical judgement and sociological observation.¹⁰⁴ He thus came upon his research material almost haphazardly, largely as a by-product of his innumerable official duties.

Two important consequences flowed from this. The first was that his data was cumulative. Each of his successive surveys of the child population, from his early studies of Liverpool and Birmingham to his more mature studies of London, provided him with yet more usable evidence, to be heaped upon the pile. This pile

⁹⁹ Nigel Hawkes, 'Not Fraud, After All', *The Times*, 18 February 1992; Peter Aldhous, 'Psychologists rethink Burt', *Nature* Vol. 356 (5 March 1992), p. 5; Robert Joynson, 'The Burt Business', *The Times Literary Supplement*, 4 September 1992, p. 14.

¹⁰⁰ Joynson, *The Burt Affair*, p. 191; Fletcher, *Science, Ideology and the Media*, p. 11.

¹⁰¹ Burt, 'The Genetic Determination of Differences in Intelligence. A Study of Monozygotic Twins Reared Together and Apart', *Brit. J. Psych.* Vol. 57, Nos. 1 and 2 (1966).

¹⁰² Fletcher, *Science, Ideology and the Media*, pp. 12–13, 309–10.

¹⁰³ See, for example, Burt, *The Backward Child*, p. vi.

¹⁰⁴ Cf. Hearnshaw, 'Balance Sheet on Burt', p. 2, a–b.

was imperfectly filed and catalogued. Worse still, when University College, London, had to be evacuated during the blitz, the material was thrown higgledy-piggledy into various boxes and stored in the basement. The College later suffered a direct hit. One of Burt's long-time assistants, Charlotte Banks, testified that the twin data was retrieved after the war piecemeal, in different boxes and at different times, with some of the misplaced material rediscovered many years later.¹⁰⁵ Yet in his retirement, preoccupied by theoretical issues and distressed by the rise of egalitarianism, Burt got into the habit of treating this material as scientific research of the highest quality.

The second result was that there is a yawning gap between the quality of his research material and the sophistication of his theories. His later articles on twins – particularly the 1966 article – contain serious flaws: too little information about his sample and too many slips and last-minute corrections. Yet his theoretical contributions were 'elegantly and meticulously composed, with profound erudition and impressive technical sophistication'.¹⁰⁶ He pioneered the application of quantitative genetics to psychometric data. 'He was undoubtedly the first psychologist', Jensen has argued, 'to understand thoroughly, and to use, the important contributions of Fisher, Haldane, and Mather in biometrical genetics'.¹⁰⁷ The very articles which contain so many empirical errors also include lucid explanations of genetic theory.¹⁰⁸ Isolated in his retirement, preoccupied by genetic theory, and equipped only with imperfect records of tests carried out while he was a practical psychologist, he seems to have treated his data as the backdrop for the illustration of theoretical issues.¹⁰⁹

Burt also had a worrying penchant for pseudonyms. (He almost admitted as much: in a letter to a friend in 1970 he mused, puckishly, that 'no one thinks the worse of Daniel, Job or Ecclesiastes because they were not written by their ostensible authors'.)¹¹⁰ Even Fletcher admits that Burt probably wrote articles ascribed to Howard and Conway.¹¹¹ But a glance through the *British Journal of Statistical Psychology* suggests that this may have been a habit rather than an aberration. He contributed articles, notices, book reviews, and letters under pseudonyms, all intended to inflate his own reputation and deflate that of his numerous rivals; and he regularly tampered with the proofs of his contributors in order to advance his cause. Of the more than forty 'contributors' to the *Journal*

¹⁰⁵ Joynson, *The Burt Affair*, p. 179.

¹⁰⁶ Jensen, 'Kinship Correlations Reported by Sir Cyril Burt', p. 25, and 'IQ and Science: the Mysterious Burt Affair', *Public Interest* No. 105 (Fall 1991), pp. 96–7. ¹⁰⁷ *Ibid.*, p. 25.

¹⁰⁸ See, for example, Burt and Howard, 'The Multifactorial Theory of Inheritance and its Application to Intelligence', *British Journal of Statistical Psychology* Vol. 9 (1956), pp. 95–131.

¹⁰⁹ Jensen, 'Kinship Correlations Reported by Sir Cyril Burt', p. 25.

¹¹⁰ Quoted in Joynson, *The Burt Affair*, p. 185.

¹¹¹ J. Conway, 'The Inheritance of Intelligence and its Social Implications', *British Journal of Statistical Psychology* Vol. 11, No. 2 (1958), and 'Class Differences in General Intelligence', *ibid.*, Vol. 12, No. 1 (1959). See Fletcher, *Science, Ideology and the Media*, pp. 98, 277; Joynson, *The Burt Affair*, p. 185.

during the period when Burt had editorial control over it well over half are unidentifiable: the style and content suggest that they were nothing more than pseudonyms for Burt. The fifty-nine pages of the *Journal* for May 1953, for example, were almost entirely devoted to Burt. Burt contributed nineteen pages of comments on the papers of contributors, two pages of reviews signed in his own name, and between one and three pages of reviews signed in pseudonyms. Eysenck's reply to a vituperative review of one of his books contributed under one of Burt's pseudonyms took up two and a half pages; and Burt's reply under the pseudonym took up a further six and a half pages. In addition, another two pages were taken up with reviews of Burt's own books.

This passion for pseudonyms resulted from mounting intellectual isolation and professional impotence. From the mid-1940s onwards psychometry suffered a relentless series of blows. Burt was bitterly disappointed with the reception of *The Factors of the Mind* (1940), a book which he hoped would revitalise and unite his faction-ridden discipline. The reviews were lukewarm, and the dismal disputes over *g* continued. Burt saw his position as educational policy adviser-in-chief usurped, first by a muscular Christian, Sir Cyril Norwood, then by a gaggle of sociologists.¹¹² Most devastatingly of all, up-and-coming psychologists spurned Galton for alien idols.¹¹³ Post-war psychology was increasingly theoretical, experimental, and behaviouristic, whereas pre-war psychology had been practical, statistical, and hereditarian. Students looked to America for their inspiration and the animal kingdom for their subjects. Interest in genetic theory and statistical method became a badge of eccentricity and a guarantee of isolation. The readership of the *British Journal of Statistical Psychology* aged and shrank to a few hundred.

The fact that Burt was succeeded as head of psychology at University College not by a fellow Galtonian but by an animal psychologist underlined the plight of his discipline. Burt was, of course, determined that his tradition should continue and, despite a convention that retiring professors should abstain from meddling in new appointments, did everything he could to influence the selection committee.¹¹⁴ He ran his own candidate, Alec Rodger, who had been head of the vocational guidance department of the National Institute of Psychology and senior psychologist at the Admiralty during the war, and, when he was blocked, unsuccessfully approached R. B. Cattell and Hans Eysenck. After a deadlock which lasted for more than a year, the committee agreed upon Roger Russell, an animal psychologist from the University of Pittsburgh. Despite Burt's repeated attempts to meddle in the department after his retirement, the tradition which he represented rapidly died

¹¹² See, in particular, Board of Education, *Curriculum and Examinations in Secondary Schools. Report of the Committee of the Secondary School Examinations Council appointed by the President of the Board of Education in 1941* (1943), p. vii, and Burt, 'The Education of the Young Adolescent: The Psychological Implications of the Norwood Report', *Brit. J. Educ. Psych.* Vol. 13 (1943), pp. 126-40.

¹¹³ Liam Hudson, *The Cult of the Fact*, p. 58.

¹¹⁴ Hearnshaw, *Cyril Burt*, pp. 149-53.

out. 'The American professor who followed me at University College', he wrote bitterly in 1959, 'was one of those who hold that the proper study of man is rats.'¹¹⁵

Pseudonyms helped Burt to dispel the misery of isolation. He might have a diminishing band of flesh-and-blood disciples; the *British Journal of Statistical Psychology* might attract only a trickle of contributions; some of his most able pupils might have transformed themselves from acolytes into enemies. But as long as Burt could churn out papers and conjure up names at least psychometry would appear to be flourishing.

Why did Burt's critics seize on puzzling data and insist that it constituted evidence of fraud? There are two rather different reasons for this, one concerned with the structure of psychology, the other with the dynamics of politics.

More than any other discipline, psychology was divided into warring schools.¹¹⁶ These schools were self-sufficient – they each had their own research programmes and patronage networks – yet mutually antagonistic. Hereditarians denounced environmentalists. Behaviourists denounced Freudians. Materialists denounced interactionists. Psychologists could not agree on what they were supposed to be studying let alone on how they were supposed to be studying it. In such an atmosphere of professional rivalry and intellectual intolerance, accusations of fraud were all too common. At the same time, Burt was at the heart of one of the most explosive of modern scientific debates: the relationship between human ability and social opportunity. From the late 1930s psychometry was subjected to a relentless series of assaults. Social biologists argued that Burt and his contemporaries underestimated the number of able children in the working-class population; educational sociologists suggested that measured intelligence is largely an acquired characteristic; Marxists insisted that intelligence tests provided a pseudo-scientific justification for an unjust social order; and teachers complained that selection was distorting education and cheating bright children.

The criticisms came in three waves, each one fiercer than its predecessor. In 1938 Lancelot Hogben published *Political Arithmetic*, which included two long essays by Gray and Moshinsky. Between 1953 and 1956, Brian Simon published *Intelligence Testing and the Comprehensive School* (1953), Alice Heim published *The Appraisal of Intelligence* (1954), and Floud, Halsey and Martin published *Social Class and Educational Opportunity* (1956). Between 1963 and 1964, J. McLeish published *The Science of Behaviour* (1963), the Advisory Committee on Education published its report on Higher Education, the Robbins Report (1963), and J. W. B. Douglas published *The Home and the School* (1964). Burt was often the direct, and usually the indirect, target for such criticisms.

Burt thus found not only his professional reputation but also his entire world-view subjected to wholesale attack. Ideas which had been part of the intellectual

¹¹⁵ Letter to Mrs Warde, 10 July 1959. Quoted in *ibid.*, p. 153.

¹¹⁶ Joynson, *The Burt Affair*, pp. 267–72.

equipment of all radical educated Englishmen in his twenties were treated as absurd; values which had turned him into a radical and guided him in the construction of a more just educational system were presented as reactionary and divisive.

Burt refused to take these criticisms lying down, producing a relentless series of eloquent and erudite rebuttals. In 'Ability and Income' (1943)¹¹⁷ he savaged Gray and Moshinsky (and their popularisers, Carr-Saunders and Caradog-Jones)¹¹⁸ and summoned up nineteen pairs of identical twins¹¹⁹ to help with the job. In 'The Evidence for the Concept of Intelligence' (1955),¹²⁰ he defended psychometry from a 'vigorous attack' led by Alice Heim and J. M. Blackburn.¹²¹ (The number of twin pairs had now increased to twenty-one.)¹²² In 1966 he invoked the twins against Liam Hudson, A. H. Halsey, D. H. Stott, D. G. Lewis, H. Maddox, B. Woolf, and J. McLeish, suggesting that 'most of their criticisms rest, not on any fresh evidence or new researches of their own, but chiefly on armchair arguments from general principles'.¹²³

Burt did not confine his counter-attack to obscure academic journals. He was as effective in public debate as he was in written controversy. Hans Eysenck (himself no mean controversialist) has testified to his ability to think on his feet: 'His skill became legendary in the gentle art of slaying unsuspecting opponents, and he exercised it not only in print, but also on the public platform – I remember with joy the gentle way in which he would introduce the knife into his squirming opponent's body, and twist it with the most beatific smile on his face!'¹²⁴ He was also fond of writing in more popular publications. In 1969, aged 86, he contributed a long article to the first *Black Paper* on 'The Mental Differences between Children'.

His penchant for controversy and his skill in wielding the stiletto naturally turned him into a target for radical ire. For anyone to defend the hereditarian position in the late 1960s was to run a serious risk. For a retired psychologist to do so with such verve was to guarantee charges of scientific delinquency.

The backlash was not slow in coming. Christopher Price in *The New Statesman* dismissed all the *Black Paper*-ites as a 'decrepit bunch of Educational Powellites'. *The Sunday Times*, in a long and sceptical review of the *Black Paper*, singled Burt out for particular criticism. 'The most alarming single assertion made in the Paper comes from its most eminent contributor, Professor Sir Cyril Burt, appointed by the LCC in 1913 as the first educational psychologist in the world and, at 86, still an academic with an international reputation.' His assertion – that educational

¹¹⁷ Burt, 'Ability and Income', *Brit. J. Educ. Psych.* Vol. 13 (1943), pp. 83–98.

¹¹⁸ *Ibid.*, p. 87 n. 1.

¹¹⁹ *Ibid.*, p. 91.

¹²⁰ Burt, 'The Evidence for the Concept of Intelligence', *Brit. J. Educ. Psych.* Vol. 25 (1955), pp. 158–77.

¹²¹ *Ibid.*, p. 158.

¹²² *Ibid.*, p. 167.

¹²³ Burt, 'The Genetic Determination of Differences in Intelligence: A Study of Monozygotic Twins Reared Together and Apart', *Brit. J. Psych.* Vol. 57, Nos. 1 and 2 (1966), p. 138.

¹²⁴ H. J. Eysenck, 'Sir Cyril Burt – a Tribute', reprinted in Fletcher, *Science, Ideology and the Media*, p. 387.

standards were declining – was, according to *The Sunday Times*, without any foundation. His evidence ‘must be counted lost in a labyrinth of footnotes’.¹²⁵

At the same time, Burt was dragged into the controversy over racial differences in IQ in the United States. In his explosive essay ‘How Much Can We Boost IQ and Scholastic Achievement’, published in the *Harvard Educational Review* in 1969, Arthur Jensen leaned heavily on Burt’s work.¹²⁶ (Ironically, Burt was highly critical of Jensen’s conclusions, arguing that, if they existed at all, the innate differences between different races were slight, and that the differences *within* each race, which are far less likely to be influenced by cultural differences, are ‘so wide as almost to swamp the small differences between the averages of truly representative samples’).¹²⁷ Jensen repeatedly cited Burt’s work in support of his explosive theory that black–white difference in IQ owed more to genes than circumstances, referring to his ‘thorough studies and sophisticated discussions’,¹²⁸ describing his major articles as ‘a “must” for students of individual differences’, and quoting his evidence on twins as ‘perhaps the most interesting’ available.¹²⁹

This argument excited a frenzy of opposition. The hereditarians alienated a psychological establishment dominated by behaviourists, and aroused the indignation of a liberal intelligentsia committed to positive discrimination. The *Wall Street Journal* rightly compared the Jensenism of the twentieth century with the Jansenism of the seventeenth century: both were unpopular heresies; both emphasised predestination at the expense of free will; both provoked the wrath of the proponents of the established orthodoxy. Radical students expressed their wrath by waving placards and hurling abuse, their radical teachers expressed theirs by checking references and writing polemical books.

Perhaps the most mysterious thing about the whole mysterious Burt affair was that, having laboured in increasing isolation and obscurity for the previous twenty years, Burt should have been the stuff of international headlines in the early 1970s. Paradoxically, the reason for the Burt affair lay in the revival, after a long period of neglect, of academic interest in mental measurement.

¹²⁵ ‘How Shall They be Taught’, *The Sunday Times*, 12 October 1969, p. 13.

¹²⁶ Arthur Jensen, ‘How Much Can We Boost IQ and Scholastic Achievement’, *Harvard Educational Review* Vol. 39, No. 1 (Winter 1969), pp. 1–123.

¹²⁷ Burt, *New Scientist* Vol. 42, No. 647 (1 May 1969), p. 228.

¹²⁸ *Ibid.*, p. 23.

¹²⁹ *Ibid.*, p. 52.

Equality and human nature

The revolt against the measurement of merit had profound implications for both public policy and popular opinion. The abolition of selection in state schools diminished the importance of IQ testing, and the campaign against psychometry, combined with the brouhaha about Burt's scientific methods, turned progressive opinion against the practice, convincing many that it was inaccurate and some that it was intolerable. At the same time, radicals abandoned equality of opportunity for equality of results and meritocratic allocation for minority representation. And yet, even as this new orthodoxy was implanted in the popular mind and implemented in public policy, a sustained and articulate reaction set in. Egalitarian policies failed to live up to the promises made for them; progressive teaching alienated numerous parents; and a wide range of social scientists began to turn with renewed enthusiasm to both merit and measurement.

The failure of egalitarianism

The new comprehensive schools failed to live up to the somewhat extravagant claims of their supporters. They did little to break down the cultural gap between the classes, little to promote higher rates of social mobility, and little to tap the pool of talent wasted in the secondary moderns.¹ Indeed, many of the criticisms directed against the selective system of education might justly be levelled against the non-selective system.

In *All Our Future* (1968) J. W. B. Douglas sounded a discordantly pessimistic note amid the swelling chorus of praise for comprehensive schools, pointing out that reorganisation might well fail to solve the problem of educational inequality. 'The fact that inequalities existed within the old selective system does not mean that they will disappear when selective examinations are abolished', he argued, 'and the fact that it is the pupils from poor homes who have been handicapped in the past does not necessarily mean that they will lose these handicaps when

¹ See Anthony Heath and Peter Clifford, 'Class Inequalities in the Twentieth Century', *Journal of the Royal Statistical Society*, Series A, No. 153, part 1 (1990), pp. 1-16.

comprehensive education becomes universal.² Social bias in educational allocation was not confined to selection at 11-plus: working-class pupils failed to fulfil their promise throughout the school system, falling into lower streams, gaining fewer qualifications, and leaving school earlier than middle-class competitors of equal abilities. The origin of this poor performance lay not in the organisation of the schools but in the attitudes and expectations of their homes: educational reorganisation, unaccompanied by a revolution in working-class perceptions of education, would almost certainly leave the problem unsolved.

More controversially, he speculated that reorganisation might lead to a deterioration in the life-chances of working-class children. Grammar schools had employed rigorous examinations to select their pupils, and provided educational opportunities for able children regardless of their backgrounds; streamed comprehensives might be compelled to adopt a system of hidden selection, devoid of the safeguards of standardised tests and institutionalised review; in particular, they might allow considerable scope for the operation of teachers' prejudices, which were notoriously, if unconsciously, towards middle-class children.³ Selection had extracted able working-class children from their local communities, providing them with an ethos in which education was valued, effort expected and achievement rewarded; neighbourhood comprehensives, on the other hand, might fail to have such a dramatic impact on their pupils, allowing the able children of uneducated parents to absorb the values of their neighbourhoods, put little faith in education, and leave school at the same age as all their friends.⁴ The able but recalcitrant working-class child might fall further down the comprehensive school than the grammar school; and, in large schools in mixed neighbourhoods, working-class children, regardless of their ability, might gather together in the lower forms and create a counter-school culture.⁵

In her comparative study of comprehensive and selective schools in London in the late 1960s, Julianne Ford demonstrated that Douglas' fears were well-founded. Far from providing greater equality of opportunity, comprehensive schools preserved class bias in educational attainment. Middle-class pupils were more likely than working-class pupils of equal ability to find themselves in upper streams; and, once streamed, pupils continued to fulfil the expectations of their teachers. Indeed, she suspected that 'wastage of ability' among bright working-class pupils was more marked in the comprehensive school she studied than in the grammar school: working-class children wasted their opportunities in greater numbers, leaving school without a sixth-form education and advanced qualifications and foregoing, almost certainly forever, the chance of a university education and a professional career.⁶ Her conclusion was damning: 'there is little evidence from this study of three schools that comprehensive education as it is practised at the present will modify the characteristic association between social class and

² J. W. B. Douglas *et al.*, *All Our Future*, p. 65.

³ *Ibid.*, p. 5.

⁴ *Ibid.*, p. 28.

⁵ *Ibid.*, p. 60. ⁶ Julianne Ford, *Social Class and the Comprehensive School* (1969), pp. 32-45.

educational attainment'.⁷ Comprehensive schools did not even succeed in promoting mixing between children of different social classes. Pupils continued to associate, both in and out of lessons, with others from similar backgrounds or bound for a similar social status. Indeed, there was rather less mixing between able working-class children and able middle-class children in comprehensive schools than in grammar schools: the effect of reorganisation might well have been to reinforce rather than to weaken class consciousness.⁸

The failure of radical educational reform was even more dramatic in the United States, where President Johnson's declaration in 1964 of 'unconditional war on poverty' had led to a plethora of legislation, government programmes, and policy innovation.⁹ Educational reform was central to Johnson's bid to liquidate poverty. The Economic Opportunity Act of 1964 produced Head Start, an ambitious programme of enriched education for disadvantaged pre-school children; and the Elementary and Secondary Education Act of 1965 explicitly aimed to reduce poverty by reforming education.¹⁰ Incurable optimists, the reformers seemed to believe that nothing was beyond the power of the pedagogues.¹¹ Education – or 'socio-educational engineering' as Martin Deutsch dubbed it¹² – could not only eliminate deprivation (by equipping people with the skills they needed to get high-paying jobs) but also promote equality (by enabling the disadvantaged to express their hidden abilities.) To this generation of reformers the idea that intelligence was fixed by biology was anathema.¹³ They insisted that improved education, and particularly improved pre-school education, would quickly turn potential drop-outs into academic high-flyers.

Disillusionment with this prometheanism was swift.¹⁴ Despite lavish Federal expenditure on compensatory education for the disadvantaged – and in particular for ethnic minorities – the intergenerational poverty cycle remained unbroken. In 1966 James S. Coleman's report on *Equality of Educational Opportunity*, which had been commissioned by Congress on the assumption that differences in the average school performance of blacks and whites were largely due to inequalities in resources, and that more expenditure on black pupils would improve their performances, demonstrated that variations in the performance of pupils had very little to do with variations in the resources of schools: the explanation of educational inequality lay not so much in the quality of schools as in the characteristics of their pupils.¹⁵ Other evaluations of 'Head Start programmes',

⁷ *Ibid.*, p. 41.

⁸ *Ibid.*, pp. 109–29.

⁹ On this subject see Harold and Pamela Silver, *An Educational War on Poverty. American and British Policy-Making 1960–1980* (Cambridge, 1991).

¹⁰ *Ibid.*, p. 2.

¹¹ *Ibid.*, p. 67.

¹² Quoted in *ibid.*, p. 123.

¹³ *Ibid.*, pp. 32–9. The Silvers list the attack on the idea of fixed intelligence as one of the key origins of Head Start.

¹⁴ *Ibid.*, pp. 114–43. The Silvers point out that 'war' was soon downgraded to 'programme'.

¹⁵ James S. Coleman *et al.*, *Equality of Educational Opportunity* (US Government Printing Office, Washington DC, 1966). Cf. Frederick Mosteller and Daniel P. Moynihan, *On Equality of Educational Opportunity* (1972). For an account of the disillusionment felt by those who had taken

such as the Westinghouse Report on pre-school education, began to multiply evidence that they made no substantial long-term impact on children's intellectual and social development.¹⁶ In the late 1960s criticisms of the Great Society programme began to mount. Social scientists pointed out that the programme had no clear idea of what problem it was intended to tackle: poverty or inequality? Lack of income or lack of power? Unequal opportunities or unequal results? Politicians worried that it was failing to provide value for money. Left-wingers dismissed it as 'progressive statusquoism' – a cynical attempt to use government intervention to shore up the established regime. Right-wingers insisted that any attempt to solve social problems through state activism was destined to fail. Communitarians argued that compensatory education inevitably undervalued minority culture and idealised middle-class values. Cynics of all political stripes argued that the programme was benefiting not the poor but the welfare industry.¹⁷

In 1972 Christopher Jencks' classic study, *Inequality*, acknowledged the demise of educational optimism, arguing on the basis of a mass of evidence that educational reform could do little to solve social inequalities. He insisted that school reform could do little to bring about significant social changes outside the schools; equal educational opportunity could do little to alter life-chances. The social position of a child's parents, combined with the cultural and psychological characteristics of his home, did more to influence his educational achievement than either his IQ or the quality of his schooling. The characteristics of a school's *alumni* depended almost exclusively on the characteristics of its recruits; increased expenditure or reformed policies mattered little. Given the role of chance in determining an individual's income, educational reformers needed to concentrate not on altering schools but instead on reducing the rewards for competitive success and the costs of failure in the society at large.¹⁸

European developments tended to confirm such scepticism. During the 1950s and 1960s a vast expansion of educational institutions, together with a professed commitment to equal opportunity and upward mobility, had failed to alter the social composition of the élite. The life-chances of children continued to be determined by their class and home backgrounds, with middle-class children seizing the expanded opportunities and working-class children ignoring them. Not surprisingly, the high optimism of the mid-sixties was replaced by profound

part in the war on poverty, see Moynihan, *Maximum Feasible Misunderstanding: Community Action in the War on Poverty* (New York, 1969).

¹⁶ V. G. Cicirelli *et al.*, 'The Impact of Head Start on Children's Cognitive and Affective Development' (The Westinghouse Report), Westinghouse Learning Corporation (Washington DC, 1969).

¹⁷ Head Start's reputation underwent a revival in the second half of the 1980s, with an increasing number of social scientists arguing that it made a substantial difference, and politicians from both the Republican and the Democratic parties arguing that it is a valuable programme. See Silver and Silver, *An Educational War on Poverty*, pp. 318–39.

¹⁸ Christopher Jencks (and Marshall Smith, Henry Acland, Mary Jo Bane, David Cohen, Herbert Gintis, Barbara Heyns, Stephen Michelson), *Inequality. A Reassessment of the Effect of Family of Schooling in America* (1972).

pessimism in the early seventies. By 1972, it seemed that 'the essential fact of twentieth-century educational history is that egalitarian policies have failed'.¹⁹

As a result, the revolt against the measurement of merit – a revolt which had once seemed certain of success – began to run into sustained opposition in the late 1960s and 1970s. Disillusioned by the impact of social reforms, and sceptical about liberal faith in the elasticity of human nature, a small but influential group of intellectuals in Britain and America began to revive the meritocratic tradition. Psychologists, reacting against the environmentalist orthodoxy, began to re-examine the theory behind IQ testing; biologists, sceptical about the unqualified sociological explanations popular in the universities, suggested alternative biological explanations; educators, worried about the impact of progressive education on the quality of teaching, called for a return to more traditional 'standards'; and neo-conservative intellectuals, distressed by what they took to be a subversion of liberalism from within, emphasised the merits of equality of opportunity over equality of outcome.

The revival of psychometric theory in England and America: 1969–1980

The revival of interest in mental measurement was triggered by Arthur Jensen's article 'How Much can We Boost IQ and Scholastic Achievement?', published in the *Harvard Educational Review* in 1969. Jensen's argument was directed against one of the central tenets of 'compensatory education': that improved pre-school education can improve the IQ scores of deprived children.²⁰ Despite 'unprecedented support from Federal funds' and 'theoretical sanction from social scientists', compensatory education had failed to narrow the gap between 'minority' and 'majority' pupils.²¹ Jensen argued that this failure was not organisational – a consequence of inefficient teaching or insufficient money – but fundamental and inescapable. The premise upon which the scheme was based – that poor academic performance stemmed mainly from economic deprivation and social discrimination – was simply false.

In supporting this case, Jensen revived all the standard claims of hereditarian psychology. He suggested that 'the most important fact about intelligence is that we can measure it',²² dismissing claims that tests were inaccurate or culturally-loaded. He argued that '*g* has stood like a Rock of Gibraltar in psychometrics, defying any attempt to construct a test of complex problem solving which excludes

¹⁹ A. H. Halsey (ed.), Department of Education and Science, *Educational Priority, Volume 1, Problems and Policies* (HMSO 1972), p. 6. Cf. A. H. Halsey, 'Sociology and the Equality Debate', *Oxford Review of Education* Vol. 1 (1975), pp. 9–26, and Halsey and Kathy Sylvia, 'Plowden: History and Prospect', *Oxford Review of Education* Vol. 13, No. 1 (1987), pp. 3–11.

²⁰ For a recent account of American compensatory education see Silver and Silver, *An Educational War on Poverty*, esp. pp. 84–92 and 114–43.

²¹ Arthur R. Jensen, 'How Much Can We Boost IQ and Scholastic Achievement', *Harvard Educational Review* Vol. 39, No. 1 (Winter 1969), pp. 2–3.

²² *Ibid.*, pp. 5, 8.

it'.²³ He claimed that 'intelligence fully meets the usual scientific criteria for being regarded as an aspect of objective reality, just as much as do atoms, genes, and electromagnetic fields' and insisted that it was a 'biological reality and not just a figment of social convention'.²⁴ He wrote acidly that 'the belief in the almost infinite plasticity of intellect, the ostrich-like denial of biological factors in individual differences, and the slighting of the role of genetics in the study of intelligence can only hinder investigation and understanding of the conditions, processes, and limits through which the social environment influences human behaviour'.²⁵ Against the environmentalist orthodoxy, he argued at length that differences in intellectual capacity were partly the result of genetic factors which conformed to the same polygenic principles involved in the inheritance of physical characteristics.²⁶ As if all this was not controversial enough, he went on to speculate that the discrepancy in the average school performance of blacks and whites might perhaps have a genetic as well as an environmental component.²⁷

Jensen also revived the central political preoccupations of the hereditarian tradition. He came down firmly on the side of meritocratic allocation, arguing that 'all persons rightfully must be regarded on the basis of their individual qualities and merits, and all social, educational, and economic institutions must have built into them the mechanisms for insuring and maximising the treatment of persons according to their individual behaviour'.²⁸ 'In a society that values and rewards individual talent and merit' he argued, 'genetic factors inevitably take on considerable importance'.²⁹ He insisted that intelligence was closely correlated with occupational status – he dubbed this 'one of the most substantial and least disputed facts in psychology and education'³⁰ – and suggested that the schools succeeded in sorting children into different occupational positions on the basis of their innate abilities. He expressed concern that America's collective national intelligence was inadequate to meet the demands of industrial civilisation, speculating that individuals with low IQs would soon become unemployable while there would be too few able people to fill the professional positions available.³¹ But he felt that 'the technique for raising intelligence *per se* in the sense of *g*, probably lie more in the province of the biological sciences than in psychology or education':³² eugenic reform rather than compensatory education held out the solution to the problem of the nation's intelligence. Unfortunately, however, population trends were dysgenic rather than eugenic. Intelligence and family size were negatively correlated; and the negative correlation was more marked in the

²³ *Ibid.*, p. 9.

²⁴ *Ibid.*, p. 19.

²⁵ *Ibid.*, p. 29.

²⁶ *Ibid.*, pp. 32–3.

²⁷ *Ibid.*, pp. 78–88.

²⁸ *Ibid.*, p. 78.

²⁹ *Ibid.*, p. 76.

³⁰ *Ibid.*, p. 75.

³¹ *Ibid.*, pp. 88–9. His evidence for this assertion was somewhat impressionistic. 'Perusal of the want-ads in many metropolitan newspaper reveals that there are extremely few jobs advertised which are suitable to the level of education and skills typically found below IQs of 85 or 90, while we see day after day in the want-ads hundreds of jobs which call for a level of education and skills typically found among school graduates with IQs over 110. These jobs go begging to be filled.' *Ibid.*, p. 88.

³² *Ibid.*, p. 108.

negro than in the white population, so that the two races were drawing further apart in their average innate abilities.³³ 'Is there a danger', he wondered, 'that current welfare policies, unaided by eugenic foresight, could lead to the genetic enslavement of a substantial segment of our population?'³⁴

He concluded by reaffirming the hereditarian commitment to child-centred education. Traditional teaching methods, shaped by the needs of middle-class children and reinforced by international rivalry after Sputnik, had emphasised cognitive reasoning to the exclusion of all other styles of thought. As a result they did little to appeal to the 'genetic and cultural heritage' of less able children, who were capable of associative learning but who floundered when confronted with abstract reasoning. Jensen felt that education would be successful only if it tried to tap 'the actual potential learning that is latent in these children's patterns of abilities'. 'If diversity of mental abilities, as of most other human characteristics, is a basic fact of nature, as the evidence indicates, and if the ideal of universal education is to be successfully pursued', he argued, 'it seems a reasonable conclusion that schools and society must provide a range and diversity of educational methods, programs, and goals, and of occupational opportunities, just as wide as the range of human abilities'. Equality of opportunity implied diversity of provision.³⁵

Richard Herrnstein reinforced the case for intelligence-testing in a long article for *The Atlantic*, published in September 1971. Declaring himself an agnostic on the debate over race and intelligence – the differences in social environments of blacks and whites, he felt, were too wide to allow for any valid comparisons of their innate abilities³⁶ – he turned instead to a problem which had once obsessed British psychologists: the genetic foundations of social stratification. He dealt with the subject in terms of a compelling syllogism:

1. If differences in mental abilities are inherited, and
2. If success requires those abilities, and
3. If earnings and prestige depend on success,
4. Then social standing (which reflects earnings and prestige) will be based to some extent on inherited differences among people.³⁷

Like Jensen, he insisted that the informed consensus was that intelligence was highly heritable: about 80 per cent of the variation in IQ in the population derived from the genes.³⁸ He also suggested that the substantial correlation between IQ and social class – the upper-class scored about 30 IQ points above the lower class –

³³ *Ibid.*, pp. 93–5. The evidence for the fertility of poor blacks comes from Daniel P. Moynihan, 'Employment, Income and the Ordeal of the Negro Family', in T. Parsons and K. B. Clark (eds.), *The Negro American* (Cambridge, Mass., 1966).

³⁴ *Ibid.*, p. 95.

³⁵ *Ibid.*, pp. 115–17.

³⁶ Richard Herrnstein, 'IQ', *The Atlantic* Vol. 228, No. 3 (September 1971), pp. 56–7. Herrnstein was to have second thoughts about his agnosticism on racial differences. See below, pp. 380–2.

³⁷ *Ibid.*, pp. 58–63.

³⁸ *Ibid.*, pp. 56, 58.

resulted not from the cultural-bias of the tests but from the success with which desirable occupations recruited able employees. Compelled to select people capable of performing complex intellectual operations, and confronted with a large number of candidates, the professions naturally filled up with individuals with high IQs.³⁹

With evident relish, Herrnstein went on to draw a series of polemical conclusions from his already controversial premise. He suggested that social mobility – that shibboleth of American political theory – would eventually encounter the constraint of innate human differences: social and legal barriers would be replaced by genetic barriers. Equal opportunities would sort society into rigid biological castes, welding social position firmly into biological differences. He predicted a future in which ‘there will be precipitated out of the mass of humanity a low-capacity (intellectual and otherwise) residue that may be unable to master the common occupations, cannot compete for success and achievement, and are most likely to be born to parents who have similarly failed’. ‘As technology advances’, he speculated, ‘the tendency to be unemployed may run in the genes of a family about as certainly as bad teeth do now.’⁴⁰ He warned that egalitarian social reform would only encourage the formation of a hereditary meritocracy. The equalisation of the environment would mean that an even larger proportion of the variation in IQ would be attributable to the genes; success and failure would be determined by DNA. ‘Greater wealth, health, freedom, fairness, and educational opportunity are *not* going to give us the egalitarian society of our cultural heritage’, he concluded. ‘It will instead give us a society sharply graduated, with ever greater innate separation between the top and the bottom ...’⁴¹

Both Jensen and Herrnstein provoked widespread discussion in England as well as in the United States. In particular, Hans Eysenck took the opportunity to defend and publicise the hereditarian argument. In *Race, Intelligence and Education* (1971), a popular pamphlet commissioned by *New Society*, he praised Jensen, lambasted his critics, and expounded hereditarian orthodoxy. Jensen was an honest scientist hounded by dogmatists. His so-called ‘heresy’ was ‘nothing but purest orthodoxy’, agreed upon by specialists and confirmed by the evidence.⁴² The caricature of his argument, against which most criticisms were directed, was ‘a nonsense, an analogy, an extravagance, a farrago, a mare’s nest, an amphigouri’ – the invention of polemicists who failed to understand his text.⁴³ Anyone who considered the subject dispassionately could not fail to agree with Jensen. ‘All the evidence to date’, Eysenck insisted, ‘suggests the strong and indeed overwhelming importance of genetic factors in producing the great variety of intellectual differences which we observed between certain racial groups.’⁴⁴ In *The Inequality of Man* (1973), Eysenck took Herrnstein to task for ignoring the impact of regression to the mean.⁴⁵ In each new generation, the recombination of the parental genes tended to give the

³⁹ *Ibid.*, pp. 50–51.

⁴⁰ *Ibid.*, p. 63.

⁴¹ *Ibid.*, p. 64.

⁴² Eysenck, *Race, Intelligence and Education* (1971), p. 140.

⁴³ *Ibid.*, p. 145.

⁴⁴ *Ibid.*, p. 130.

⁴⁵ Eysenck, *The Inequality of Man* (1973), p. 219.

children of the lower classes more, and the children of the upper classes fewer, abilities than their parents; inheritance wiped out the differences in IQ between the children of very bright and very dull parents in just a few generations. Equality of opportunity and meritocratic allocation would thus lead to a ceaselessly mobile society, breaking the barriers between classes and reallocating individuals in each new generation. Hereditarianism was logically radical, he argued, whereas environmentalism was conservative. For if the environmentalists were right, parents would pass on their advantages directly to their children and classes would calcify into castes, immobile and immutable.⁴⁶ 'For anyone wishing to perpetuate class or caste differences', he concluded, 'genetics is the real foe.'⁴⁷

Convinced that individuals differed widely in their innate abilities, Eysenck denounced comprehensive education and praised the tripartite system as socially just and educationally efficient. Like Jensen, he felt that schools ought to provide a diversified curriculum, with academic courses for some and vocational courses for others. He consequently felt that current educational reforms were a step backwards – a flight from sense into fantasy. He was particularly incensed by the left-wing campaign against intelligence tests.⁴⁸ The main impact of tests, he argued, had been to promote the interests of able working-class children at the expense of dull middle-class children; their removal would make it 'less likely that bright children who are socially disadvantaged will obtain an education suited to their natural capacities while dull children with social advantages will receive an education which they cannot properly appreciate'.⁴⁹ He concluded acidly that 'the conscious cultivation of a mediocracy, in which the bright, the original, the innovators, the geniuses are held back in order to spare the mediocre the spectacle of outstanding success is to me an abomination ...'⁵⁰

The innumerable barbs in these writings were directed not against the disadvantaged, as many critics imagined, but against the environmentalists.⁵¹ (Academics are often less concerned with analysing the world than with chastising their colleagues.) The hereditarians felt that the environmentalists had turned into a decadent establishment, smugly self-satisfied but intellectually sloppy. Since the Second World War they had had the field of the human sciences to themselves, spinning out ever more extreme and unrestrained environmentalist arguments and mentioning genetic factors only to dismiss them.⁵² They commanded widespread public sympathy, since they endorsed a popular need to believe in the infinite plasticity of human nature.⁵³ But they paid a heavy price for their intellectual monopoly, abandoning their obligation to question their assumptions and scrutinise

⁴⁶ *Ibid.*, pp. 134, 219.

⁴⁷ *Ibid.*, p. 219.

⁴⁸ Eysenck, 'The Rise of the Mediocracy', in *Psychology is About People* (1972), pp. 160–99.

⁴⁹ *Ibid.*, p. 165.

⁵⁰ *Ibid.*, p. 19. See also Jeffrey Gray, 'Why Should Society Reward Intelligence?', *The Times*, 8 September 1972.

⁵¹ Cf. Hudson, *Cult of the Fact*, p. 22.

⁵² Herrnstein, *IQ in the Meritocracy* (1973), pp. 156–7. Eysenck, *Inequality of Man*, pp. 15, 27.

⁵³ *Ibid.*, p. 119.

public orthodoxy. Like all establishments, they had exploited their power over the agenda of intellectual debate, rejecting hereditarianism without bothering to examine it and endorsing environmentalism by rhetorical repetition rather than scientific demonstration. Jensen complained that in most recent popular textbooks on psychology and education 'genetic factors in individual differences have usually been belittled, obscured, or denigrated, probably for reasons of interest mainly on historical, political, and ideological grounds'.⁵⁴ Eysenck pointed out that sociological arguments were invariably one-sided: 'environmentalist hypotheses exclusively are considered, and conclusions are based on evidence which is entirely correlational, and hence incapable of bearing this causal interpretation. Genetic arguments are not refuted by appeal to factual evidence; they are never even considered'.⁵⁵ He compared the anti-hereditarians to the Aristotelian opponents of Galileo, who refused to put the telescope to their eyes in fear that it might reveal something which they would rather not know.⁵⁶

The hereditarians despaired at the environmentalists' double standards – absurdly low when applied to their own arguments, impossibly high when applied to the opposition. Unlike conventional scientists, environmentalists failed to present precise hypotheses, state them in testable terms, and subject them to experimental study.⁵⁷ Instead, they were willing to 'tolerate a degree of vagueness in definitions, concepts and inferences that would be unseemly in any other realm of scientific discourse'.⁵⁸ They were unwilling to allow emotional certainty to be touched by scientific evidence and rational argument. Eysenck speculated that this failure was built into their argument, since 'the environmentalist theory is in reality too vague to be properly tested at all'.⁵⁹ On the other hand, they were hypercritical of hereditarian theory, belittling 'already generally accepted facts', denigrating 'reasonably well-established quantitative methods and measurements', and demanding 'practically impossible criteria of certainty' from their opponents.⁶⁰ To the charge of intellectual incompetence the hereditarians also added one of moral cowardice. They felt that the environmentalists established their liberal credentials at the expense of the socially disadvantaged; self-righteousness had been allowed to triumph over social responsibility. Their refusal to countenance genetic explanations of individual differences, and their willingness to respond to unconventional arguments with superficial slogans and unflinching dogmatism, could only exacerbate social problems.⁶¹ 'The enemy is indulgence to one's sentimentality',

⁵⁴ Jensen, 'How Much Can We Boost IQ?', p. 28.

⁵⁵ Eysenck, *Race, Intelligence and Education*, p. 81.

⁵⁶ *Ibid.*, p. 135.

⁵⁷ *Ibid.*, pp. 123–8.

⁵⁸ Arthur Jensen, 'What is the Question? What is the Evidence?', in T. S. Krawiec (ed.), *The Psychologists* (New York, 1974), II, p. 237.

⁵⁹ Eysenck, *Race, Intelligence and Education*, p. 119.

⁶⁰ Jensen, 'What is the Question? What is the Evidence?', p. 237.

⁶¹ Jensen, 'How Much Can We Boost IQ', p. 79, and 'What is the Question? What is the Evidence?', p. 237; Eysenck, *Race, Intelligence and Education*, p. 140.

Jensen reflected. 'True sensitivity, on the other hand, is principled and clear-sighted, not blind and self-indulgent'.⁶²

Together with reviving the technique of intelligence testing, several psychologists had tried to revive a number of ideas and anxieties which had been commonplaces among their predecessors, notably fear of racial deterioration, enthusiasm for eugenic reform, and a commitment to biological explanations of human behaviour. Their efforts attracted support from a surprisingly wide range of academics; indeed, the psychologists almost seemed like shock troops in a well-coordinated assault on environmentalist orthodoxy.

Throughout the 1960s a 'new eugenics' had been forming, stimulated by dramatic advances in genetic science. Prenatal genetic screening had enabled parents to avoid having children with congenital disorders; sperm banks had provided women with further opportunities for breeding with intelligent men; and genetic engineering had allowed scientists to manipulate the fundamental hereditary process.⁶³ All in all, the improvement of the human gene pool seemed more possible than ever before. When the controversy over Jensen's paper was at its height, William Shockley, a Nobel laureate and co-inventor of the transistor, reiterated his own somewhat intemperate opinions on eugenics. He made a series of well-publicised speeches on related themes, arguing that the 'flat human quality illusion' was more dangerous than the 'flat earth illusion'; that there was a 'difference in the wiring patterns' of white and black minds; that differential fertility threatened the black community with genetic enslavement; and that cash incentives should be used to secure the sterilisation of the dull.⁶⁴

The eugenics of William Shockley were easy to dismiss. Much more formidable was the new discipline of sociobiology, invented in the early 1970s by Edward O. Wilson, a Harvard-based authority on insect societies. The aim of the sociobiology was grandiose – to explain the biological basis of social behaviour and to apply evolutionary theory to the social sciences – and it rapidly changed the direction of the study of both man and animals.⁶⁵

Wilson was fortunate in his timing. His work built on a rapprochement between the social and biological sciences which had started in the early 1950s and gathered momentum over the next two decades. Social scientists started to study the biological basis of human nature and biologists began to explore the social side of

⁶² Jensen, 'What is the Question? What is the Evidence?', p. 241.

⁶³ Kevles, *In the Name of Eugenics*, pp. 251–68.

⁶⁴ *Ibid.*, pp. 271–2. *Science* Vol. 168 (8 May 1970), p. 685, and Vol. 172 (7 May 1971), pp. 539–41; *Newsweek* Vol. 77 (10 May 1971), pp. 69–70, and (17 December 1973), pp. 109–10; John Neary, 'A Scientist's Variations on a Disturbing Racial Theme', *Life* (12 June 1970), p. 58; *New York Times*, 3 May 1970, p. 58, 29 April 1971, p. 24, and 2 May 1972. By 1972 Shockley was more publicised than Jensen: invitations for him to speak on campuses automatically led to protests.

⁶⁵ For a summary of the origins, arguments, and impact of sociobiology, see Arthur Fisher, 'Sociobiology: A New Synthesis Comes of Age', *Mosaic* Vol. 22, No. 1 (Spring 1991), pp. 3–17. See also Kevles, *In the Name of Eugenics*, pp. 272–5.

animal behaviour. Psychologists rediscovered the concept of instinct, once popularised by William McDougall but long dismissed as little more than mumbo-jumbo.⁶⁶ Anthropologists such as David Bidney questioned the doctrine that human behaviour is primarily shaped by culture.⁶⁷ Zoologists pointed to the similarities between the social behaviour of animals and men – and the likes of Desmond Morris and Lionel Tiger became almost indecently famous in the process.⁶⁸ The implication of all of this work was that men are much less peculiar than social scientists had previously assumed. Animals are capable of learning from each other and performing complex mental operations; the higher human emotions are open to biological explanations.⁶⁹

Perhaps the most important development for the nascent science of sociobiology was the discovery that one of the most puzzling forms of social behaviour – altruism – can be explained in evolutionary terms. The Darwinian hypothesis that organisms are driven to maximise their offspring had always been open to a crushing objection: why do so many animals sacrifice themselves for others? In the mid-1960s William D. Hamilton, an Oxford zoologist, produced a neat solution to the conundrum: kin selection. In general, animals will sacrifice themselves for others in direct proportion to their relatedness. (J. B. S. Haldane had once made the point neatly when he quipped that he would lay down his life for two brothers or eight cousins.) Animals give their lives for others in order to ensure that a share of their genes survives into the next generation.⁷⁰

These fledgling sociobiologists were motivated less by a desire to shore up the status quo – most were card-carrying liberals – than by a genuine intellectual conversion. Two potent forces were behind their change of mind: the collapse of behaviourism and the startling scientific achievements of biology. The converts were particularly impressed by genetics, a discipline which had not only rehabilitated itself politically by sloughing off its connections with old-style eugenics, but also produced dazzling breakthroughs, notably the discovery of the double helix of DNA.⁷¹

Sociobiology, then, had been long in the making. (The bibliography of Wilson's *Sociobiology: The New Synthesis* (1975) ran to 2,500 items.) But Wilson was more than just a cypher: he possessed both the learning to weld disparate ideas into a coherent system and the panache to challenge the ruling orthodoxy in the social sciences.

One of his many ambitions was to turn sociology into a branch of evolutionary

⁶⁶ Carl N. Degler, *In Search of Human Nature. The Decline and Revival of Darwinism in American Social Thought* (New York, 1991), pp. 222–4. ⁶⁷ *Ibid.*, pp. 219–21.

⁶⁸ Desmond Morris, *Naked Ape. A Zoologist's Study of the Human Animal* (1967), and Lionel Tiger, *Men in Groups* (1969), were both on the best seller list.

⁶⁹ Degler, *In Search of Human Nature*, pp. 226–31.

⁷⁰ *Ibid.*, pp. 279–81.

⁷¹ *Ibid.*, pp. 227–44. Wilson was much impressed by James Watson when he was a graduate student at Harvard. See Arthur Fisher, 'Sociobiology: A New Synthesis Comes of Age', p. 5.

biology.⁷² In *The Insect Societies* (1971) he suggested that the principles of population biology and comparative zoology, which had done so much to explain the behaviour of the social insects, might also be applied to the vertebrates.⁷³ In *Sociobiology: The New Synthesis* he rose to his own challenge, outlining a new discipline, summarising a vast body of research, and concluding with a provocative chapter on 'Man: From Sociobiology to Sociology'.⁷⁴ He expanded his ideas on man in *On Human Nature* (1978), and, together with Charles J. Lumsden, defended and elaborated them in *Genes, Mind and Culture* (1981) and *Promethean Fire* (1983). The hypothesis which had dominated the social sciences for generations, that mankind had escaped its own genes to the extent of being entirely culture-bound, had at last found a coherent alternative.

Wilson suggested that several commonplace but controversial characteristics of human behaviour – aggression, territoriality, tribalism, pair-bonding, even religious belief – were biologically programmed rather than socially constructed. Convinced that man was closer to the animals than he liked to imagine, and weary of ultra-environmentalist assertions that 'behaviour can be shaped into virtually any form',⁷⁵ he emphasised the genetic foundations of social behaviour. 'The question of interest is no longer whether human social behaviour is genetically determined', he argued. 'It is to what extent. The accumulated evidence of a large hereditary component is more detailed and compelling than most persons, including geneticists, realise. I will go further: it already is decisive.'⁷⁶ He suggested that men are naturally aggressive, driven by biological urges to compete for territory, status, and access to females; warfare was consequently endemic to human society.⁷⁷ He reasoned that the need to secure the maximum proliferation of favourable genes guaranteed that males would dominate over females, since a man is capable of generating so many more children than a woman.⁷⁸ Physiology meant that women's temperaments were radically different from men's: they were 'flirtatious to attract many suitors, but also hesitant, socially skilled, and perceptive in order to mate with the best of the males'.⁷⁹ The facts of nature rather than the conventions of culture encouraged men to pursue and acquire while women stayed at home and raised children; and even the most open and egalitarian of societies would preserve a sexual division of labour.⁸⁰ Although his own interests were much more general than those of the psychometrists, he lent passing support to their case, arguing that individuals differ widely in their natural abilities and that races may well differ in their average qualities.⁸¹ 'Given that humankind is a biological

⁷² Cf. Charles J. Lumsden and Edward O. Wilson, *Promethean Fire. Reflections on the Origins of Mind* (Cambridge, Mass., 1983), pp. 23, 170.

⁷³ Wilson, *The Insect Societies* (Cambridge, Mass., 1971), pp. 458–60.

⁷⁴ Wilson, *Sociobiology. The New Synthesis* (Cambridge, Mass., 1978), p. 18.

⁷⁵ Wilson, *On Human Nature* (Cambridge, Mass., 1978), p. 18.

⁷⁶ *Ibid.*, p. 19.

⁷⁷ *Ibid.*, pp. 99–112.

⁷⁸ *Ibid.*, pp. 121–48.

⁷⁹ Lumsden and Wilson, *Promethean Fire*, p. 30.

⁸⁰ Wilson, *On Human Nature*, p. 133.

⁸¹ Wilson, *Sociobiology*, pp. 548–9.

species', he mused, 'it should come as no shock to find that populations are to some extent genetically diverse in the physical and mental properties underlying social behaviour.'⁸²

Wilson's writings aroused interest in England as well as America. In particular, Richard Dawkins, an Oxford zoologist, provided a highly readable version of the sociobiological case in *The Selfish Gene* (1978). Critical of the habit of teaching the humanities 'almost as if Darwin had never lived',⁸³ he outlined the genetic foundations of animal and human behaviour. He suggested that natural selection is essentially selfish: 'nature red in tooth and claw' summed up the process admirably.⁸⁴ But, unlike many other biologists, he argued that the fundamental unit of natural selection was neither the individual nor the species but the gene.⁸⁵ Genes, he went on, are ruthlessly selfish, determined to survive in a competitive world, and willing to employ any means to gain their ends. The natural world consists of 'machines' built by genes to ensure their survival. Each individual 'machine' is simply a temporary vehicle for a short-lived combination of genes; sexual reproduction allows a gene to survive in a succession of individual bodies. Indeed, a gene is potentially immortal: 'it leaps from body to body down the generations, manipulating body after body in its own way and for its own ends, abandoning a succession of mortal bodies after they sink in senility and death'.⁸⁶ The most advanced survival machines for these immortal but selfish genes are men: 'gigantic lumbering robots' directed by huge colonies of inhabitants.⁸⁷ Dawkins suggested that men may be programmed to be aggressive, selfish, and cunning. 'It is even possible that man's swollen brain, and his predisposition to reason mathematically, evolved as a mechanism of ever more devious cheating, and ever more penetrating detection of cheating in others'.⁸⁸ But he added that culture had made altruism and co-operation possible; paradoxically, the selfish gene thrived on reciprocal altruism.⁸⁹ Dawkins was thus more cautious than Wilson in applying his ideas to man; yet an enthusiast could read his book as a qualified endorsement of the sociobiological position.

Although they had set out to goad the environmentalist establishment, the new hereditarians were shocked by the ferocity of the reaction to their arguments. They rapidly became the most controversial figures in the scientific world, widely discussed and passionately denounced. Arthur Jensen was almost as unpopular in Berkeley as Governor Ronald Reagan. Student radicals, who had first been politicised by the Free Speech Movement, demanded noisily that he should be silenced, reinforcing their demands with a campaign of harassment, threats and intimidation.⁹⁰ Despite his refusal to endorse Jensen's speculations on race and IQ,

⁸² Wilson, *On Human Nature*, p. 50.

⁸³ Richard Dawkins, *The Selfish Gene* (1978), p. 1.

⁸⁴ *Ibid.*, p. 2.

⁸⁵ *Ibid.*, p. 12.

⁸⁶ *Ibid.*, p. 36.

⁸⁷ *Ibid.*, p. 21.

⁸⁸ *Ibid.*, p. 202.

⁸⁹ *Ibid.*, pp. 203–15.

⁹⁰ Jensen, *Genetics and Education*, pp. 22, 24–5, 44–6, and 'What is the Question? What is the Evidence?', p. 235. 'Harassment Charged by Author of Article about Negro IQs', *New York Times*,

Herrnstein was subjected to similar treatment. Student radicals disrupted his classes, called for his dismissal, and threatened him with death. 'Wanted for Racism' posters bearing his photograph littered the Harvard campus, accusing him of 'misusing science' in support of 'racial superiority, male supremacy and unemployment'.⁹¹ In England Eysenck was anathematised by the burgeoning student movement. His lectures were frequently disrupted by hecklers. Pamphlets drew public attention to his supposed intellectual shortcomings.⁹² 'Eysenck is one of a band of sold-out careerists who are parading as writers, scientists, scholars, etc.' one of these argued. 'They have come forward to prostitute themselves in the service of imperialism. Through the promotion of unscientific and anti-people ideas they are creating the ideological basis for the development of fascism'.⁹³ Edward Wilson was subsequently subjected to a similar cycle of abuse. The Sociobiology Study Group, a network of some thirty-five scientists and students in the Boston area who belonged to the radical organisation Science for the People, subjected him to a barrage of arguments, invective and abuse. Public lectures, open reading groups, and lengthy press statements were all organised to discredit his work.⁹⁴ 'In the Boston area at the present time', he complained, 'it has become difficult to conduct an open forum on human sociobiology, or even general sociobiology, without falling into the role of either prosecutor or defendant.'⁹⁵

At the same time academics responded to the new hereditarianism with a torrent of commentaries, criticisms and condemnations.⁹⁶ Sensitive to the snub to their environmentalist convictions, and worried that genetic theory might lend support to racial bigotry, critics approached their task with a combination of personal vitriol

19 May 1969, p. 33; 'Campus Totalitarians', 20 May 1969, p. 46. 'New Rage at Berkeley', *Newsweek*, 2 June 1969, p. 69; Kevles, *In the Name of Eugenics*, p. 280.

⁹¹ Herrnstein, *IQ in the Meritocracy* (1973), 'Appendix. A True Tale from the Annals of Orthodoxy', pp. 156–80; 'The Perils of Expounding Meritocracy', *Science* Vol. 181, No. 40 (6 July 1973), pp. 36–9. *Encounter*, December 1972, pp. 84–5.

⁹² Eysenck, 'The Dangers of the New Zealots', *Encounter*, December 1972, pp. 79–91. See also Eysenck, *Rebel With A Cause. The Autobiography of Hans Eysenck* (1990), pp. 215–20.

⁹³ Eysenck, 'The Dangers of the New Zealots', p. 87.

⁹⁴ See, for example, Elizabeth Allen *et al.* 'Against "Sociobiology"', Arthur L. Caplan (ed.), *The Sociobiology Debate. Readings on the Ethical and Scientific Issues Concerning Sociobiology*, pp. 259–65. Joseph Alper, Jon Beckwith and Lawrence G. Miller, 'Sociobiology is a Political Issue', *ibid.*, pp. 476–89. Sociobiology Study Group of Science for the People, 'Sociobiology – Another Biological Determinism', *ibid.*, pp. 280–90. Joseph Alper *et al.*, 'The Implications of Sociobiology', *ibid.*, pp. 333–6. For accounts of the development of the discipline, and of the opposition to it, see Nicholas Wade, 'Sociobiology: Troubled Birth for New Discipline', *ibid.*, pp. 325, 332 and 'Why You Do What You Do: Sociobiology: A New Theory of Behaviour', *Time*, Vol. 110 (1 August 1977), pp. 18–23.

⁹⁵ Edward O. Wilson, 'Academic Vigilantism and the Political Significance of Sociobiology', *ibid.*, p. 299.

⁹⁶ The most comprehensive collection of critical writings is N. J. Block and Gerald Dworkin (eds.), *The IQ Controversy: Critical Readings* (New York, 1976); also see Ashley Montagu (ed.), *Race and IQ* (1975). The standard British collection – K. Richardson and D. Spears (eds.), *Race, Culture and Intelligence* (Harmondsworth, 1972) – is disturbingly inferior to its American equivalents. See also Kevles, *In the Name of Eugenics*, pp. 281–90.

and professional logic-chopping unusual even in academic controversy. The *Harvard Educational Review* devoted its Spring and Summer issues to dissections of Jensen's arguments, performed by leading psychologists, geneticists and educationalists.⁹⁷ Almost every leading professional and popular journal carried criticisms of IQ testing. ('If my article had been faulty', Jensen commented acidly, 'one competent critic should have been sufficient to put it down. The fact that dozens of criticisms of the article have steadily appeared for more than five years after its publication is a social-psychological phenomenon perhaps worthy of study in its own right.'⁹⁸) In general, critics concentrated on five key features of Jensen's argument.

First, they faulted his command of population genetics. Richard Lewontin emphasised that heritability estimates are specific to the particular group surveyed and to the particular environment in which that group existed. 'The fundamental error of Jensen's argument', he went on, 'is to confuse heritability of a character within a population with heritability of the difference between two populations'; in consequence his evidence was 'irrelevant'.⁹⁹ Luigi Cavalli-Sforza and Walter Bodmer questioned Jensen's attempt to hold environment constant by comparing the IQ scores of blacks and whites of the same socio-economic status: there was much more to environment than money.¹⁰⁰ Jensen's critics also faulted his persistent use of evidence of differences in average IQs between classes to support his contention that differences might exist between races.¹⁰¹ Classes are fluid occupational groups, open to upward mobility for the gifted and downward mobility for the dull; races are castes, rigidly divided by skin colour, and preserving 'within each group its full range of genetic diversity of intelligence'.¹⁰²

Second, they insisted that Jensen's estimate that 'IQ scores are 80 per cent hereditary' was far too high. Mary Jo Bane and Christopher Jencks estimated that genes explained 45 rather than 80 per cent of the variation in American test scores,

⁹⁷ See *Harvard Educational Review*, Reprint Series No. 2, *Environment, Heredity and Intelligence* (1969), pp. 125–208 for a selection of these criticisms.

⁹⁸ Jensen, 'What is the Question? What is the Evidence', p. 235.

⁹⁹ Richard C. Lewontin, 'Race and Intelligence', in Block and Dworkin (eds.), *The IQ Controversy*, p. 89. This argument was reiterated by numerous other critics. See, for example, J. F. Crow, 'Genetic Theories and Influences', *Harvard Educational Review*, Vol. 39, No. 2 (Spring 1969), p. 308; T. G. Gregg and P. R. Sanday, 'Genetic and Environmental Components of Differential Intelligence'; C. L. Brace *et al.*, 'Race and Intelligence' (Washington DC: American Anthropological Association, 1971), p. 60; W. F. Bodmer, 'Race and IQ: The Genetic Background', *Race, Culture and Intelligence*, pp. 105–6; S. J. Gould, 'Racist arguments and IQ', in Ashley Montagu (ed.), p. 149; David Lazar, 'Science or superstition? A physical scientist looks at the IQ controversy', in Block and Dworkin (eds.), *The IQ Controversy*, pp. 201–2; Block and Dworkin, 'IQ, Heritability and Inequality', *ibid.*, pp. 476–7.

¹⁰⁰ Walter F. Bodmer and Luigi Luca Cavalli-Sforza, 'Intelligence and Race', *Scientific American* Vol. 223, No. 4 (Oct. 1970), p. 27 (b).

¹⁰¹ *Ibid.*, p. 27 (a); Sandra Scarr-Salapatek, 'Unknowns in the IQ Equation', in Block and Dworkin (eds.), *The IQ Controversy*, pp. 121–4.

¹⁰² Scarr-Salapatek, 'Unknowns in the IQ Equation', p. 122.

so that black/white cultural differences could easily account for the observed difference of 15 points.¹⁰³ Leon Kamin went even further, pointing to methodological flaws in Jensen's data (including Burt's study of identical twins)¹⁰⁴ and concluding that 'the adopted child studies, like the separated twin studies, seem to me to offer no evidence sufficient to reject the hypothesis of zero heritability of IQ scores'.¹⁰⁵ Whatever figure they accepted, Jensen's critics agreed that the expression of a gene was strongly influenced by the environment, and that the development of IQ, which was influenced by many genes, each contributing on average only a small effect, was profoundly affected by a host of environmental factors.¹⁰⁶ They had no doubts that a host of social factors – the legacy of slavery, the disrupted black family, malnutrition and poor housing, lack of early stimulation, social discrimination and the internalisation of the white man's prejudices – could easily explain the differences in IQ between blacks and whites. Their conclusions were uniformly optimistic. 'Perhaps the single most important fact about human intelligence', David Layzer insisted, 'is its enormous and, as yet ungauged capacity for growth and adaptation'.¹⁰⁷ The solution to the failure of compensatory education lay in more money and more imaginative techniques – combined with a general commitment to social reform.

Third, they maintained that IQ tests are inaccurate measures of intelligence, particularly when applied to minority and disadvantaged children. (Jensen likened this approach to treating a fever by throwing away the thermometer.)¹⁰⁸ Different critics dwelt on different points, but a number of arguments kept recurring. The test items are often schoolish, biased, defective, or trivial; psychologists cannot define intelligence and so should not presume to be able to measure it; tests measure nothing more than the ability to do well in similar tests; tests fail to measure innate capacity and instead reflect specific knowledge and acquired skills; IQ is inconstant from early childhood to maturity; and every aspect of intelligence testing, from the 'testing situation' to the selection of questions, is culturally biased against minority children.¹⁰⁹

Fourth, they questioned Jensen's sociological assumptions, arguing that the relationship between IQ and occupation was far more confused than he had suggested. Personal wealth, family connections, and good fortune might promote someone with a low IQ well above his 'natural' station; alcoholism, drug addiction, mental instability, and bad luck might lead someone with a high IQ to join the

¹⁰³ Mary Jo Bane and Christopher Jencks, 'Five Myths About Your IQ', in Block and Dworkin (eds.), *The IQ Controversy*, pp. 330–5.

¹⁰⁴ Leon J. Kamin, 'Heredity, Intelligence, Politics and Psychology: 1', *ibid.*, pp. 242–62. Kamin expanded on his criticisms in *The Science and Politics of IQ* (Potomac, 1974).

¹⁰⁵ Kamin, 'Heredity, Intelligence, Politics and Psychology', p. 262.

¹⁰⁶ Bodmer and Cavalli-Sforza, 'Intelligence and Race', p. 21.

¹⁰⁷ David Layzer, 'Science or Superstition?', p. 239.

¹⁰⁸ Jensen, *Bias in Mental Testing* (New York, 1980), p. xi.

¹⁰⁹ See *ibid.*, pp. 23–4 for a summary of the case against testing.

underclass. Mary Jo Bane and Christopher Jencks demonstrated that IQ played only a modest role in determining income, explaining only about 12 per cent of income variation and leaving the other 88 per cent to be explained by factors unrelated to IQ.¹¹⁰

Fifth, they subjected Jensen to a barrage of political arguments and insults. Some suggested that he was misguided to investigate the subject and counselled that no further attention be paid to it. Sandra Scarr-Salapatek suggested that 'to assert, despite the absence of evidence, and in the present social climate, that a particular race is genetically disfavoured in intelligence is to scream "FIRE ... I think" in a crowded theater'.¹¹¹ Bodmer and Cavalli-Sforza argued that, since no scientific or practical justification could be given for studying genetic differences between races, there was no case for using public funds to support such studies. 'There are many more useful biological problems for the scientist to attack'.¹¹² Others went further, questioning Jensen's motives and suggesting that he was a reactionary, an elitist, even a racist. Martin Deutsch castigated his 'wholly anti-democratic eugenic position'.¹¹³ The Association of Black Psychologists suggested that all intelligence tests threatened 'to potentiate Black genocide'.¹¹⁴ Leon Kamin argued that the IQ controversy was yet another case of 'blaming the victims'. 'Perhaps, however, it is we psychologists who have failed; perhaps again, it is the society in which we live that has failed. Those who care have a double task. We had better build a better psychology; and we had better help to build, quickly, a better society'.¹¹⁵

Of course, this controversy only helped to focus attention on the hereditarian argument.¹¹⁶ In particular, Jensen succeeded in reviving academic interest in mental measurement, population genetics, and the psychology of individual differences. 'Thanks to Jensen's provocative article', Sandra Scarr-Salapatek noted, 'many academic psychologists who thought IQ tests belonged in the closet with Rorschach inkblots have now explored the psychometric literature and found it to be a trove of scientific treasure'.¹¹⁷ Sociologists who had previously taken environmentalism for granted were forced to deal with the methods and conclusions of psychometry; and geneticists, who had generally ignored social problems and public policy issues, were drawn into the debate on compensatory education. Jensen's paper in the *Harvard Educational Review* was discussed in over 116 articles in the first two years after its publication.¹¹⁸ He received thousands of requests for

¹¹⁰ Bane and Jencks, 'Five Myths About Your IQ', p. 328.

¹¹¹ Scarr-Salapatek, 'Unknowns in the IQ Equation', p. 128.

¹¹² Bodmer and Cavalli-Sforza, 'Intelligence and Race', p. 29 (c).

¹¹³ Martin Deutsch, 'Happenings on the Way Back to the Forum: Social Science, IQ and Race Differences Revisited', *Harvard Educational Review* Vol. 39, No. 3 (Summer 1969), p. 524.

¹¹⁴ Quoted in Jensen, *Bias in Mental Testing*, p. 16.

¹¹⁵ Kamin, 'Heredity, Intelligence, Politics and Psychology: 1', p. 262.

¹¹⁶ Cf. Noam Chomsky, 'The Fallacy of Richard Herrnstein's IQ', in Block and Dworkin (eds.), *The IQ Controversy*, p. 285. ¹¹⁷ Scarr-Salapatek, 'Unknowns in the IQ Equation', p. 118.

¹¹⁸ See Jensen, *Genetics and Education*, pp. 356-64 for a bibliography of these articles.

reprints. Numerous college courses in education, psychology, biology and genetics dealt with his arguments in detail, and some made them the exclusive focus of their attention.¹¹⁹ Goaded by his critics, Jensen reinforced his case in a series of books on every aspect of psychometric theory – *Genetics and Education* (1972), *Educational Differences* (1973), *Educability and Group Differences* (1973), *Bias in Mental Testing* (1980), and *Straight Talk About Mental Tests* (1981) – which contained a total of over 2,000 pages of discussion. Eysenck and Herrnstein's writings, together with the proliferation of comments which they excited, helped further to consolidate the hereditarian argument.

By a felicitous combination of accident and design the new hereditarians also commanded a vast popular audience for their ideas. The popular press publicised Jensen's arguments with astonishing speed. Jensen began to read newspaper accounts of his *Harvard Education Review* article two weeks before a copy of the journal reached him in California.¹²⁰ Every major news magazine discussed his arguments in some detail.¹²¹ A thorough account in the *New York Times Magazine*¹²² – 'Jensenism, n. Or the theory that IQ is largely determined by the genes' – provoked more letters to the editor than any article it had ever published.¹²³ The British media followed the American example, and Eysenck, Burt, Hammerton, C. P. Snow and Nathaniel Weyl all gave vigorous support to the hereditarian position, though Burt chastised Jensen for focusing on group rather than individual differences.¹²⁴

Whereas Jensen had written for fellow academics, Eysenck and Herrnstein aimed at the popular market. Herrnstein's *Atlantic* article summarised the history of IQ testing, demonstrated the sociological implications of hereditarian theory, and tried to extricate IQ from the race question. Eysenck was a past master at popularising psychological theory – *Uses and Abuses of Psychology*, *Sense and Nonsense in Psychology* and *Know Your Own IQ* had all sold in their millions – and

¹¹⁹ *Ibid.*, p. 1.

¹²⁰ *Ibid.*, p. 12.

¹²¹ See, for example, M. R. Berube, 'Jensen's Complaint', *Commonweal* (1969), 91, pp. 42–4; J. Cass, 'Race and Intelligence', *Saturday Review* (1969), pp. 52, 67–68; M. Hunt, 'The Intelligent Man's Guide to Intelligence', *Playboy* Vol. 18, No. 2 (Feb. 1971), pp. 94–6, 106, 191–4; J. D. Hyman, 'Communication: IQ and Race', *The New Republic* (1969), 161, pp. 30–1; C. Jencks, 'Intelligence and Race: What Color is IQ?', Nos. 10–11, Issues 2854–5, pp. 25–9; Marilyn Mercer, 'Is Your IQ really you?', *Glamour* Vol. 63, No. 2, pp. 212–13, 283–5; J. Neary, 'Jensenism: Variations on a Racial Theme', *Life* 68 (12 June 1970), p. 58; C. T. Rowan, 'How Racists use "Science" to degrade black people', *Ebony* Vol. 25, No. 7 (May 1970), pp. 31–40.

¹²² L. Edson, *New York Times Magazine*, 31 August 1969, pp. 10–11. For discussions, see 21 and 28 September issues.

¹²³ Jensen, *Genetics and Education*, p. 14.

¹²⁴ Eysenck, 'A Critique of Jensen', *New Scientist* (May 1969), pp. 228–9; Burt, 'Intelligence and Heredity', *New Scientist*, 1 May 1969, pp. 226–8; M. Hammerton, 'Race, Morals and Research', *Listener*, 28 January 1971, pp. 99–101 (originally delivered as a broadcast on Radio 3); Snow, Weyl and Jensen, *Daily Telegraph Magazine*, 5 June 1970, pp. 14–20. For more hostile receptions see Liam Hudson, 'Nature, Nurture: Racialist Comeback?', *The Times Educational Supplement*, 4 July 1969, p. 33; B. Silcock, 'Race, Class and Brains', *The Sunday Times* (London) *Weekly Review*, 1 February 1970, pp. 49–50, and 'The Case of the Vanishing IQ Gap', *ibid.*, 8 February 1970, p. 5.

his book neatly packaged 'Jensenism' for a mass audience. He was adept at making provocative comments – about the average intelligence of the Irish for example – and then retreating into scientific qualification. His book was widely reviewed, even exciting the interest of the tabloid press.¹²⁵ His appearance on a BBC programme, *Controversy*, significantly widened the audience for his ideas.¹²⁶ Edward Wilson was also a skilful publicist, writing a long article on the implications of sociobiology for man in the *New York Times Magazine*.¹²⁷ Student protests gave further publicity to these arguments and provoked widespread sympathy for the hereditarians. By indulging in mass protests, over-blown rhetoric, and emotional accusations, radicals turned themselves into ideal publicists for the ideas they anathematised.¹²⁸

The new hereditarians also discovered that they had some supporters among politicians and policy-makers. Their scepticism about public spending, disillusionment with social engineering, and anxiety about the quality of the population all struck responsive chords on the right. Shortly after the publication of Jensen's *Harvard Education Review* article, Daniel Patrick Moynihan remarked that the 'winds of Jensen' were gusting through the capital at gale force.¹²⁹ Once again, Britain followed America's lead, with politicians toying with hereditary ideas, usually in private, occasionally, if they were unwise, in public. Sir Keith Joseph scuppered whatever chances he may have had of becoming leader of the Conservative Party when, in a public speech in October 1974, he was unwise enough to broach the subject of the deterioration of the population:

The balance of our population, our human stock, is threatened ... a high and rising proportion of children are being born to mothers least fitted to bring children into the world and bring them up. They are born to mothers who were first pregnant in adolescence in social classes four and five. Many of these girls are unmarried, many are deserted or divorced or soon will be. Some are of low intelligence, most of low educational attainment ... They are producing problem children, the future unmarried mothers, delinquents, denizens of our borstals, sub-normal educational establishments, prisons, hostels for drifters. Yet these mothers, the under twenties in many cases, single parents from classes four and five, are now producing a third of all births. A high proportion of these births are tragedy for the mother, the child and for us. If we do nothing, the nation moves towards degeneration, however much resources we pour into preventive work and the overburdened educational system.

¹²⁵ *The Daily Mirror*, for example, highlighted his observation that the Irish score rather poorly on IQ tests. 'This caused a number of Irish navvies to ring up and threaten to punch me on the nose, no doubt under the illusion that this was a rational argument which could disprove my factual statement'. H. J. Eysenck, 'The Dangers of the New Zealots', *Encounter*, December 1972, p. 82.

¹²⁶ *Ibid.*, pp. 85–7.

¹²⁷ Edward O. Wilson, 'Human Decency is Animal', *New York Times Magazine*, 12 October 1975.

¹²⁸ Cf. Gould: 'our rhetoric was at fault'. Lewontin: 'other people may have listened more if we had presented our arguments differently'. 'Why You Do What You Do.' p. 222.

¹²⁹ J. Neary, 'Jensenism: Variations On a Racial Theme', *Life*, 12 June 1970, pp. 58–61.

He added that the problem was compounded by 'the loss of people with talent and initiative as our semi-socialism deprives them of adequate opportunities, rewards and satisfactions'.¹³⁰

The revival of psychometric theory in England and America: 1980–1990

The psychometric revival shows no sign of running out of momentum. Throughout the 1980s, a small but immensely prolific group of hereditarians continued to publish fresh data, win new converts, revive old arguments, excite journalistic interest, ignite angry controversies and, in the process, influence public debate and political opinion.¹³¹ The likes of Arthur Jensen and Hans Eysenck insisted with mounting confidence that IQ tests are reasonable measures of intelligence and that intelligence owes rather more to inheritance than to environment.¹³² They continued to attract able pupils, as can be seen from two weighty *festschrifts* edited by Sohan and Celia Modgil.¹³³ The vigour of most of the contributions (by no means all of them favourable)¹³⁴ provided ample evidence that psychometry had not lost its ability to pose new problems. The psychometrists continued to provoke impassioned rebuttals, some scholarly, some self-indulgent, all evidence that their work was still taken seriously.¹³⁵

Jensen and Eysenck were not exponents of an increasingly isolated academic tradition, as many of their opponents have hinted. In 1984 Mark Synderman and Stanley Rothman asked a large number of American psychologists and educationalists, both academic and applied, what they thought of intelligence tests.¹³⁶ They also put the same question to noted journalists and influential science editors. They found that a large majority (94 per cent) of experts believed that genetic factors played some part in measured IQ differences and a small majority (54 per cent) believed that genetic factors played at least some part in the average IQ differences

¹³⁰ 'People We Can't afford', *Observer*, 20 October 1974, p. 1.

¹³¹ For a recent example of their influence, see Mickey Kaus, *The End of Equality* (New York, 1992), pp. 43–7, and 'The End of Equality', *New Republic*, 22 June 1992, pp. 21–7.

¹³² See, for example, H. J. Eysenck, 'Equality and Education: Fifteen Years On', *Oxford Review of Education* Vol. 17, No. 2 (1991), pp. 161–7.

¹³³ Sohan Modgil and Celia Modgil (eds.), *Arthur Jensen. Consensus and Controversy* (1987), and Modgil and Modgil (eds.), *Hans Eysenck. Consensus and Controversy* (1987). Both books were published in the Falmer international master-minds challenged series. Other master minds were Lawrence Kohlberg, Noam Chomsky and B. F. Skinner.

¹³⁴ See, for example, Lorrie A. Shepard, 'The Case for Bias in Tests of Achievement and Scholastic Aptitude', pp. 177–90, Richard Flynn 'Race and IQ: Jensen's Case Refuted', pp. 221–32, and Robert Sternberg, '"Gee, There's More than G!" A Critique of Arthur Jensen's Views of Intelligence', pp. 237–49, in Modgil and Modgil (eds.), *Arthur Jensen. Consensus and Controversy*.

¹³⁵ Michel Schiff and Richard Lewontin, *Education and Class. The Irrelevance of IQ Genetic Studies* (Oxford, 1986) is one of the most impressive examples of this hostile literature.

¹³⁶ Mark Synderman and Stanley Rothman, *The IQ Controversy: The Media and Public Policy* (New Brunswick, New Jersey, 1988).

between blacks and whites. (This news came as a surprise to Jensen: asked to estimate what proportion of experts agreed with his position on black-white differences he ventured a figure of 20 per cent.¹³⁷) The proportion of journalists who were willing to allow some role to the genes was much lower: only 74 per cent of science editors and 67 per cent of journalists believed that genes played some role in IQ differences, and only 27 per cent of journalists and 23 per cent of science editors believed that genes helped to explain black-white IQ differences. Only 17 per cent of experts were out-and-out environmentalists, compared with 34 per cent of journalists and 47 per cent of science editors.¹³⁸ Synderman and Rothman concluded that the media had misrepresented the IQ debate to the public, severely underestimating the extent to which the wider academic community endorsed the hereditarian position.

The hereditarians continued to buttress familiar arguments with fresh evidence. One of the most widely discussed new studies dealt with the subject which ended up staining Cyril Burt's reputation: monozygotic and dizygotic twins reared apart. From 1979 onwards the Minnesota Centre for Twin and Adoption Research contacted more than 100 sets of twins and triplets, most of them from the United States and the United Kingdom, but some from other countries, who had been separated at birth and reared apart.¹³⁹ This constituted the largest study of twins ever attempted. The Centre subjected each set of twins to a week of intensive psychological and physiological assessment. The study discovered that about 70 per cent of the variance in IQ was associated with genetic variation. It also found that on multiple measures of personality and temperament, occupational and leisure-time interests, and social attitudes, monozygotic twins reared apart are about as similar as monozygotic twins reared together.

The new hereditarians turned their attention to a range of social problems which had preoccupied their predecessors between the wars but had been treated as environmentalist fiefdoms since the late 1950s.¹⁴⁰ One of the first to catch their attention was crime. Together with James Q. Wilson, a criminologist who was then based at Harvard, Richard Herrnstein published *Crime and Human Nature* (1985), a highly controversial attempt to go beyond fashionable explanations of crime and explain why some individuals are more likely to break the law than others.¹⁴¹ Throughout the densely argued text the authors concentrated on biological reasons for predatory criminal behaviour such as assault, rape, arson and the like. Gifted

¹³⁷ Letter from R. Gordon, p. 2 in *On Rushton, Race and Academic Freedom: Responses from the International Academic Community*. Bound copy of letters from distinguished scholars commenting on J. P. Rushton's Appeal. Copy in author's possession.

¹³⁸ For a summary of their conclusions, see Synderman and Rothman, *The IQ Controversy*, pp. 284-5.

¹³⁹ Thomas J. Bouchard *et al.*, 'Sources of Human Psychological Differences: The Minnesota Study of Twins Reared Apart', *Science* Vol. 250 (12 October 1990), pp. 223-8.

¹⁴⁰ Cf. 'Nature or Nurture? Old Chestnut, New Thoughts', *Economist* Vol. 325, No. 7791 (26 December 1992), pp. 61-4.

¹⁴¹ James Q. Wilson and Richard J. Herrnstein, *Crime and Human Nature* (New York, 1985), p. 24.

polemicists, they had some harsh words to say for colleagues who dismissed or trivialised the importance of constitutional features in criminality.¹⁴² In advancing their argument, they revived many of the central preoccupations of Burt's classic study *The Young Delinquent*, particularly the links between criminality and below-average intelligence.¹⁴³

Since then the hereditarians have turned their attention to even more controversial issues. Richard Herrnstein argued that the differential rate of fertility between bright women (who limit their fertility in the interests of professional advancement and personal comfort) and less intelligent women (who have much less control over their lives) is reducing the average intelligence of the American population. His gloomy conclusion might well have been penned in the 1930s: 'we ought to bear in mind that in not too many generations differential fertility could swamp the effects of anything else we may do about our economic standing in the world'. Richard Lynn speculated that selective migration had produced significant differences in the mean IQ of populations in various regions of the British Isles, with mean IQs highest in London and the South East and declining the further you get away from the capital.¹⁴⁴

But undoubtedly the most controversial attempt to revive hereditary psychology has been made by J. Philippe Rushton, an Englishman who teaches psychology at the University of Western Ontario in Canada. Rushton argued that races differ in numerous heritable capacities such as brain size, IQ, maturation rate, personality and temperament, and social organisation.¹⁴⁵ Negroes, he suggested, are, on average, more fertile, faster maturing, more sexually active, and less accomplished in standardised tests than Orientals. Caucasians fall between the other two racial groups. Rushton speculated that the ordering corresponded to what population biologists know as the r-K scale of reproductive strategy. At one end of this scale are 'r-strategies', which emphasise high reproductive rates, and at the other end are 'K-strategies', which emphasise careful nurturing. The implication was simple: Negroes put more emphasis on the quantity, and Orientals on the quality, of their children. Caucasians fall in the middle.

This thesis inevitably – and rightly – aroused furious criticism. Psychologists and biologists questioned his data (on the grounds that much of it is old or poorly ascertained), his methods (on the grounds that the correlations between many of his variables are weak) and his conclusions (on the grounds that the r-K strategies may not apply to human beings).¹⁴⁶ The university forced him to give his lectures on

¹⁴² *Ibid.*, p. 511.

¹⁴³ *Ibid.*, pp. 148–72.

¹⁴⁴ Richard Lynn, 'The Social Ecology of Intelligence in the British Isles', *British Journal of Social and Clinical Psychology* Vol. 18 (1979), pp. 1–12.

¹⁴⁵ J. Philippe Rushton, 'Race Differences in Behaviour: A Review and Evolutionary Analysis', *Personality and Individual Differences* Vol. 9, No. 6 (1988), pp. 1,009–24.

¹⁴⁶ See, for example, Marvin Zuckerman and Nathan Brody, 'Oysters, Rabbits and People: A Critique of Race Differences in Behaviour' by J. P. Rushton, *Personality and Individual Differences* Vol. 9, No. 6 (1988), pp. 1,025–33; and D. P. Cain and C. H. Vanderwolf, 'A Critique of Rushton on Race,

videotape and awarded him an unsatisfactory rating for research. His job might well have been in jeopardy had not numerous distinguished British and American academics, many of whom strongly disagreed with his views, defended his right to freedom of expression.¹⁴⁷

Academic hostility and public outrage has not persuaded the new hereditarians to abandon their interest in the biological basis of social problems. Richard Herrnstein is now collaborating with Charles Murray, a social scientist who earned national prominence and political favour with his controversial analysis of the welfare state,¹⁴⁸ on a major study of biological differences and public policy in the United States.¹⁴⁹ The book will highlight the tension between America's egalitarian philosophy and the unequal distribution of innate abilities. Early hints suggest that Herrnstein and Murray will touch on such explosive issues as the genetic aspects of inequality between blacks and whites and the social implications of fertility rates. They may even present a case for using social policy to narrow the fertility gap between the highly educated and the less educated – in a word, for eugenics. With two such well known academics at work on such a controversial subject, the science of individual differences is destined to occupy a huge amount of intellectual energy on both sides of the Atlantic in the next decade or so.

Along with old-fashioned preoccupations, the hereditarians resuscitated even more old-fashioned methods. In the 1980s psychologists revived interest in a technique which had been dismissed as old hat by their predecessors in the 1900s: using physical data to measure intellectual ability. Jensen assembled a large body of evidence to demonstrate that IQ is highly correlated with reaction time,¹⁵⁰ a theory which had been passionately advanced by Francis Galton but universally abandoned after the appearance of a seemingly devastating monograph in 1901.¹⁵¹ He also pointed to a growing body of research which suggested that intelligence is correlated with the rate of glucose generated in the brain, the speed of neural

Brain Size and Intelligence', *Personality and Individual Differences* Vol. 11 (1990), pp. 777–84. For Rushton's replies, see Rushton, 'The Reality of Racial Differences: A Rejoinder with New Evidence', *Personality and Individual Differences* Vol. 9, No. 6 (1988), pp. 1,035–40; 'Race, Brain Size and Intelligence: A Rejoinder to Cain and Vanderwolf', *Personality and Individual Differences* Vol. 11, No. 8 (1990), pp. 785–94, and 'Do r-K Strategies underlie Human Race Differences? A Reply to Weizmann et al.', *Canadian Psychology* Vol. 32, No. 1 (1991), pp. 29–42.

¹⁴⁷ Barry R. Gross, 'The Case of Philippe Rushton', *Academic Questions* Vol. 3, No. 4 (1990), pp. 35–46. See also William Rees-Mogg, 'Why Science Must be Free to Breach Taboos', *The Independent*, 10 June 1991. The case can be followed in more detail in *On Rushton, Race and Academic Freedom: Responses from the International Academic Community*. Bound copy of letters from distinguished scholars commenting on J. P. Rushton's Appeal. Copy in author's possession.

¹⁴⁸ Charles Murray, *Losing Ground. American Social Policy 1950–1980* (New York, 1980).

¹⁴⁹ Michael Prowse, 'Monday Interview: How to be Cruel to be Kind. Michael Prowse Talks to American Social Scientist Charles Murray', *Financial Times*, 2 April 1990, p. 38.

¹⁵⁰ A. R. Jensen, 'Chronometric Analysis of Mental Ability', *Journal of Social and Biological Structures* Vol. 3 (1980), pp. 103–27 and 'The Chronometry of Intelligence', in R. J. Sternberg (ed.), *Advances in the Psychology of Human Intelligence* Vol. 1, pp. 255–310.

¹⁵¹ C. Wissler, 'The Correlation of Mental and Physical Tests', *Psychological Review*, Monograph No. 3.

transmission, and numerous anatomical variables.¹⁵² Most surprisingly of all, a growing number of psychologists argued that there is a relationship between the size of a head and the amount of intelligence it contains.¹⁵³ Eysenck suggested that mental chronometry might put hereditary psychology on a much firmer basis than mental tests, which were notoriously open to environmental influences.¹⁵⁴ Far from rejecting the accusation that they were little better than nineteenth-century craniometrists, the new hereditarians seemed to relish it.

The British intelligentsia has been slow to spot the revival of hereditary thinking. But in the early 1990s a number of right-wing think tanks began to sense that yet another liberal orthodoxy – environmentalism – was open to criticism. In the spring of 1990, for example, the Centre for Policy Studies invited Richard Herrnstein and a group of like minded academics to speak at a London-based conference on crime.¹⁵⁵ The conference attracted several leading members of the Conservative Party including Kenneth Baker, the party chairman, Lord Hugh Thomas, an adviser to the prime minister, Lord Joseph, and a Deputy Under Secretary at the Home Office, who apologised for the absence of David Waddington, the Home Secretary. The Americans were also given a guided tour of the Home Office, Scotland Yard and Policy Unit at Downing Street. The conference naturally attracted a flurry of comment in the media as pundits claimed to spot yet another sinister development in the ideology of the new right.¹⁵⁶

¹⁵² A. R. Jensen and S. N. Sinha, 'Physical Correlates of Intelligence', in P. A. Vernon (ed.), *Biological Approaches to the Study of Human Intelligence* (Norwood, New Jersey, 1991); A. R. Jensen, 'Spearman's G and the Problem of Educational Equality', *Oxford Review of Education* Vol. 17, No. 2 (1991), pp. 169–87; R. J. Haier *et al.*, 'Cortical Glucose Metabolic Rate Correlates of Abstract Reasoning and Attention Studies with Positron Emission Tomography', *Intelligence* Vol. 12 (1988), pp. 191–217.

¹⁵³ Lee Willerman *et al.*, 'In Vivo Brain Size and Intelligence', *Intelligence* Vol. 15 (1991), pp. 223–8; Fred W. Johnson, 'Biological Factors and Psychometric Intelligence: A Review', *Genetic, Social and General Psychology Monographs* Vol. 117, No. 3 (1991), pp. 313–57; J. Philippe Rushton, 'Mongoloid–Caucasoid Differences in Brain Size From Military Samples', *Intelligence* Vol. 15 (1991), pp. 351–59.

¹⁵⁴ Hans Eysenck, 'Intelligence and Reaction Time: The Contribution of Arthur Jensen', in Modgil and Modgil (eds.), *Arthur Jensen: Consensus and Controversy*, pp. 285–95.

¹⁵⁵ The like-minded academics were Charles Murray, George Kelling and Jackson Toby.

¹⁵⁶ Oliver James, 'Crime and the American Mind: The Government is Being Influenced by Genetic Theories about the Underclass', *The Independent*, 21 May 1990. Lord Thomas, a director of the Centre for Policy Studies, was so unnerved by some of the issues raised at the conference that, in a letter to *The Independent*, he made clear that, as far as he was concerned, Herrnstein's views were as unconvincing as they were objectionable. See, 'An Unconvincing Theory of Criminal Behaviour', *The Independent*, 23 May 1990, p. 22.

The measurement of merit revived?

The revival of psychometric theory coincided with mounting scepticism about the more extravagant forms of progressive education. Based on a belief in children's ability to educate themselves, and sceptical about the claims of adult authority, progressive schooling led to a number of experiments which appalled the conservative public and even gave radical fellow travellers pause for doubt. In both Britain and America policy makers were heavily influenced by a 'back-to-basics' movement, with its emphasis on rote learning, examinations, and school discipline; the ethos of effort and the classification of children by merit was once again a popular reforming movement.

The Black Papers versus progressive education

The reaction against progressive education found its most forceful expression in the *Black Papers*, a series of polemical pamphlets initiated by two English literature dons, Brian Cox and A. E. Dyson.¹ Originally intended to combat radical student interference with academic traditions, the *Black Papers* soon widened their scope to deal with the 'general crisis in education'.² They attracted numerous well-known and articulate contributors, including academics, politicians, school-teachers, and writers.³ These contributors differed widely in their intellectual and political commitments – some were dyed-in-the-wool Tories, some were habitual Labour voters disillusioned with Labour's educational policies – but they were all united by a common antipathy to the leftward drift of education. They disliked student protests, levelling politics, and permissive ethics; regarded the 1960s as a

¹ See, in particular, Brian Cox, *The Great Betrayal* (1992), which is part autobiography, part history of the *Black Papers*. They were called black papers to distinguish them from government white papers.

² C. B. Cox and A. E. Dyson, 'Introduction', *The Black Papers on Education* (1971), p. 9. Revised version of the first three Black Papers, published in March 1969, October 1969 and November 1970, collected under one cover and furnished with a new introduction.

³ E.g. Cyril Burt, Jacques Barzun, G. H. Bantock, Bryan Wilson, H. J. Eysenck, Max Beloff, Edward Norman, Kingsley Amis, Iris Murdoch, Rhodes Boyson, Angus Maude, Robert Conquest.

'hideous decade', in which 'ill-thought-out notions of spontaneity, self-realisation and equality' had invaded and subverted education;⁴ and insisted on the virtues of high culture, reasoned argument, and disciplined learning.

They reserved their most aggressive polemic for left-wing students and progressive teachers. Student militants they regarded as vandals in 'the temple of culture',⁵ financed by the state to subvert traditional civilisation, and they blamed their existence on over-ambitious university expansion.⁶ But they soon realised that it was impossible to understand student unrest without analysing lack of school discipline.⁷ Progressive educational thought, ossified into dogma and applied uncritically, they argued, had produced a generation of ignorant, ill-disciplined and selfish adolescents. Deprived of adult guidance, let loose in non-structured schools, with no rules, no discipline, no school uniform, no homework, no morning assembly, no rituals, no team games, no Houses, no form classes, no set subjects, and no timetables, and encouraged simply to discover and express their 'true personalities', children inevitably became soft-minded and self-centred victims of the pop and television culture. The vacuum left by lack of instruction was filled by a mass culture which conditioned children to accept life as trivial, violence as normal, authority as contemptible, reason as irrelevant, and self-gratification as admirable.⁸

By mixing educational arguments with more general criticisms of permissive morals, the *Black Papers* built up a composite picture of educational decline and social decay: tension in the home, as Spock-inspired methods of child rearing undermined family discipline; anarchy in the infant and junior schools, with permissive teachers preferring hedonism to work discipline and self-discovery to instruction; declining standards of teaching and behaviour in the senior schools; and student unrest and government interference in the universities, as over-rapid expansion led to the recruitment of unsuitable students and academics.⁹

Above all, the *Black Paper* writers were sharply critical of universal comprehensive education.¹⁰ They dismissed the claim that comprehensives would

⁴ C. B. Cox and Rhodes Boyson, 'Background', Cox and Boyson (eds.), *Black Papers* 1977, p. 13.

⁵ A. E. Dyson, 'Culture and Anarchy 1869-1969', *Critical Quarterly* Vol. 1, No. 1 (Spring 1969).

⁶ Kingsley Amis, 'Pernicious Participation', *Black Papers on Education* (1971), p. 172.

⁷ Cox, *Great Betrayal*, p. 145.

⁸ See, for example, Cox and Dyson, 'Introduction', Cox and Dyson (eds.), *Black Papers on Education*, pp. 17-21; C. M. Johnson, 'Freedom in Junior Schools', *ibid.*, p. 100; A. E. Dyson, 'The Sleep of Reason', *ibid.*, pp. 84-6.

⁹ 'Education: The Backlash Starts', *Observer*, 23 March 1969, p. 10.

¹⁰ Their attitude to comprehensive schools changed and hardened in the 1970s. In 1969 they rejected the 11-plus and praised the achievements of many comprehensives; their objection was to the universalisation of the comprehensive system and to the egalitarian wing of the comprehensive movement. (See Cox and Dyson, 'Introduction', *The Black Papers on Education* (1971), p. 11, and Rhodes Boyson, 'The Essential Conditions for the Success of a Comprehensive School', *ibid.*, pp. 151-62, esp. p. 151). But by 1977 they hoped to turn back the clock. 'We cannot, however, remain as we are with a monolithic, failing comprehensive system, if we are to preserve scholarship and survive as an economic community' concluded Cox and Dyson in *Black Paper* 1977, p. 61.

promote social mobility and social mixing, and thereby create a less class-stratified society, as ideological moonshine. Middle-class children would attend middle-class comprehensives, with capable staff, excellent facilities, and an encouraging atmosphere, whereas working-class children would be consigned to working-class comprehensives, with limited opportunities and innumerable social problems. 'Neighbourhood comprehensive schools would in the view of the egalitarians end the class system by educating the Duke's son and the docker's son in the same school, and, in an unstreamed school, in the very same class', Rhodes Boyson argued. 'It is a pity that the advocates of such schools did not look on the map and note that the Duke and the docker lived in different places'.¹¹

They were particularly concerned about the fate of able working-class children under a monolithic comprehensive system.¹² The grammar schools, they argued, had provided outstanding opportunities for talented working-classes children, compensating for their economic and cultural disadvantages, enabling them to break down the barriers of class and achieve unrestricted scope for their talents, and setting them on the path of upward social mobility. The comprehensive schools, compelled to select their pupils on the basis of the location of their parents' homes, would become bastions of inequality, with schools set in working-class districts offering no opportunity for their abler students to develop their talents and escape to a better education.¹³ The replacement of educational selection with a geographical lottery would increase rather than diminish inequalities of opportunity; and the main victims would be the manual working classes.¹⁴

Not surprisingly, the *Black Paper* writers repeatedly called for a return to the traditional virtues of intellectual rigour and academic learning. Convinced that the essential duty of the teacher was to expound the 'great achievements of past civilisation',¹⁵ they hoped that instruction would again replace experiment at the heart of the school syllabus. Education should introduce the child to high culture, furnishing him with information and forcing him to think, at the same time; and the inescapable accompaniment of success was discipline and hard work. Self-improvement rather than self-expression was the touchstone of educational achievement. 'What education exists to do', A. E. Dyson argued, 'is to inform, train, extend and enrich the "self", to offer knowledge, insight, ideals and discipline far beyond the self-regarding sterilities of our pop-culture world'.¹⁶

The *Black Paper* writers argued that a successful educational system would inevitably employ the well-tried mechanisms of competition, examination, and streaming. Competition stimulates individual effort, narrows the gap between

¹¹ Boyson, 'The Essential Conditions for the Success of a Comprehensive School', *Black Papers on Education* (1971), p. 153.

¹² See Cox, *Great Betrayal*, pp. 3-4.

¹³ Tibor Szamuely, 'Russia and Britain: Comprehensive Inequality', *Black Papers on Education* (1971), pp. 125-7.

¹⁴ Iris Murdoch, 'Socialism and Selection', in Cox and Boyson (eds.), *Black Paper* 1975, p. 9.

¹⁵ Cox and Dyson, *Black Papers on Education* (1971), p. 17.

¹⁶ Dyson, 'The Sleep of Reason', *ibid.*, p. 85.

capacity and performance, and promotes higher standards and aspirations; it also prepares children to take part in the relentless adult struggle for limited resources.¹⁷ Examinations provide a fixed standard for measuring educational achievement, preventing students from distorting their results by currying favour and protecting teachers from the temptations of sex appeal, pseudo-friendship, and mute appeals from weakness.¹⁸ 'All life depends upon passing exams', Cox insisted. 'If you fail at football, they drop you to the reserves. If you fail in business, you go bankrupt. If you fail in politics, you are forced to resign (or, in some countries, get shot). Exams measure people against standards distilled from human traditions and achievements, not against inclinations spun lazily out of the "self".'¹⁹ He added that working-class children in particular suffered from the abandonment of examinations, since, without examinations, employers would have to rely not on objective certificates but on personal impressions and letters of recommendation.²⁰ Finally, streaming increased educational efficiency and instilled realistic attitudes in children. 'Society is inevitably hierarchical', Richard Lynn argued. 'Streaming teaches children this fact of life and that if they wish to do well in the hierarchy they must use their intelligence and work hard'.²¹

Anxious to support political polemic with scientific evidence, the *Black Paper* writers repeatedly referred to the psychometric tradition. They insisted that intelligence testing had proved beyond doubt what all sensible men had always suspected: that individuals differ widely in their abilities, that these differences owe more to nature than to nurture, and that attempts to level them out of existence are doomed to failure. 'The intellectual deprivation of children occurs at the moment of conception in the dance of the chromosomes', Rhodes Boyson noted, 'and not from material, educational or social deprivation'; social engineering was powerless against innate inequalities.²² They pointed out that opportunities for the able, who were naturally scattered throughout the population, would lead to social mobility rather than class rigidity, contributing both to individual justice and economic efficiency.²³ They argued that, instead of pursuing a policy which demanded greater uniformity in education, the government should aim at greater diversity, with different institutions catering for different ability groups. Both Cyril Burt and Hans Eysenck lent their support to the *Black Papers*, contributing articles which combined theoretical arguments with empirical evidence in wholesale assaults on

¹⁷ Richard Lynn, 'Competition and Cooperation', in Cox and Boyson (eds.), *Black Paper 1977*, pp. 108–10.

¹⁸ Cox, 'In Praise of Examination', in Cox and Dyson, *Black Papers on Education* (1971), pp. 71–4

¹⁹ *Ibid.*, p. 76.

²⁰ Cox, 'Examinations: Seven Questions', *Black Paper 1975*, p. 33.

²¹ Richard Lynn, 'Streaming: Standards or Equality', in Cox and Dyson (eds.), *Black Papers on Education* (1971), p. 82.

²² Rhodes Boyson, *The Crisis in Education* (1975), p. 98, cf. p. 44: 'egalitarians, the modern levellers, who, rejecting all heredity as some once rejected the idea that the earth revolved around the sun, see differences of ability or intellect as simply a function of differences in home and social class'.

²³ *Ibid.*, p. 98.

progressive education.²⁴ Burt furnished explosive evidence for long-term decline in England's educational standards.

Judged by tests applied and standardised in 1913–14, the average attainments in reading, spelling, mechanical and problem arithmetic are now appreciably lower than they were 55 years ago. The deterioration is most marked in English composition. Here the vogue is all for 'creativity'. Bad spelling, bad grammar, and the crudest vulgarisms are no longer frowned upon, but freely tolerated. Instead of accuracy, the teacher aims at 'self-expression'; instead of clear and logical thought or precise description of facts, he – and still more often she – seeks to foster what is called 'imagination'. At the same time parents and members of the public at large are beginning to wonder whether the free discipline, or lack of discipline, in the new permissive school may not largely be responsible for much of the subsequent delinquency, violence and general unrest that characterise our permissive society.²⁵

The *Black Papers* appeared in the wake of two weighty reports by the Central Advisory Council for Education, both of which proclaimed post-war education a magnificent success story.²⁶ But – and this was perhaps as much a surprise to the *Black Paper* contributors as it was to professional educationalists – they attracted a great deal of sympathetic public attention.²⁷ Unlike most writings on education, they were readable and engaging, sounding a tub-thumping, almost revivalist, tone calculated to appeal to the prejudices of the conservative public. A free copy was sent to every MP, leading to a number of parliamentary questions. Thousands of teachers bought them; universities and colleges of education held 'teach-ins' on them, publicising their arguments even as they anathematised them; huge radio, television, and newspaper coverage carried their arguments, duly sensationalised with stories of violence and educational decline, to an audience peripherally concerned with education but permanently willing to be outraged. *Black Paper* contributors were overwhelmed with invitations to speak at parents' meetings and political debates.²⁸ Rhodes Boyson, the headmaster of Highbury Grove School, was drawn into full-time politics by his educational convictions, becoming Conservative MP for Brent North in 1974. Edward Short, Labour Secretary of State for Education, provided the *Black Papers* with welcome publicity when he unblushingly described the publication of the first of the series as 'marking one of the blackest days for education in the past century'.

As a result, the impact of the *Black Papers* was considerable. They broke the fashionable progressive consensus on education, initiated a reappraisal of radical

²⁴ Burt, 'The Mental Differences between Children', *Black Papers on Education* (1971), pp. 45–63; Eysenck, 'Educational Consequences of Human Inequality', *Black Paper* 1975, pp. 39–42 and 'When Discrimination', *Black Paper* 1977, pp. 93–8. ²⁵ Burt, *ibid.*, p. 60.

²⁶ Frank Musgrove, 'The Black Paper Movement', in Roy Lowe (ed.), *The Changing Primary School* (1987), p. 106. ²⁷ Cox, *Great Betrayal*, pp. 168–80.

²⁸ Cox and Dyson, *Black Papers on Education* (1971), pp. 10–13.

assumptions, and demonstrated the existence of a coherent alternative philosophy. They transformed the anti-progressive campaign, linking isolated battles against the destruction of grammar schools into a national movement and inspiring traditionalist parents and teachers, who had hitherto endured the progressive revolution with anything from impotent rage to uneasy resignation, with a renewed sense of purpose.²⁹ 'In the late 1960s', Cox and Boyson recalled, 'it seemed that the educational revolution in the United Kingdom would wreak its havoc with little or no opposition. The retreat from teaching and structure, the flight from high culture to pop culture, the move to non-selective education, still advanced on all sides and even influenced the programme of political parties'.³⁰ Organised by the *Black Paper* group, opposition to this leftward drift began to influence policy. 'In the 1970s', Cox and Boyson argued, 'we are witnessing a slow return to common sense, to formal teaching, to a renewed awareness that the child's happiness and personal fulfillment depend on a secure environment under the control of adults.'³¹

The *Black Paper* case was reinforced by two well-publicised incidents in 1976: the disintegration of the William Tyndale Junior and Infants Schools and the publication of Neville Bennett's findings on educational standards.

Between 1974 and 1976 William Tyndale was controlled by a clique of progressive teachers, who expounded a 'democratic, egalitarian and non-sexist philosophy', rejected 'arbitrary standards of attainment and behaviour', and encouraged children to 'make their own decisions about their learning and lives'.³² Convinced that the average teacher is simply 'part of the apparatus of control', they granted their pupils almost complete freedom.³³ Their aim was to 'diminish role-difference between them and their children, to a point where each could be seen to have something of value to offer the other on an equal level'.³⁴ The result of this philosophy was that the children at the school could decide not only what they should learn but also whether they should learn it, and when. In other words, anarchy.

Several teachers and numerous parents objected to such mumbo-jumbo, and the school rapidly fell apart. Parents withdrew their children; the Inner London Education Authority tried to inspect; newspapers printed sensational headlines; seven teachers went on strike, and then set up their own school, claiming to be victims of political harassment. A public inquiry, conducted by Robin Auld QC and widely reported in the press, took on something of the form of a national inquest on progressive teaching. It concluded that, by the time Terry Ellis had completed two terms as headmaster, the school was in 'complete turmoil', with the teaching organisation ruined, the quality and content of instruction low, and school

²⁹ Cox, *Great Betrayal*, pp. 4-6.

³⁰ Cox and Boyson, 'Letter to MPs and Parents', *Black Paper* 1975, p. 3.

³¹ Cox and Boyson, 'Background', *Black Paper* 1977, p. 13.

³² Terry Ellis, Jackie McWhirter, Dorothy McDolgan and Brian Haddow, *William Tyndale: The Teacher's Story* (1976), p. 45.

³³ *Ibid.*, p. 43.

³⁴ *Ibid.*, p. 45.

discipline undermined.³⁵ Children defied their teachers, swore openly at teachers and staff, and fought among themselves.³⁶ Instead of becoming 'self-motivated' by freedom, they were often bored and listless. After the novelty of being able to do as they liked had worn off, some became discontented with the lack of pattern to their days, and indicated that they wanted to be taught again.³⁷ The report was particularly critical of Ellis' 'doctrinaire and aggressive' assistant, Brian Haddow, arguing that 'he had become so mesmerised by the labels of "progressive teaching" generally, and "co-operative teaching" and "options systems" in particular, that he pursued such methods with little regard to circumstance and with little thought to the practicalities of planning and organisation that such methods of teaching require'.³⁸

Neville Bennett's report on primary school teaching, *Teaching Styles and Pupil Progress* (1976),³⁹ reinforced doubts about the progressive orthodoxy. Based on a comparative study of thirty-seven teachers whose methods ranged from the highly formal to the extremely informal, the report concluded that pupils who were taught formally showed superior progress in the basic subjects, were no worse in imaginative story writing, and were less prone to make grammatical errors. In the course of a single school year the formally taught children shot ahead by three to four months in reading age, by three to four months in English, and by four to five months in mathematics. Anxious children in particular suffered in informal classrooms, working less, and gossiping, gazing into space and misbehaving more than they did in formal settings. The more formal the teaching, then, the more time pupils spent in working on the subject matter at hand; and the more time they spent working on a subject, the more they improved at it. The key to improving teaching of basic skills lay, in general, in a clear structuring of activities within a cognitively orientated curriculum – or, more succinctly, in traditional rather than progressive methods. Bennett did not deny that progressive methods could be successful: the most able teacher in his sample used progressive methods. He simply pointed out that they were more likely to be unsuccessful than traditional methods. It was difficult to operate an informal system successfully, and most teachers seemed to lack the required competence. But Bennett's qualifications and circumlocutions were soon forgotten by a press eager to exploit his report to stir up public disquiet about teaching standards and progressive conduct. His argument was soon broadcast as a straightforward condemnation of informal primary education, and a vindication of the traditional virtues of formal instruction; he provided 'bullets for Dr Boyson's blunderbuss'.⁴⁰

³⁵ Robin Auld QC, *William Tyndale Junior and Infants Schools Public Inquiry* (July 1976), p. 274, para. 838.

³⁶ *Ibid.*, p. 79, para. 253.

³⁷ *Ibid.*, p. 78, para. 252.

³⁸ *Ibid.*, p. 287, para. 864. On the impact of the affair on the left, see Brian Simon, 'Education and the Right Offensive', in his *Does Education Matter?* (1985), p. 203.

³⁹ Neville Bennett, *Teaching Styles and Pupil Progress* (1976).

⁴⁰ *The Times Educational Supplement*, 30 April 1976, p. 1.

But the *Black Paper* group did not simply discredit the progressive consensus: as we have seen, there were plenty of progressive teachers who were quite capable of doing that without any assistance from the right. It also created and popularised an alternative agenda. The first *Black Papers* may have been exercises in nostalgia, idealising the post-war educational settlement, with its rigid hierarchy of schools, its infatuation with Greek and Latin, and its insistence that higher education is a privilege for a small minority.⁴¹ The later *Black Papers*, on the other hand, looked forward to a market-driven educational system, sensitive to parental wishes, invigorated by competition, and regulated by rigorous examinations. The educational voucher replaced the 11-plus as the rallying cry of the ascendant right.

From pamphleteering to policy-making

Despite being inspired by disaffected academics rather than professional politicians, the *Black Papers* exercised a mounting influence over Conservative Party educational thinking.⁴² Several leading *Black Paper* writers became active members of the Party, and several leading Tories became frequent contributors to the *Black Papers*, with the result that, by the mid-1970s, a *Black Paper* clique virtually controlled Conservative educational policy-making.

Hostility to comprehensive schools was hardly new in Conservative circles. Angus Maude had started to denounce the comprehensive experiment as early as 1953.⁴³ His *Good Learning* (1964) was an eloquent summary of the case for increasing the supply of grammar schools – particularly in areas where the number of middle-class families was increasing rapidly – rather than introducing comprehensive schools.⁴⁴ He found passionate support from the likes of Gilbert Longden, Kathleen Olleranshaw and Russell Lewis. Yet throughout the 1960s the anti-comprehensive lobby was impotent – a bunch of disaffected backwoodsmen rather than a caucus with a policy. The Party grandees were content to let the Labour Party make the running on educational policy. Sir Edward Boyle felt that the argument over the 11-plus had been lost in the public debates of the 1950s and early 1960s,⁴⁵ and wanted to see tripartism replaced by a much more flexible structure. The *Black Papers* provided the anti-comprehensive lobby with the two things it needed if it was to mount an effective counter-attack on such patrician attitudes: a sense of identity and an alternative strategy.

By the early 1970s the balance of power in the Party began to shift. Several *Black*

⁴¹ Frank Musgrove, 'The *Black Paper* Movement', in Roy Lowe (ed.), *The Changing School* (1987), pp. 106–28. Musgrove is right to emphasise the element of nostalgia in much *Black Paper* writing but wrong not to recognise the forward-looking element.

⁴² The most scholarly account of this is Christopher Knight, *The Making of Tory Education Policy in Post-War Britain 1950–1986* (Lewes, 1990).

⁴³ *Ibid.*, p. 11.

⁴⁴ Angus Maude, *Godliness and Good Learning* (1964), pp. 46–62.

⁴⁵ Knight, *Making of Tory Education Policy*, p. 34.

Paper writers became influential members of the Conservative Party. Brian Cox, once a Fabian socialist, joined the Party in 1970, despite continued misgivings about the right's infatuation with the market.⁴⁶ Rhodes Boyson worked his way up the Conservative hierarchy, no doubt helped by his notoriety as a *Black Paper* activist. Caroline Cox, John Marks and Fred Naylor all joined the Party in order to defend intellectual standards and preserve selection – or at least differentiation. The recruitment of these fellow travellers encouraged old-fashioned opponents of educational fashion such as Angus Maude to redouble their attempts to stiffen Tory resistance to the comprehensive revolution. At the same time, an increasing number of Tories, including many MPs, became involved in local campaigns to preserve grammar schools,⁴⁷ and several leading figures in Conservative Central Office recognised that there was political capital to be earned out of the anti-progressive crusade.

Tories who sympathised with the *Black Paper* line gradually captured the organs of party opinion-forming from liberal Tories such as Edward Boyle.⁴⁸ The *Swinton Journal*, the house magazine of the Swinton Conservative College, published a plethora of *Black Paper*-style articles on education.⁴⁹ The Conservative Political Centre, which produces briefing papers for local activists as well as MPs, published two pamphlets by Rhodes Boyson, *Battle Lines for Education* in 1973 and *Parental Choice* in 1975. 'Notes on Current Politics', the in-house journal of the Conservative Research Department, was taken over by *Black Paper* sympathisers. A special edition on education, published in April 1975, endorsed a series of *Black Paper* themes: the need for a national curriculum, a stronger inspectorate, more parental choice, and a shake-up of teacher training.⁵⁰ This shift in received wisdom among activists soon influenced party policy documents. From the early 1970s they began to put more emphasis on the importance of preserving centres of excellence, the desirability of differentiation, and the evils of egalitarian social engineering, and the havoc wreaked by child-centred teaching. The education section of the 1974 Conservative manifesto was effectively drafted by three *Black Paper* stalwarts, Rhodes Boyson, Harry Greenway and Sir Gilbert Longden.

The right's success was not confined to the back-room of the party. In 1969 Edward Boyle, disturbed by the agitation of the anti-comprehensive lobby in the

⁴⁶ Cox, *Great Betrayal*, pp. 211–12, 224–5.

⁴⁷ David Crook, 'Edward Boyle: Conservative Champion of Comprehensives', *History of Education* Vol. 22, No. 1 (March 1993), p. 55. ⁴⁸ Knight, *Making of Tory Education Policy*, p. 65

⁴⁹ Knight singles out three essays in particular: John O'Sullivan, 'The Direction of Conservatism', *Swinton Journal* Vol. 16, No. 1, pp. 30–6, Ronald Bell, 'The Content of Education', *Swinton Journal* Vol. 18, No. 4, pp. 11–16, and Tom Howarth, 'The Future of Our Schools: A Conservative View', *Swinton Journal* Vol. 19, No. 3, pp. 3–7.

⁵⁰ Brian Salter and E. R. Tapper, 'The Politics of Reversing the Ratchet in Secondary Education 1969–1986', *Journal of Educational Administration and History* Vol. 20, No. 2 (July 1988), p. 60. The authors make some intriguing points about the overlap between the right's concern for educational standards and the Department of Education's desire to extend its power over education.

shires and Fleet Street,⁵¹ decided to retire from politics. Edward Heath replaced him with Margaret Thatcher, a supporter of selection, as shadow Minister of Education.⁵² (Mrs Thatcher was rather more robust in what she said than what she did: she abolished more grammar schools than anyone before or since, personally approving 91 per cent of the 3,600 secondary reorganisations which she was asked to judge.) Two years later, in November 1972, Heath unwittingly strengthened the grip of the right over education by appointing Norman St John Stevas, a liberal on everything except education, as Mrs Thatcher's junior minister.⁵³ The victory of the *Black Paper* faction seemed to be symbolised by Edward Boyle's decision to retire from Conservative politics in the same year.

The Conservative Party was not alone in deciding that egalitarianism had gone too far. The *Black Paper* coterie achieved one of its most unexpected triumphs in persuading the Labour Party to make a U-turn on education. In 1976 James Callaghan's government threw its weight behind a more traditional approach to teaching. It ceased to flirt with radical theories about abolishing examinations and encouraging self-expression and talked instead of standards, rewards and economic efficiency. This *volte face* was a shrewd response to mounting public anxiety and employers' complaints.

By the mid-1970s public opinion had turned against progressive education. The press painted a terrifying picture of academic decline and social disintegration: academic standards were slipping fast; the curriculum devoted too much time to trendy fringe subjects and too little to the core disciplines of reading, writing and arithmetic; teachers were incapable of teaching children the virtues of hard work, self-discipline and good manners; and, to make matters worse, they were all too often the victims of soft-minded dislike for traditional virtues or, more sinisterly, the exponents of a hot-headed philosophy of social subversion and political revolution.⁵⁴ A spate of academic publications added to the feeling that education was being subverted by an unholy alliance of left-wing sociologists (who were more interested in equality than instruction) and progressive teachers (who valued educational fads such as open classrooms more than the long-term interests of their pupils).⁵⁵ To add to the sense of crisis, several international comparisons revealed huge variations in the standards achieved, the curricula offered, and the resources available for education across the country. They also showed England lagging behind its more centralised continental rivals in increasing the proportion of 16- to

⁵¹ Hugo Young, *One of Us* (1991 edn), pp. 66-7; Crook, 'Edward Boyle: Conservative Champion of Comprehensives', p. 60.

⁵² The first choice for the job was Keith Joseph. Crook, 'Edward Boyle: Conservative Champion of Comprehensives', p. 61. ⁵³ Knight, *Making of Tory Education Policy*, pp. 72-3.

⁵⁴ For examples of newspaper headlines, see Clyde Chitty, *Towards a New Education System. The Victory of the New Right?* (Lewes, 1989), pp. 63-6.

⁵⁵ See, in particular, A. Flew, *Sociology, Equality and Education* (1976), R. Sharp and A. Green, *Education and Social Control* (1975), K. Evans, 'The Physical Form of the School', *British Journal of Educational Studies* Vol. 27 (1979), p. 29.

18-year-olds staying on in education and in producing the highly skilled workers required by knowledge-intensive industries.

This last point won the loud support of an influential group of industrialists. Arnold Weinstock, Managing Director of the General Electric Company, spoke for many industrialists in his provocatively entitled article 'I blame the teachers'. He blamed the shortage of skilled labour on the failings of the school system and demanded that incompetent teachers should be sacked.⁵⁶ John Methven, Director General of the Confederation of British Industry, echoed these arguments, complaining that the schools left their pupils ill-equipped for employment and ill-informed about capitalism. He wanted schools to give more time to core subjects and place more emphasis on vocational education.⁵⁷

The man who did more than anybody else to communicate these worries to the Labour leadership was Bernard Donoughue, a political historian turned public policy adviser, whose position as head of the Policy Unit at No. 10 Downing Street between 1974 and 1979 gave him unrivalled access to the prime minister.⁵⁸ He feared that comprehensive education was in danger of discrediting itself through hubris and ineptitude, and worried that the right was making invaluable political capital out of education.⁵⁹ He also had a hunch that many of the arguments presented in the *Black Papers* – though grotesquely exaggerated and mobilised in a malign cause – had a core of truth to them. He had little truck with the producer lobby in education. Lack of accountability, he argued, had turned 'the secret garden into a weed patch'.⁶⁰ He dismissed the conventional Labour Party assumption that educational problems could be solved by throwing money at them. Above all, he loathed the National Union of Teachers. 'In all my many dealings with the NUT at that time', he complained, 'I never once heard mention of education or children. The union's prime objective appeared to be to secure ever decreasing responsibilities and hours of work for its members and it seemed that the ideal NUT world would be one where teachers and children never entered a school at all – and the executive of the NUT would be in a permanent conference session at a comfortable seaside hotel.'⁶¹

James Callaghan was highly sympathetic to the Donoughue line. He was a natural traditionalist in education, as in so much else: a self-educated man who had

⁵⁶ Arnold Weinstock, 'I Blame the Teachers', *The Times Educational Supplement*, 23 January 1976. In fact, industrialists had done a good deal to promote the policies Weinstock excoriated. See Gary McCulloch, *Philosophers and Kings* (Cambridge, 1991), pp. 85–90.

⁵⁷ John Methven, *The Times Educational Supplement*, 29 October 1976.

⁵⁸ On the Donoughue Policy Unit, see G. W. Jones, 'The Prime Minister's Aides', in A. King (ed.), *The British Prime Minister* (1985), esp. pp. 82–4.

⁵⁹ B. Donoughue, *Prime Minister. The Conduct of Policy under Harold Wilson and James Callaghan* (1987), p. 110.

⁶⁰ Interview with Bernard Donoughue, 16 January 1986, quoted in Clyde Chitty, *Towards a New Education System. The Victory of the New Right?* (Lewes, 1989), p. 67.

⁶¹ B. Donoughue, *Prime Minister. The Conduct of Policy under Harold Wilson and James Callaghan* (1987), p. 110.

left school at fifteen, he had no time for the fashionable concerns of his university-educated colleagues.⁶² Talk of allowing children to express their inner selves and doing away with the boundaries between traditional academic disciplines left him cold. To him there was no shame in thinking of education as an instrument of personal advancement and a tool of national prosperity.⁶³ Rumour has it that Callaghan was shocked into shaking up education by his daughter's well-publicised decision to transfer one of her children from a lackadaisical state primary school to an independent school.⁶⁴ In fact, his decision also has the hallmark of a well choreographed political manoeuvre. He was disturbed by complaints from friends in industry that the schools were failing to turn out employable workers, and he calculated that it made good political sense to preempt Tory populism with Labour populism.⁶⁵ Letting Donoughue off the leash made perfect political sense.

Donoughue had already made a start in 1975 by lobbying for the replacement of Sir William Pile by James Hamilton, a mandarin with qualifications in science and engineering, as Permanent Secretary at the Department of Education and Science.⁶⁶ But 1976 was his *annus mirabilis*. He drafted a series of hard-hitting questions which James Callaghan put to his unfortunate education minister, Fred Mulley, a few weeks after moving into Downing Street,⁶⁷ and coordinated the various drafts of the Ruskin speech.⁶⁸ Donoughue was the unseen scriptwriter of the Great Debate on education.⁶⁹

The Yellow Book, an internal discussion document prepared by the DES in July at the instruction of James Callaghan and leaked to the press in October, provided more grist for the Donoughue mill. The Yellow Book was equivocal about informal teaching methods, praising their successes but arguing that they could be disastrous when applied by inexperienced or inept teachers. 'The challenge now is to restore the rigour without damaging the real benefits of child-centred education.' The Paper criticised the 'more participatory style' of contemporary secondary schools, suggesting that it allowed pupils to choose unbalanced and unmarketable courses and failed to prepare them for a productive role in the economy. It also pointed to the surplus of young and inexperienced teachers, drawn into the profession by a sudden and rapid expansion, and complained that the 'average is probably below

⁶² Denis Healey, *The Time of My Life* (1989), p. 448.

⁶³ James Callaghan, *Time and Chance* (1987), p. 409.

⁶⁴ Gerry Fowler, 'The Changing Nature of Educational Politics in the 1970s', in Patricia Broadfoot, Colin Brock and Witold Tulasiewicz, *Politics and Educational Change. An International Survey* (1981), p. 23.

⁶⁵ Chitty, *Towards A New Education System: The Victory of the New Right?* p. 63. The reference is to an interview of Callaghan conducted by Ted Wragg for the BBC Radio 4 programme *Education Matters*.
⁶⁶ Donoughue, *Prime Minister*, p. 110.

⁶⁷ Callaghan, *Time and Chance*, pp. 408–9.

⁶⁸ *Education in Schools: A Consultative Document* (July 1977), Cmnd 6869, p. 8.

⁶⁹ Chitty, *Towards A New Education System. The Victory of the New Right?*, pp. 87–92. See also James Callaghan, *Time and Chance*, p. 410.

what used to be expected in, for example, a good grammar school'.⁷⁰ *The Times* nicely dubbed the memorandum 'The Department's Black Paper'.⁷¹

The most celebrated public statement of this more hard-headed approach to education was a speech which James Callaghan delivered at Ruskin College, Oxford on 18 October 1976. Without ostentatiously turning his back on the quest for equality, Callaghan changed the subject of the educational debate.⁷² He insisted on the need for more rigorous educational standards, for greater monitoring and accountability of teachers, for increased concentration on the basic skills of literacy and numeracy, and for giving greater priority to technical, vocational and practical education. Gathering his '*Black Paper* cloak around him',⁷³ he sympathised with 'the unease felt by parents and teachers about the new informal methods of teaching 'which seem to produce excellent results when they are in well-qualified hands but are much more dubious in their effects when they are not'.⁷⁴

The prime minister asked the DES to draw up a Green Paper exploring some of the themes raised in his speech. Donoughue later complained that the response represented 'Whitehall at its self-satisfied, condescending and unimaginative worst'.⁷⁵ The draft paper did not arrive in Downing Street until June 1977, and it was thin in content and complacent in tone, a celebration of established practice which said little on standards or discipline. For all Donoughue's reservations, however, the Green Paper did include some pretty hard hitting stuff about making education more relevant to industry and persuading teachers to take more note of the varying capacities of their pupils.⁷⁶

At the same time, the great debate on education enormously strengthened the hand of a hitherto obscure body, the Assessment of Performance Unit (APU). Set up in 1974, the APU was formally part of the DES, reporting to an under-secretary and, through him, to the permanent secretary and government ministers, but it was co-headed by a senior HMI and sub-contracted much of its work to the NFER.⁷⁷ The APU was originally intended to monitor the supposed under-achievement of children from ethnic minorities: its creation was announced in a 1974 White Paper, *Educational Disadvantage and the Educational Needs of Immigrants*, and its original terms of reference emphasised the identification of under-achievement.⁷⁸ But from the first many senior people in the DES had rather grander plans for the Unit. In the early 1970s officials were increasingly worried by the fact that they were held

⁷⁰ For a summary, see Chitty, *Towards a New Education System. The Victory of the New Right?* pp. 74–81.

⁷¹ *Ibid.*, p. 83.

⁷² Stuart Maclure, 'Beyond the Education Reform Act', *Policy Studies* Vol. 11, No. 1 (Spring 1990), p. 6.

⁷³ *The Times Educational Supplement*, 10 October 1976, p. 1.

⁷⁴ Chitty, *Towards a New Education System. The Victory of the New Right?*, p. 72.

⁷⁵ Donoughue, *Prime Minister*, p. 112.

⁷⁶ Department of Education and Science, *Education in Schools. A Consultative Document* (1977) (Cmnd 6869) (Green Paper), p. 2.

⁷⁷ For details on the relationship between the Unit and other educational bodies, see, Caroline Gipps and Harvey Goldstein, *Monitoring Children. An Evaluation of the Assessment of Performance Unit* (1983), pp. 1–3, 149–55.

⁷⁸ *Ibid.*, p. 23.

responsible for educational results yet lacked any say over the content of the curriculum.⁷⁹ They were also sensitive to the accusation that standards were falling, as grammar schools were phased out and the 11-plus ceased to exercise its disciplinary influence on the primary school curriculum, and that the world of education was accountable to no one. If standards really were falling, they wanted to be able to lever them back up; if educational decline was just a media myth, they wanted to be able to quote facts and figures; and whatever was happening to standards, they wanted to make educationalists more accountable to voters.⁸⁰

The Ruskin speech, together with the furore over the William Tyndale school, ensured that the more grandiose vision of the APU prevailed.⁸¹ The Unit rapidly expanded its brief from examining disadvantage to assessing the educational system as a whole, beginning to monitor performance in maths in 1978, language in 1979, science in 1980 and foreign language in 1983.⁸² The Unit found cross-party support for its activities, enabling the Labour Party to claim that it was responding to popular worries about standards and appealing to the Conservative Party's belief in testing in basic subjects. The 1979 Conservative manifesto devoted almost all of its brief discussion of education to the APU:

We shall promote higher standards of achievement in basic skills. The government's Assessment of Performance Unit will set national standards in reading, writing and arithmetic, monitored by tests worked out with teachers and others and applied locally by educational authorities.⁸³

Predictably enough, the Unit flourished under Mrs Thatcher, laying the foundations for a national curriculum monitored by regular examinations.

Through a combination of plain speaking and backroom wire pulling, Callaghan and Donoughue succeeded in reversing the trend in educational policy-making. Ideas and policies ratcheted to the right. Shirley Williams, the Secretary of State for Education and Science, was goaded into adopting a more cautious approach to education. She wanted to give the comprehensive system time to settle down, arguing that 'there is nothing that the educational system needs more than a chance to build on what has happened and not to be thrown into disarray once again'.⁸⁴ She suggested that child-centred education had turned into a trap for less able or less experienced teachers who applied the freer methods uncritically or who failed to plan the options offered to children and monitor individual progress systematically.⁸⁵ She even tried to encourage more differentiation within the

⁷⁹ *Ibid.*, p. 150.

⁸⁰ *Ibid.*, pp. 4-7.

⁸¹ *Ibid.*, p. 9.

⁸² *Ibid.*, p. 17. The NFER designed the tests except those for science, which were the work of Leeds University and the Chelsea College, London.

⁸³ Quoted in *ibid.*, p. 9.

⁸⁴ Department of Education and Science. *Comprehensive Education. Report of a Conference Held at the Invitation of the Secretary of State for Education and Science at the University of York on 16 and 17 Dec. 1977* (HMSO 1978), Introduction, p. iv.

⁸⁵ *Education in Schools: A Consultative Document* (July 1977), Cmnd 6869, p. 8.

comprehensive system. Writing to Dennis Healey in March 1977, she argued that 'I hope in the future, as some schools begin to specialise in particular subjects such as sciences or languages, that parents will be allowed to choose schools for their children to attend on this basis'.⁸⁶ To Tony Benn this all smacked of an attempt to revive Cyril Burt's educational theories.⁸⁷

Margaret Thatcher and 'this equalisation rage'

Left-wing defensiveness encouraged right-wing radicalism. No longer content just with defending threatened grammar schools, the *Black Paper* group began to produce elaborate plans to make all schools more consumer-orientated and examination-driven, through a combination of a core curriculum and pupil-driven funding. Calls for a root-and-branch reform of the post-war welfare state (including the educational service) became increasingly popular with constituency parties. Norman St John Stevas reflected this mounting radicalism in his speech to the party faithful in May 1977:

Variety and flexibility implies different kinds of school and a continuing process of assessment which will sometimes lead to selection for schools and sometimes to selection inside schools. You cannot teach all children in the same way and in the same kind of school.⁸⁸

Margaret Thatcher consequently had no shortage of ready-made educational policies. She accepted the Callaghan agenda: more central control of the curriculum, greater teacher accountability, closer links between schools and industry, an increased emphasis on vocational education.⁸⁹ But she also sympathised with the emerging new right blueprint: increased competition, greater differentiation and even the reintroduction of selection.

Reintroducing selection by ability was a particular passion with the Thatcherite clique. Mrs Thatcher liked to claim that she had no truck with 'this universal comprehensive thing'.⁹⁰ In 1983 she recalled her earlier frustration as education minister: 'There was a great battle on. It was part of this equalisation rage at the time, that you musn't select by ability. After all, I had come up by selection by ability. I had to fight it. I had a terrible time.'⁹¹ Sir Keith (now Lord) Joseph, her intellectual mentor and education minister between 1981 and 1986, shared her enthusiasm for selection and differentiation: 'There should be differentiation within the curriculum for variations in the abilities and aptitudes of pupils. This is

⁸⁶ Quoted in Chitty, *Towards A New Education System. The Victory of the New Right?*, p. 156.

⁸⁷ Tony Benn, *Against the Tide. Diaries 1973-76* (1989), p. 629.

⁸⁸ Quoted in Knight, *The Making of Tory Education Policy*, p. 121.

⁸⁹ Donoughue, *Prime Minister*, p. 113.

⁹⁰ Quoted in Clyde Chitty, *Towards a New Education System. The Victory of the New Right?*, p. 196.

⁹¹ Quoted in Hugo Young, *One of Us*, p. 68.

a task that has to be tackled within each school as well as between schools where this is relevant.⁹²

Given her hostility to 'this equalisation rage', Mrs Thatcher took a remarkably long time to get around to reforming education. Her decision to appoint Mark Carlisle, a moderate with little interest in education, rather than Rhodes Boyson, a *Black Paper* activist, as her first minister of education signalled her willingness to bide her time.⁹³ Her first administration devoted little energy to education, and her Policy Unit had no remit to tamper with the subject until 1982.⁹⁴ At first, practical achievements were minimal. The Education Act of 1980 made it easier for parents to send their children across administrative boundaries and introduced the Assisted Places Scheme (subsidies to help poorer children leave the public for the private sector). But the first measure made little practical difference and the second benefited no more than 1 per cent of the age group, with a disproportionate share of the largesse going to cash-strapped middle-class parents such as clergymen and widows.⁹⁵ Though a few grammar schools were reprieved, the drift towards comprehensivisation continued.

The radical agenda re-emerged when – much to Mrs Thatcher's surprise – Keith Joseph chose to move to education rather than one of the more glamorous departments. Sir Keith found every corner of the educational world in trouble: low-quality teachers, ill-motivated pupils, decaying schools, wretched libraries, imperious local authorities and a chaotic curriculum. He also found the educational profession permeated by an anti-capitalist culture, contemptuous of commerce, hostile to industry, infatuated with the state.⁹⁶ As well as raising standards, he wanted to change the ethos of intellectual life, increasing the status of business and enterprise, reasserting the importance of excellence and achievement, and turning education into an instrument of market-driven regeneration.

Sir Keith tried to introduce more differentiation into a curriculum which, he felt, tended to treat children as a mass, endowed with the same abilities and inspired by similar interests. He was particularly concerned to make comprehensive schools more relevant to the bottom 40 per cent of the ability range.⁹⁷ Force-feeding non-academic children with pseudo-academic courses would only lead to alienation and rebellion: instead they should be motivated by studying technical and pre-vocational subjects. To achieve this aim, he introduced two important innovations

⁹² Quoted in Chitty, *Towards a New Education System. The Victory of the New Right?*, p. 158.

⁹³ Boyson had to be content with a job as Carlisle's under-secretary.

⁹⁴ N. Wapshott and G. Brock, *Thatcher* (1983), p. 104.

⁹⁵ Geoff Whitty, John Fitz and Tony Edwards, 'Assisting Whom? Benefits and Costs of the Assisted Places Scheme' in Andy Hargreaves and David Reynolds, *Education Policies: Controversies and Critiques* (Lewes, 1989), pp. 138–60. See also Brian Simon, *Education and the Social Order* (1991), pp. 475–6.

⁹⁶ See, for example, Keith Joseph, *Reversing the Trend. A Critical Reappraisal of Economic and Social Policies* (1975), p. 61.

⁹⁷ For example LAPP (Lower Attaining Pupils' Programme) and TVEI (Technical and Vocational Education Initiative), which he dreamt up with his friend David Young.

in quick succession: the Technical and Vocational Education Initiative (TVEI) in November 1982 and the Lower Achieving Pupil Project in January 1983. TVEI was intended as a harbinger of much more radical reforms. The product of clandestine planning with Mrs Thatcher and David (now Lord) Young, a Joseph protégé⁹⁸ who was then Chairman of the Manpower Services Commission (MSC), it handed control of vocational education for 14- to 16-year-olds to the MSC, injecting more differentiation into the curriculum, putting the DES on the defensive, and creating the framework for a much more ambitious policy.⁹⁹

The 1983 election victory re-energised the Tory right. Encouraged by an opinion poll which indicated popular support for the return of the grammar schools, and goaded by sixty Tory MPs who signed a parliamentary motion favouring selection, Joseph began to plan a major structural transformation of education. Several Tory-controlled local authorities flirted with selection. In September 1983 the Director of Education at Solihull Metropolitan Council proposed to turn two comprehensive schools into grammar schools, selecting pupils on the basis of a combination of longitudinal assessments and objective tests.¹⁰⁰ Shortly afterwards, Berkshire and Wiltshire planned to extend their existing selection procedures.

Much to the right's dismay, these plans met with vociferous opposition. In Solihull, a 'non-political' pressure group, Solihull Parents for Educational Equality, was rapidly organised. Months of concerted lobbying – letters to councillors, MPs and the media, demonstrations outside the town hall, a spate of noisy public meetings – forced the council to drop its scheme in February 1984. Activists were refreshingly open about their reason for opposing selection: they had bought expensive houses in certain areas in order to ensure that their children went to socially exclusive and academically rigorous schools. Selection would introduce uncertainty into their carefully-laid plans for passing on their advantages to their children; it would also mean importing scholarship winners from the less desirable areas of the borough.¹⁰¹ Everywhere that a return to selection was mooted, activists came up with similar objections. The message to the Conservative Party was clear: middle-class parents prefer to see school places allocated on the basis of house prices rather than examination results. Interviewed on television, Joseph reluctantly dropped selection for differentiation: 'If it be so, as it is, that selection between schools is largely out, then I emphasise that there must be differentiation within schools.'¹⁰² Differentiation became the cornerstone of DES policy,

⁹⁸ David Young, *The Enterprise Years. A Businessman in the Cabinet* (1991 edn), pp. 31–2.

⁹⁹ Young had originally planned to set up a network of technical schools, modelled on Israeli ORT schools. See Young, *Enterprise Years*, pp. 95–100.

¹⁰⁰ Geoffrey Walford and Sian Jones, 'The Solihull Adventure: an Attempt to Reintroduce Selective Schooling', *Journal of Education Policy* Vol. 1, No. 3 (1986), p. 239.

¹⁰¹ Walford and Jones, 'The Solihull Adventure', pp. 246, 251–2. The authors also point out that the pro-selection lobby handled their case lamentably.

¹⁰² Quoted in Chitty, *Towards a New Educational System*, p. 159.

reiterated in official publications such as *Better Schools*: 'There should be careful differentiation: what is taught and how it is taught need to be matched to pupils' abilities and aptitudes. It is of the greatest importance to stimulate all pupils, including the most and least able ...'¹⁰³

By the end of the second term, however, it looked as if even this second best strategy had failed. Many right-wingers regarded the replacement of a two-tier exam at 16-plus with the unified GCSE as the triumph of the comprehensive principle in the curriculum. The 1986 Education Act was a messy piece of legislation, the creation of inchoate back-bench resentments rather than co-ordinated national policy.¹⁰⁴ When Joseph resigned in May 1986, driven out by teacher strikes and middle-class discontent, it seemed as if vested educational interests had triumphed.

The triumph proved illusory. Mrs Thatcher wanted reform of the welfare state to be the *leit motif* of her third administration. Taxes and nationalised industries had been dealt with in the first two administrations. Now it was the turn of the public service providers.¹⁰⁵ In the run up to the election Mrs Thatcher repeatedly hinted that she was contemplating radical educational policies, including direct-grant schools and vouchers.¹⁰⁶ In 1986 she instructed her policy unit, headed by Brian Griffiths, to draw up a blueprint for educational reform.¹⁰⁷ At about the same time, right-wing think tanks and pressure groups, frustrated by the inertia of the Joseph years, began to focus on education, excoriating the so-called education establishment and producing dozens of plans for reform, including 'crown' schools, magnet schools, opting out, financial delegation and open enrolment.¹⁰⁸ To ensure that these ideas were turned into practical policies, Mrs Thatcher replaced Keith Joseph with Kenneth Baker. Baker was not an ideological soulmate like Joseph – his earliest mentor had been Edward Heath – but he had a formidable reputation for cultivating friends in the press and pushing tricky legislation through parliament.¹⁰⁹

Baker turned a rag-bag of ideas, some based on studies commissioned by Keith

¹⁰³ Department of Education and Science, *Better Schools* (1985) (Cmnd 9469), para. 45.

¹⁰⁴ Cf. Ken Jones, *Right Turn. The Conservative Revolution in Education* (1989), p. 19.

¹⁰⁵ Hugo Young, *One of Us*, p. 521.

¹⁰⁶ See Richard Johnson, 'A New Road to Serfdom? A Critical History of the 1988 Act' in Centre for Cultural Studies, *Education Limited* (1992), pp. 59–60 for contemporary quotations.

¹⁰⁷ For an insider's view of the policy unit under Thatcher, see David Willetts, 'The Role of the Prime Minister's Policy Unit', *Public Administration* Vol. 65 No. 4 (Winter 1987), pp. 443–54.

¹⁰⁸ See, for example, Caroline Cox and Roger Scruton, *Peace Studies. A Critical Survey* (Institute for European Defence and Strategic Studies, 1984); Adam Smith Institute, *Omega Report. Education Policy* (1984); R. Scruton, A. Ellin-Jones and D. O'Keefe, *Education and Indoctrination* (Education Research Centre, 1985); A. Seldon, *The Riddle of the Voucher* (Institute of Economic Affairs, 1986); No Turning Back Group of MPs, *Save Our Schools* (Conservative Political Centre, 1986); Hillgate Group, *Whose Schools? A Radical Manifesto* (1986) and *The Reform of British Education* (1987); Stuart Sexton, *Our Schools. A Radical Policy* (Institute of Economic Affairs, 1987); and Anthony Flew, *Power to the Parents* (1987).

¹⁰⁹ S. Maclure, *Education Re-formed: A Guide to the Education Reform Act* (Sevenoaks, 1988), p. 166.

Joseph, some generated by Brian Griffiths in the Policy Unit, some dreamt up by think tanks such as the Centre for Policy Studies, some outlined by Nigel Lawson, the Chancellor of the Exchequer, into a legislative programme.¹¹⁰ The 1988 Education Act represented the triumph of the radical right. It created a national curriculum – the first in English history – and reinforced it with regular testing at 7, 11, and 14. It promoted the Secretary of State from the senior partner into the managing director of the educational service, and relegated the local educational authorities to the role of monitors. It tried to make schools more accountable, by forcing them to publish the results of national tests, and more businesslike, by giving them control of their budgets. Above all, it injected an internal market into school funding, making a school's income dependent on the number of pupils it attracted and effectively turning each pupil into an educational voucher. To weaken the comprehensive system still further, it gave further encouragement to a variety of new kinds of schools: City Technology Colleges which concentrated on vocational subjects and relied partly on industrial sponsorship, magnet schools which specialised in particular disciplines, and grant-maintained schools which opted out of local government control.

The 1988 Act is introducing much more competition into state education: and competition is inexorably leading to the reintroduction of selection. Not only are schools competing for grant-bearing children: parents and children are competing for school places. Successful schools are having to turn away some children – partly because they fear that over-expansion will destroy their characters and partly because they want to boost their academic reputations by choosing the best students. Much of the legislation since 1988 has been aimed at making it easier for schools to establish their own identities, even if this means selecting pupils. The main problem for successful schools is not *whether* to select but *how*. The 1988 Act will not reintroduce the binary line between grammar schools and secondary moderns: instead it will create a complex and elastic hierarchy, which will be much more difficult to challenge than the traditional selective system.

Psychometry versus Thatcherism

Sir Cyril Burt would have welcomed a number of features of the 1988 Education Act, particularly its hostility to egalitarianism, its emphasis on vocational subjects, its enthusiasm for regular testing, and its support for differentiation and selection. But he would have found rather more to criticise than to admire.

He would have criticised the Act for perpetuating the illusion that all children have similar intellectual capacities. The different levels of the national curriculum

¹¹⁰ Hugo Young, *One of Us* (1991 edn), pp. 522–4; Nigel Lawson, *The View from Number 11. Memoirs of a Tory Radical* (1992), pp. 606–11. Hammering out a policy was far from easy. For examples of disagreements between Baker and Griffiths, see Young pp. 523–4.

represent only a modest attempt to cater for variations in ability. Yet, according to psychometric theory, children differ enormously in their innate abilities. In a random class of 10-year-olds the most able may have a mental age of 15 and the least able a mental age of 5. The national curriculum is too easy for the able and too difficult for the dull. The able coast through school without being stretched while the dull are discouraged, and perhaps permanently alienated. Burt used to like to quote the house master in Kipling's *Stalky and Co.*: 'You can't teach a calf the violin and, if you try, the creature's apt to kick out.' A better solution (at least according to psychometric theory) would have been several different national examinations, designed to cater for children with different abilities and different occupational destinations. 'So infinitely varied is our individuality', Sidney Webb once reminded us, 'that, in matters of social provision as in tailoring, the wholesale supply, when we come more narrowly to scrutinise it, can be nothing better than a series of misfits.'¹¹¹

Burt would have had little truck with injecting market forces into education. Market forces distribute opportunities according to parental preferences, with sophisticated and well-informed parents securing better opportunities for their children than unsophisticated and uninformed parents. But regression to the mean – the tendency of able parents to have children who are slightly less able than themselves and of dull parents to have children who are slightly more able than themselves – means that such a system may be as wasteful as it is unjust, giving dull middle-class children opportunities denied to bright working-class children. The essence of psychometric theory, on the other hand, is that the abilities of children, rather than the preferences of parents, ought to determine the distribution of educational opportunities. Schools should choose children, not parents schools.

To add to his disappointment, Burt would have found policy towards the mentally handicapped naïve in conception and fumbled in execution. The government pays lip service to integration, but continues to allow practical policy to be dictated by institutional convenience and bureaucratic penny-pinching.

On the surface, government policy is in line with the progressive consensus of the 1960s. The Education Act of 1981 embodied the main recommendations of the 1978 Warnock Committee on children with special educational needs, bringing official English policy in line with countries such as the United States and Sweden. This changed both the formal definition of backward children and the official guidelines for educating them. The 1944 Act talked in terms of eleven carefully defined kinds of mental and physical handicaps. (New handicaps were subsequently added in a rather piecemeal and pragmatic fashion.)¹¹² The 1981 Act (which came into force in 1983) dismissed the idea of permanent handicaps and substituted

¹¹¹ Sidney Webb, 'Secondary Education', in Brennan (ed.), *Education for National Efficiency*, p. 132.

¹¹² Christine Heward and Mel Lloyd-Smith, 'Assessing the Impact of Legislation on Special Education Policy: An Historical Analysis', *Journal of Education Policy* Vol. 5, No. 1 (1990), pp. 25–9.

instead the notion of a continuum of special educational needs. Children with special educational needs might include any children who periodically experienced learning difficulties or required special help from their teachers – that is up to 20 per cent of the age group. The Act instructed local authorities to teach such children in ordinary schools, if at all possible, and made special education the responsibility of every teacher in every school.¹¹³

Not for the first time in the history of special education, fine words did not automatically produce enlightened policies.¹¹⁴ In 1986 Will Swann searched in vain for any clear evidence that integration was being implemented systematically.¹¹⁵ In 1992 the Audit Commission, though a little more optimistic, noted that the trend towards integration was slow, and marred by wide regional variations.¹¹⁶ Most special school teachers continued to plan their courses and refine their techniques on the assumption that segregation is a fact of life.¹¹⁷ Mary Warnock explains this tension between government rhetoric and local reality in terms of cash: 'what really made it inevitable that the 1981 Act should be more or less stillborn was the financial crisis. This gave birth to a new ideal in education, that of cost-effectiveness.'¹¹⁸ But muddled thinking and vested interests also played their part in aborting the policy.

The 1981 Act left many questions unanswered, doing too little to define special education needs, or to specify the proper relationship between schools and local authorities.¹¹⁹ To make things worse, the DES failed to put its full weight behind integration. The Department neglected to back up the legislation with a detailed timetable or a clear set of guidelines; above all, it failed to provide LEAs with enough incentive to turn bold ideas into practical policy.¹²⁰ In the mid-1980s it found itself almost wholly preoccupied with preparing for a major reform of the

¹¹³ Rea Reason, Peter Farrel and Peter Mittler, 'Changes in Assessment', in Noel Entwistle (ed.), *Handbook of Educational Ideas and Practice* (1990), pp. 1,023–34.

¹¹⁴ See Heward and Lloyd-Smith, 'Assessing the Impact of Legislation on Special Education Policy', pp. 21–36.

¹¹⁵ Will Swann, 'Trends in Special School Placement to 1986: Measuring, Assessing and Explaining Segregation', *Oxford Review of Education* Vol. 14, No. 2 (1988), pp. 139–61.

¹¹⁶ Audit Commission, *Getting in on the Act. Provision for Pupils with Special Educational Needs: the National Picture* (HMSO, 1992), p. 27.

¹¹⁷ See in particular Derek Baker and Keith Bovair (eds.), *Making Special Schools Ordinary? Volume 1. Models for the Developing Special School* (Lewes, 1989), and *Volume 2. Practitioners Changing Special Education* (Lewes, 1990). See also the remarks by John Fish in Baker and Bovair (eds.), *Making the Special School Ordinary. Vol 1*, p. xi.

¹¹⁸ Mary Warnock, 'Equality Fifteen Years On', *Oxford Review of Education* Vol. 17, No. 2 (1991), p. 148.

¹¹⁹ Audit Commission, *Getting in on the Act. Provision for Pupils with Special Educational Needs: the National Picture* (1992), esp. pp. 13–16; Audit Commission, *Getting the Act Together. Provision for Pupils with Special Educational Needs: A Management Handbook for Schools and Local Education Authorities* (1992), p. 5.

¹²⁰ Will Swann, 'Trends in Special School Placement to 1986: Measuring, Assessing and Explaining Segregation', *Oxford Review of Education* Vol. 14, No. 2 (1988), p. 156; Audit Commission, *Getting the Act Together*, p. 5.

whole educational system.¹²¹ LEAs were free to interpret the legal guidelines (which were enabling rather than prescriptive) in whatever way best suited their current priorities, past traditions, and current practices. Some gave statements to large numbers of children, others to a tiny minority. Many preferred mouthing platitudes to implementing integration.

Administrative neglect was compounded by professional hostility. Experts disagreed sharply over what integration actually meant.¹²² Many doctors and teachers felt that, whatever it meant, it was likely to be a bad thing.¹²³ Mainstream teachers, bristling at the extra work involved in integration, refused to take on handicapped children without special training or extra help.¹²⁴ (They might have quoted Cyril Burt's objections to integration with some sympathy: 'the teacher is doing a double duty. It is like asking a single shoe-maker not only to manufacture the boots and shoes for the whole neighbourhood, but at the same time to take charge of all the repairs.'¹²⁵) Remedial teachers worried that the government was using the new fashion as an excuse for cutting expenditure on handicapped children. They pointed out that remedial classes had provided handicapped children with manageable tasks and careful supervision, worried that the less structured atmosphere of mixed-ability classes might leave them isolated and demoralised, and hinted that the government might be using the new philosophy as an excuse for cutting expenditure.¹²⁶

The 1988 Education Act made policy towards children with special educational needs still more confused. The legislation was based on three key principles: encouraging competition by funding schools on the basis of the number of children they attract, empowering parents by forcing schools to publish their results in national examinations taken at 7, 11, 14 and 16, and devolving decision making by giving schools control of their own budgets. Each idea has worrying implications for handicapped children.¹²⁷ Competition may encourage schools to improve their published examination results by rejecting less able pupils – or at least by exempting them from the national curriculum and the associated examinations.¹²⁸ Pupil-driven funding may give them an added incentive to exclude children who bring more problems than resources – that is those with learning difficulties and emotional problems. Local management of schools may reduce the amount of funds

¹²¹ Heward and Lloyd-Smith, 'Assessing the Impact of Legislation on Special Education Policy: An Historical Analysis', p. 21.

¹²² Philippa Russell, 'The Education Reform Act. The Implications for Special Educational Needs' in Michael Flude and Merrill Hammer, *The Education Reform Act 1988. Its Origins and Implications* (Lewes, 1990), p. 215. ¹²³ Warnock, 'Equality Fifteen Years On', p. 147.

¹²⁴ Sally Tomlinson, 'Special Educational Needs', in Anthony Hartnett and Michael Nash (eds.), *Education and Society Today* (Lewes, 1986), p. 58. ¹²⁵ Burt, *Backward Child*, p. 576.

¹²⁶ A. V. Kelly, 'Mixed-Ability Teaching in the Secondary School', Noel Entwistle (ed.), *Handbook of Educational Ideas and Practice* (1990), pp. 794–802.

¹²⁷ See, for example, *The Independent*, 22 August 1991; *The Times Educational Supplement*, 7 May 1991; *Education*, 14 June 1991; *The Observer*, 14 July 1991. But cf. Audit Commission, *Getting in on the Act*, p. 32. ¹²⁸ Sections 4, 17, 18 and 19 of the Act allow them to do this.

which Local Education Authorities have to spend on resources such as the School Psychological Services.¹²⁹ Widespread opting out of local authority control may make it almost impossible to run regionally based back-up services. An internal market in education provides few safeguards for handicapped children.

Above all, Burt would have worried that the Conservatives are reintroducing selection without ensuring that it is fair and accurate – that the lottery of the comprehensive school is being replaced by the lottery of the market. He would have argued that the only way to solve the problem of competition for places in good schools is intelligence testing: other methods are riddled with bias. Teachers' reports and personal interviews usually favour middle-class children, mistaking polish and self-confidence for ability. Intelligence tests – or so he would have argued – have three compelling advantages: they are more impersonal, more objective and more reliable than traditional methods of selection. They measure aptitudes rather than achievements – capacity to profit from future instruction rather than previous educational experience. They are highly accurate in predicting success in a wide range of mental tasks. Money spent educating children with high IQs is unlikely to be money wasted. They provide a standardised way of comparing one child's performance with the performances of other children in its age group. Because they are impersonal and objective, they do not discriminate for or against children on the ground of sex, race or class; and because they are less culture-bound than other examinations they 'read through' the veneer of social class background, revealing talents in children from uneducated and uncultured families and exposing weaknesses in children from educated and cultured homes.

The revival of the cult of measurement and merit was undoubtedly a highly successful exercise in intellectual revisionism. Directed against two shibboleths of the sixties – egalitarianism and environmentalism – masterminded by a small and embattled group of academics, and greeted with intense hostility, the revival nevertheless commanded some public support and political sympathy. It appealed to a public alienated by university radicals, an intelligentsia weary of sociological clichés and millennial prophecies, and a political class worried by public spending and popular morality. In particular, Jensen's 1969 article succeeded in changing the direction of intellectual debate. Having been long neglected, population genetics, individual differences, and mental measurement once again became central to arguments about social problems and public policies. Even those who loathed Jensen's conclusions were forced, in combating him, to learn some of his methods.

The new hereditarians rescued psychometry from the worst fate which can befall any scientific discipline: indifference and neglect. But they did so at the cost of associating it, in the lay mind at least, with political conservatism, educational

¹²⁹ See Warnock, 'Equality Fifteen Years On', p. 151 for a pessimistic view of the Act. But cf. Philippa Russell, 'The Education Reform Act. The Implications for Special Educational Needs', in Flude and Hammer, *The Education Reform Act 1988. Its Origins and Implications*, pp. 207–23.

traditionalism, and even racial bigotry. If they revived interest in psychometry among experts, they also repelled an influential section of educated opinion. Their insistence that group differences in IQ – and particularly differences between racial groups – might well have a genetic basis aroused intense opposition. People who knew nothing about behavioural genetics became instant converts to the environmentalist position: confronted with unpalatable conclusions they rejected the whole argument as repugnant. The news media amplified and endorsed the anti-hereditarian case. Both Leon Kamin's *The Science and Politics of IQ* and Stephen Jay Gould's *The Mismeasure of Man* received almost universally favourable, and often laudatory, reviews: polemical arguments on highly contested issues were presented as unquestioned orthodoxies. The television frequently lambasted the "IQ myth", denouncing tests as scientifically worthless and politically reactionary. The *New York Review of Books* published uniformly critical reviews of intelligence testing between 1975 and 1981. It also gave the impression that the only respectable debate on the subject was between different versions of the Marxist orthodoxy, as Stephen Jay Gould played Mutt to Richard Lewontin's Jeff.

Unfortunately, the hereditarians made substantial as well as rhetorical sacrifices. The psychometrists believed in social mobility, scientific management, and technological efficiency. They naturally belonged to a progressive alliance, committed to social justice and rational administration and opposed to tradition, allegiance and religion. They were remarkably insensitive to the role of the school as a transmitter of cultural tradition, and repeatedly sided with the moderns in the war against the classics. Yet in the 1970s they were forced into an alliance with conservative politicians, who believed in defending class hierarchy, and educational traditionalists, who preferred classical culture to scientific innovation. They modified their ideas in consequence, emphasising their commitment to selection and examinations, but keeping silent about their belief in progressive, child-centred education.

Yet, even if the meritocratic case had not been tainted with right-wing politics, it is unlikely that it would have commanded undivided support. The three main sections of industrial society – the economy and administration, the political system, and the culture – are governed by distinct and often antagonistic principles.¹³⁰ The economy and administration tend to be meritocratic. Regulated by the demands of economic efficiency, they aim at the rational allocation of human resources. The political system is egalitarian and democratic, granting everyone a right to political representation; and the post-war 'revolution in entitlements' has constantly extended popular demands for participation in decision-making.¹³¹ The culture is increasingly libertarian. It values self-expression, self-determination, and

¹³⁰ I owe this point to Daniel Bell, *The Cultural Contradictions of Capitalism* (1976).

¹³¹ Cf. Max Weber: 'democracy fears that a merit system and educational certificates will result in a privileged "caste"'. Hence, democracy fights against the special-examination system'. H. H. Gerth and C. Wright Mills (eds.), *From Max Weber, Essays in Sociology* (1977 edn), p. 240.

Measuring the mind

the pursuit of pleasure. Individual preferences, rather than personal responsibility, are becoming the shibboleths of the 'good society'. The educational system, since it has the threefold duty of preparing children for the labour market, educating future voters, and dealing with the citizens of the consumer society, is inevitably at the point of friction between these principles. In recent years the meritocratic principle has lost ground against its competitors. Economic and administrative élites have been confronted with mounting demands that their membership should be 'representative' of the composition of the population as a whole, while employees are increasingly reluctant to confine self-expression and hedonism to the non-working hours. Yet there must be limits to the retreat of the meritocratic principle. The demands of bureaucratic organisation and economic efficiency will ensure its future.

Conclusion

Educational psychology made rapid advances in the decades after 1880. In the 1880s the educated possessed only a rudimentary knowledge of children's mental abilities and emotional development. What passed for science rested on bizarre and often harmful assumptions. The Child Study movement based its case on two easily discredited arguments: that the development of the child recapitulated the development of the race, and that the body was a mirror of the mind. Psychologists and doctors had no feasible definition of 'intelligence', and no reliable method for measuring what they failed to understand; Francis Warner estimated children's mental powers by measuring the size of their skulls until well into the 1890s.

And yet by the 1920s the subject had been reorganised on entirely new foundations. Psychologists organised themselves into a professional community and won a recognised place in a hostile academic world and an impoverished school system. They developed and adapted group and individual intelligence tests, which were sophisticated, if controversial, measuring devices, and produced a voluminous, and increasingly technical, body of literature and evidence. They debated the nature and meaning of 'intelligence' at an impressive level of sophistication, with three main schools advancing different definitions of the term, and they investigated backward, delinquent and neurotic, as well as normal children; at the same time they furnished government committees with important evidence on the mental and emotional development of schoolchildren. They also made significant contributions to such diverse areas as educational theory, political arithmetic, and statistical method. If many of the problems which haunted them – particularly national deterioration – seem arcane to us today, they do so partly because of the evidence and methods of these psychologists: they managed to discredit, by careful investigation, a number of ideas with which they had been closely associated, and they provided the sociologists with the statistical tools to finish the job.

They brought a sophisticated and more or less coherent philosophy to bear on their educational work. On most issues of substance they were at one until the early 1940s, arguing that people differed considerably in their intellectual abilities; that such differences were caused more by inheritance than by environment; and that it was possible to measure these differences with objective tests and allocate

educational resources and occupational positions accordingly. Granted, they disagreed passionately about the details of this position – about the precise weighting to be given to nature and nurture, about the efficacy of different tests, about whether *g* provided an *explanation* as well as a *description* of ‘intelligence’ – but such disagreements made sense only within a shared intellectual tradition. Two aspects of their educational philosophy are particularly noteworthy. They felt that education should be based on the developing needs of the child rather than on the demands of a fixed academic tradition; and they wanted to reform both the educational system and the social structure so that positions were allocated according to ability rather than connections. The *Quarterly Review*’s characterisation of the civil service reformers of the 1860s might well be applied to the psychologists of the 1920s and 1930s:

They are warm and enthusiastic, and cannot wait till the slow unseen breathings of public opinion shall have dried up the miasmata of jobbery. They have a new, patent, self-acting machine, which will do it all at once ... They find that all shortcomings of the public departments have arisen from abuse of patronage, and that the abuse of patronage has arisen from the hopes, fears, or loves of the human patron; therefore they seek a mechanical patron that has no hopes or fears, or loves.¹

Their target was not so much overt ‘jobbery’ as the much more subtle operation of cultural bias and educational privilege in educational and occupational selection. But they certainly felt that, in psychometric testing, they had found a ‘self-acting’ machine capable of eliminating bias and allocating limited resources on the basis of justice.

This passage points to one of the most persistent themes of this study: the intimate links between psychological thought and general questions of policy and politics. The Child Study movement reflected late-Victorian and Edwardian fears about racial deterioration and the multiplication of defectives. Francis Galton’s interest in innate variations in individual ability and his enthusiasm for improving the quality of the race through eugenics exercised a powerful influence over most of the leading psychologists. In particular, Cyril Burt’s pre-eminent position within the academic and educational establishment ensured that the Galtonian tradition continued to dominate psychological theory and research until after the Second World War. Despite the increasing sophistication, isolation and objectivity of psychological writing, the subject continued to have an overtly political content. A good deal of research between the wars was designed to test the eugenic hypothesis that ‘as a result of the differential fertility between the genetically superior professional classes and the genetically inferior lower classes’, the innate abilities of the race were declining, and R. B. Cattell even conjectured that mental deficiency was increasing at such a rate that the western nations were degenerating into races

¹ ‘Competitive Examinations’, *Quarterly Review* Vol. 108 (1860). Quoted in W. L. Guttsman, *The English Ruling Class* (1968), pp. 230–40.

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of 'sub-men'.² Even in 1949 the *Royal Commission on Population* argued that expert evidence on the correlation between high intelligence and small families 'tentative and inconclusive though it is', 'raises very serious issues' and encouraged the government to support 'further research into this and related problems'.³

Like most British intellectuals in this period, the psychologists relished their involvement in central policy-making and local decision-taking.⁴ They were happy to sit on committees, to appear as expert witnesses, to draft government reports, and to design tests for local authorities. From the first, they were willing to provide statistics and measurements as a tool for a more rational administration and to work out blueprints for curriculum and organisational reform. Even such a sophisticated book as Cyril Burt's *The Factors of the Mind* (1940) was intended to vindicate the practice of testing schoolchildren. If they were often frustrated in their careers, they were never, like some continental intellectuals, alienated from their society; on the contrary, they were enmeshed in the nation's administrative and educational machinery and involved in important policy-making. This involvement influenced both the style and the content of their work. It emphasised the virtues of clarity and simplicity of presentation: if they frequently intimated their technical expertise, they seldom made a simple point needlessly obscure. It ensured that they dealt with practical problems. They collected their facts and computed their statistics with a practical purpose in mind, and they hoped that their ideas would be used as levers of social reform. Above all, it forced psychology to turn itself into a practical technology before it had come of age as a theory and matured as a body of research.

Intelligence tests inevitably acquired a political resonance. Granted, the ideal of a rational calculus capable of placing children in schools on the basis of their natural aptitudes commanded support from both the left and the right. The psychologists themselves regarded their work as apolitical: as a conscious attempt to remove any subjective element from the allocation of national resources. Yet any attempt to rationalise the distribution of educational opportunities cannot help having political consequences. The psychometrists were inspired by a bundle of political anxieties: about the quality of the British population; about the recruitment of the gifted into the élite; about the encouragement of science and technology; and about the development of scientific management of the economy and the state. As their conservative critics emphasised, their work was designed to promote a particular type of society, individualistic, atomistic and mobile, hostile to established classes and traditional cultural practices. Even if the means for promoting this society were scientific (and many would claim that they were not), the idea that such a society was an ideal one was hotly contested.

These psychologists were preoccupied with 'guidance' and 'therapy' as well as with testing. Only after the Second World War did psychometry turn into an

² Raymond B. Cattell, *The Fight for Our National Intelligence* (1937), p. 2.

³ *Royal Commission on Population. Report*, p. 156.

⁴ Cf. Philip Abrams, *The Origins of British Sociology 1834-1914* (Chicago, 1968), pp. 3-195, *passim*.

inward-looking discipline, hostile to less rigorous approaches to mental phenomena. They wanted to guide children and adolescents into occupations which would suit both their intelligence and their temperaments; and they advocated the use of therapy to reconcile individuals to their appropriate social roles. They thought that they had identified yet another weakness in the free-market economy – its failure to regulate breeding and rationalise occupational recruitment and adjustment – and they suggested that the only solution was for the state to intervene in private life as well as in the economy. Their work highlights an important stage in the development of the British welfare state: the assumption of communal responsibility for the treatment of the mentally ill and for the promotion of mental as well as physical welfare. The rise of the school psychological services was involved in the last of three successive movements in the evolution of the public health services. Firstly, the initiatives which developed out of the sanitation investigation conducted in 1838 under the reformed Poor Law were concerned almost exclusively with environmental sanitation: with the impersonal and external aspects of health. Secondly, the preventative medicine campaign of the first quarter of this century shifted the emphasis from environmental to personal hygiene. Both the infant welfare and school medical services emphasised the importance of encouraging personal hygiene in order to prevent the possible onset of disabilities which interfered with education and the proper growth of the child. Thirdly, schools increasingly accepted responsibility for the mental as well as the physical health of school children, since successful teaching depended on the mental well-being of the child.⁵

The internal development of the psychological profession also had its political aspect. Science has a marked pecking order, in which the pure look down on the applied, the mathematical on the non-mathematical, the 'hard' on the 'soft'. Psychology stands low in this pecking order, and itself contains a similar pecking order, in which experimental scientists stand at the top and applied psychologists – educational, social, industrial, and clinical – stand at the bottom. In particular, the educational psychologist is contaminated by his contact with children and school-teachers.⁶ Such a lowly position in the status hierarchy affected the subject in a number of ways, ensuring that it recruited people by accident rather than design. Most educational psychologists would rather have studied another discipline and tended to model their subject on high-status professions, such as medicine, pure research, or statistical theory. It meant that those who succeeded within the subject tended to move on to other areas: to academic research in the case of Cyril Burt, to psychoanalytical therapy in the case of Susan Isaacs. It helped to starve the subject of research funds and academic opportunities. Above all, it encouraged the status-conscious to overcompensate by putting up an elaborate show of sophistication, even when their data could not justify it. English psychologists underpinned

⁵ *The Voluntary Mental Health Services. The Report of the Feversham Committee* (1939), pp. 177–8.

⁶ Liam Hudson, *Cult of the Fact* (1976), p. 54.

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everything they wrote about children with an elaborate body of statistics, perhaps to such an extent that they made greater contributions to the field of statistical method than to developmental psychology; continental psychologists indulged in philosophical speculation and logico-mathematical symbolism.⁷ Together with anxiety about the quality of the population, the quest for status probably had a determining influence on the subject's development.

If psychologists emphasised the quantitative side of their work out of scientific snobbery, educationalists tended to pick on it out of administrative convenience. Bent on ranking their pupils according to a single hierarchy of 'merit', they evaluated psychometry (often negatively) in terms of its ability to solve this traditional educational problem. Given this enthusiasm for classification, it is often easy to forget that intelligence tests involved a theory of mental development as well as a technique for ranking the members of a population. In a psychometric utopia the tests might be used to expose the unfolding aptitudes of individual children; in England, however, they were used to provide quick solutions to pressing problems.

As the mathematics of mental development became more sophisticated, so its sociological assumptions became more questionable. A rigorous mathematical model of the mind was not complemented by an interest in the social or political implications of 'merit'. Whereas Macaulay and Galton defined 'merit' as a combination of ability and character, the psychometrists tended to equate it exclusively with intelligence; and whereas Macaulay and Galton expected that men would prove their worth in the complex of tests which led to 'reputation', the psychometrists were increasingly willing to measure a child's worth in terms of his performance on a single test. As a result, IQ testers came to seem like the tailor on the island of Laputa, who computed Gulliver's altitude with a quadrant, then measured his various dimensions with a footrule and compasses, and after six days brought him 'a suit very ill made'.

So far the most influential attempt to explain the links between psychological theories and political interests has been the Marxist one.⁸ Marxists argue that psychologists worked (albeit unconsciously) to further the interests of an economic grouping: the professional middle class. Their social interests distorted their scientific arguments and turned them into ideologists of the capitalist status quo. In particular, intelligence tests and the theory of innate inequality of abilities which underpinned them, served both to justify an unequal social system and to disguise as rational a system of educational selection which was systematically biased towards the middle class.

⁷ *Ibid.*, p. 55.

⁸ Brian Simon, *Education and the Social Order 1940-1990*, pp. 156-60, *Education, Intelligence and Psychology* (1971), *The Politics of Educational Reform 1920-1949* (1974), pp. 240-50; Leon Kamin, *The Science and Politics of IQ* (Harmondsworth, 1977); Stephen Jay Gould, *The Mismeasure of Man* (1981), pp. 146-337; S. Bowles and H. Gintis, *Schooling in Capitalist America* (1976), p. 103; R. C. Lewontin, Steven Rose and Leon Kamin, *Not in Our Genes*, pp. 83-130.

Although this argument continues to attract articulate supporters, it faces several empirical and theoretical difficulties. Many middle-class professionals distrusted intelligence testing and preferred to put their faith in standard systems of educational and occupational selection. Some of the most sophisticated defenders of the established order denounced the psychometrists as closet revolutionaries, determined to break down the bonds of class and to dissolve the fabric of culture. The revolt against the selective system was led by the middle classes rather than the working classes, as middle-class parents found that their children did not have a guaranteed place at grammar school. On the other hand, until the 1950s the Labour movement contained an influential meritocratic wing, which saw in psychometry an instrument of social justice and political change.

In fact, intelligence testing had no fixed political or class constituency, and won support at different times from both the left and the right and from the middle classes and the working classes. It expressed the social aspirations of a status group rather than an economic class. Those who supported it did so because they shared similar educations, character structures, and cultural values rather than because they had common economic interests. The psychometrists appealed to three distinct social groups which were drawn together by common experiences and common values: working-class scholarship winners, middle-class professionals, and the intellectual aristocracy.

Several historians and sociologists have given an ingenious twist to the Marxian argument by emphasising the links between scientific thought, professional self-interest, and social control. Partly in reaction against a somewhat uncritical historical tradition, and partly in response to the writings of Michel Foucault, they have suggested that scientists adopt their arguments and methods to advance their professional interests and to extend their power over their clients.⁹ According to this argument psychology rapidly turned itself into a method of domination, as psychologists simultaneously asserted their claims to control their subjects and created a demand for their 'services'. Wherever this argument is not a pretentious statement of the obvious it is highly misleading. Although educational psychologists wanted to turn their discipline into a recognised profession, with its own body of experts equipped with distinctive methods and recognised areas of competence, they were often willing to act against their own long-term material interests. In producing standardised mental tests, they may have limited demand for their expert opinion; such tests could be mechanically applied by anyone with even the most rudimentary training. Their interest in eugenics owed more to concern for the

⁹ Nikolas Rose, *The Psychological Complex* (1984) and, for a summary, 'The Psychological Complex: Mental Measurement and Social Administration', *Ideology and Consciousness*, Vol. 5 (1979), pp. 5-68; Michael Ignatieff, *A Just Measure of Pain. The Penitentiary in the Industrial Revolution 1750-1850* (1978), pp. 219-20. For examples of this trend in related areas, see Michael Katz, *The Ironies of Early School Reform* (Cambridge, Mass., 1968); Andrew T. Scull, *Museums of Madness* (1979); Anthony M. Platt, *The Child Savers. The Invention of Delinquency* (Chicago, 1969); David Rothman, *The Discovery of the Asylum* (Boston, 1971).

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'community' than to professional self-interest. Since one of their main areas of expertise lay in classifying and training the handicapped, their interest lay in the multiplication, not the elimination, of the backward. They preferred the praise of their fellow scientists to power over their 'clients'. Wherever possible, they abandoned practical work with disadvantaged children for scientific abstractions. Above all, the followers of Foucault tend to dismiss all 'social problems' as the 'constructs of experts' – illusions in the minds of scientists rather than problems in the practical world. Yet educational psychology dealt with a general demand, generated in the schools, hospitals and homes, and tried to come to terms with the concrete problems of mental backwardness and personal maladjustment. Although their work was closely connected with issues of power and policy, the relationship between the two was highly paradoxical.

Burt and his allies were all committed meritocrats. Their work was the final and most elaborate manifestation of the liberal mission to reform admission into established institutions. They tried to apply to secondary-school selection a principle which Macaulay and Trevelyan had first developed in their reforms of the Indian and English Civil Service: the principle that positions should be offered to the most able man, on the basis of his performance in objective examinations. The impulse which inspired their work was reformist and liberal; the ideal which they looked to was a meritocracy, in which intelligence was the main criterion of merit; and the method which they used was the objective examination. For all that, the relationship between the political conception of merit and the everyday practice of intelligence testing was far from simple.

Rooted in a power struggle between the 'intellectual aristocracy' and the landed élite, the meritocratic ideal embodied an attempt to open established institutions to men of ability as well as men of good family. The intellectual aristocrats habitually interpreted their actions in abstract and universalist terms. Francis Galton tried to turn the ideal into a science, based on a statistical calculation of the inheritance of natural ability; his work represented a highly sophisticated version of what had originally been a social and political ethic. But ideas – particularly ideas which have been translated in to the abstract language of science – have a tendency to take on a life of their own, independent of the intentions of those who formulated them; and the 'psychology of individual differences' rapidly turned itself into a dynamic scientific research programme, based on Mendel's theory of genetic inheritance and equipped with a novel form of measuring instrument: the intelligence test.

Paradoxically, intelligence tests were first used in distributing social welfare rather than allocating social position. Binet and Simon succeeded in developing a scale of measurement which had eluded Galton; and their concern lay with the care of backward children rather than the promotion of able men. An attempt was made to regulate admission to grammar schools on the basis of 'objective tests'; but these tests were always balanced by more traditional methods, and the public schools and the older universities, which still dominated recruitment into the élite, hardly

noticed the existence of the technology of mental measurement. Established élites, even those which claimed to be meritocratic, preferred to employ selection systems which they had patented themselves, rather than to rely on 'objective' tests. The authorities were much happier using IQ tests to select the backward. An overtly 'political' idea was thus clothed in the concepts of science; and an attempt to capture power transformed into a technique for selecting and educating those who were least likely to possess power in any society, particularly a sophisticated one.

The political reputation of intelligence testing is also paradoxical. The fate of testing in England was bound up with the issue of secondary-school selection. When selection commanded widespread support, it was commended as an instrument of justice; when selection became controversial, it was denounced as a pseudo-scientific sham. Yet the implications of psychometric theory are highly ambiguous; and psychometrists disagreed among themselves on the merits of selection. If the theory which underlay IQ testing insisted that individuals differed in their innate abilities, it also argued that these differences were continuous, and that no sudden shift marked one group off from another. The theory undermined a popular environmentalism which suggested that, if the quality of teaching was good enough, children could all be taught to command a discipline; but it also discredited the idea that the deficient were qualitatively different from the normal, and should therefore be isolated in institutions. The psychometric position was more ambiguous: the difference in ability between those at the top and those at the bottom of the scale of abilities was so vast that similar treatment was impossible; yet nowhere could a hard line be drawn between one group and another; each merged into its neighbour by insensible gradations. The issue of selection needed to be decided by practical convenience as much as by psychological theory.

Psychometrists reacted to this ambiguity in several ways. They all condemned the idea that all 'sub-normal' children were alike, and should be educated together. Burt, for example, favoured creating classes in ordinary schools for the 'backward' or 'retarded': those children who could not keep up with their classes but who were not deficient. The Wood Committee, which relied heavily on psychological evidence, advocated a 'community care' approach to the deficient. But they disagreed over selection for the gifted, with Thomson opposing it and Burt supporting it. Despite Burt's well-publicised support for selection, it is clear that the connection between psychometry and selection is contingent rather than essential. The division between grammar schools and secondary modern schools was a legacy of history, not a creation of psychological theory. If psychologists provided tests to help to distinguish between those who could profit from grammar schools and those who could not, they did so because educationalists asked them to do so.

Whatever their disagreements, they all shared a Baconian belief in the value of science and the wisdom of experts. They hoped that the development of psychology might mark a new stage in man's struggle to master the natural world and

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emancipate himself from need. Base education on scientific principles, they argued, and efficiency would be ensured and prosperity multiplied. They wanted to change the curriculum as well as reform selection, to shape a new type of educated élite: scientifically trained experts rather than classically educated gentlemen. Their work was inspired by the ideal of a scientifically managed meritocracy, governed by an élite which was selected by objective tests and trained in science and technology. The ambivalent reception of their ideas in England thus reflects a wider ambivalence about the value of science in general, and the human sciences in particular.

They combined a passion for measurement with a commitment to child-centred education. They argued that the function of the school was not to impart a maximum of knowledge but to introduce children to successive phases of experience as they ripened for them; that children learn best by exploring the world and working on problems rather than by enduring rote-learning and mass instruction; that 'freedom of movement' and 'the play-way' are preferable to adult regimentation; and that each stage of education should be guided by the psychological development of the child and not distorted by the ambitions of pedagogues or the pressures of examinations. They felt that the criterion of educational policy was to be found not in the conventions of adults but in the natures of children; in pointing out that children differed in their natures and needs – that some needed one kind of education and others another – they were doing no more than pushing their progressive commitments to their logical conclusions. Their philosophy of education turned the priorities of the traditional humanists upside down.

Their concern for the natural development of children and their commitment to allocating opportunities on the basis of objective tests developed together, sometimes in tension, but more often in harmony. Both ideas were rooted in Darwinian thought. The theory of evolution inspired attempts to measure variations of natural endowment within biological populations; it also suggested that the development of the individual recapitulated the development of the race – that individuals went through marked stages of mental development, moving from the primitive and animistic to the civilised and rational. The merger of the Childhood Society, which was concerned with individual variations, and the Child Study Society, which was interested in the mental life of children, marked an attempt to bring these two traditions into harmony. The psychometrists tried to synthesise both arguments, suggesting that education should reflect the natural development of the child, but that different children developed at different rates, fixed by their genetic endowments. For them, child-centred education demanded accurate classification. Mental testing was an indispensable tool of progressive and child-centred teaching.

Their work thus represented an eccentric synthesis of the two most important post-Enlightenment intellectual movements: utilitarianism and romanticism.

Their belief in the precise measurement of human qualities and the rational allocation of individuals to their appropriate social roles undoubtedly has utilitarian overtones. To some extent, the intelligence test was a Benthamite calculating machine, moving the child from one level in the educational and occupational hierarchy to another, in accordance with the rules of reason and the overall interests of the community. Dickens' portrait of a typical utilitarian, in the person of Thomas Gradgrind in *Hard Times* (1854), might almost have been aimed at intelligence testers: 'With a rule and a pair of scales, and the multiplication table always in his pocket, sir, ready to weigh and measure any parcel of human nature and tell you exactly what it comes to.'¹⁰ A number of the most eloquent critics of intelligence testing have done little more than repeat arguments which the likes of Coleridge, George Eliot, Newman, and Thomas Hardy levelled against the utilitarians: that they treated the individual as a privatised cognitive unit abstracted from his social setting; and that they divorced intelligence from the complex of affections, sympathies, and attachments which help to stimulate the rational powers and serve to integrate the individual into a way of life.

Yet on one fundamental issue the psychometrists were at odds with the utilitarians. Bentham, James Mill and John Stuart Mill were all convinced that individual differences resulted from environmental training rather than biological inheritance. James Mill argued that 'you may regard the whole of this great mass of mankind, as equally susceptible of mental excellence'¹¹ and that 'all the difference which exists, or can be made to exist, between one *class* of men, and another, is wholly owing to education'.¹² His son's education testifies to his overwhelming confidence in this theory. The Benthamite calculus was mainly concerned with the philosophical issue of securing the greatest happiness for the greatest number; the psychometrists, on the other hand, were convinced that individuals differed widely in their inherited abilities. Their main interest lay in allocating individuals to social positions compatible with their innate abilities.

The psychologists also had close intellectual affinities with the romantics. Convinced that teaching should be based on the developing intellectual and emotional life of the child, they deprecated authoritarianism in education. They disagreed with Gradgrind's injunction that children were empty pitchers, to be filled with facts.¹³ Instead, they argued with Rousseau that 'nature would have them children before they are men';¹⁴ that children develop through certain marked stages; and that educational material should be presented to them 'in fitting order'.¹⁵

These two intellectual traditions may strike us at first sight as utterly incompatible. The utilitarians had been concerned to remake human nature in

¹⁰ Charles Dickens, *Hard Times* (Harmondsworth, 1969 edn), p. 48.

¹¹ James Mill, 'On Education', in F. A. Cavenagh (ed.), James Mill and John Stuart Mill, *On Education* (1931), p. 27.

¹² *Ibid.*, p. 29.

¹³ Dickens, *Hard Times*, p. 48.

¹⁴ J. J. Rousseau, *Emile*, trans. B. Foxley (1943), p. 54.

¹⁵ *Ibid.*, p. 59.

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order to equip it for the new industrial community, while the romantics who followed Rousseau had revolted against the artificial social order and sought in the natural laws of development a charter for a transformed social system. The psychologists linked these two traditions through their commitment to socio-biology. They felt that they were simply measuring qualities which were fixed by the genes. They had no need to force children to behave in appropriate ways. Instead, they could allow them to develop naturally, simply guiding them into their predestined social positions. In their ideal society – a meritocratic society – the natural order and the social order would be one.

Paradoxically, the post-war left mounted a sustained assault on the meritocratic ideal. Environmentalists argued that talent is shaped by social circumstances rather than fixed by inheritance; that tests measure a cultural construct rather than a biological property; and that poor academic performance reflects the bias of the system rather than the competence of the individual.¹⁶ Egalitarians rejected the meritocratic calculus, arguing for equality of outcome rather than equality of opportunity.¹⁷ Communitarians refused to regard society as an abstract regulating mechanism between atomised individuals and emphasised instead community ties and popular cultural traditions. Drawing on their own experiences as working-class scholarship winners, both Raymond Williams and Richard Hoggart emphasised the personal strains involved in divorcing children from their families and communities and providing them with middle-class educations and professional careers.

As the fortunes of environmentalist sociology waxed, so those of hereditarian psychology waned. Psychologists became more and more critical of the use of intelligence tests in educational selection. Some rejected selection but hoped to preserve streaming by intelligence within a common comprehensive school. Others went much further and rejected the meritocratic tradition lock, stock, and barrel, questioning *g*, emphasising the environment, and advocating egalitarianism.¹⁸

The mental testing movement was thus one of the most elaborate and influential manifestations of the liberal mission to open established British institutions to men of talent, regardless of their personal backgrounds and social connections. It attempted to universalise meritocratic allocation, taking a device which had been intended to strengthen a restricted ruling class with infusions of ability from below and turning it into a principle for the allocation of all social positions; and it looked forward to the replacement of a closed society of classes, shored up by recruitment, with a stratified meritocracy, predicated upon downward as well as upward mobility. Yet after the war criticisms of the failings of intelligence testing turned

¹⁶ See, for example, Jerome Karabel and A. H. Halsey (eds.), *Power and Ideology in Education* (New York, 1977), esp. pp. 44–61.

¹⁷ A. H. Halsey (ed.), Department of Education and Science, *Educational Priority Vol. 1: EPA Problems and Policies* (HMSO, 1972), p. 8.

¹⁸ See, for example, Halsey (ed.), *EPA Problems and Policies*; A. W. Heim, *The Appraisal of Intelligence* (1954).

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into an all-out assault on the philosophy which inspired it. The intelligence testers aroused the opposition of two of the most influential post-war intellectual groupings: the communitarians and the egalitarians. The first group deprecated individualism, competition and mobility and emphasised the virtues of community ties and traditional loyalties; the second argued for equality of provision and distrusted the theory of innate human inequalities.

This rejection of mental measurement was undoubtedly premature. The performance of a sophisticated economy is increasingly dependent not on its fund of physical capital but on its capacity to mobilise the brain power of its citizens. Shortages of brain power prevent growth, supplies of brain power fuel it. More than ever before policy-makers need to know about the natural talents of the population. How is talent distributed? How can it be discovered, measured and husbanded? How can raw ability be turned into marketable skills? We must take talents seriously, not ignore them; encourage individual differences, not suppress them; motivate the able, not handicap them. The psychometrists still have a great deal to teach us.

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Anthropometry Measurement of the physical characteristics and functional abilities of different types of people (e.g. races, sexes, social groups).

Applied psychology A branch of psychology which tries to apply the methods of experimental psychology to practical problems. The most important branches are educational, industrial, and clinical psychology.

Backward A general term covering children whose educational progress is retarded for whatever reason, natural or environmental. A 'backward' child is not necessarily educationally subnormal, and may receive educational help without recourse to admission to a special school.

Battery of tests A series of group tests administered in one session, but with each test separately timed.

Correlation A statistical device much favoured by educational psychologists. A coefficient of correlation is an index-number intended to measure, on a scale of 0 to 1, the amount of agreement between two series of results. Where the agreement is perfect, the figure is positive (+ 1.00); where there is no agreement whatever, the correlation is zero (0.00); where disagreement is at the maximum, with one set of results exactly reversing the order of the other, the coefficient is negative (− 1.00). Where agreement is more or less imperfect, the coefficient of correlation is a fraction, ranging between these extremes.

Craniometry Systematic measurement of the human skull.

Educational psychologist By 1939 the term had come to mean someone with a university or equivalent training in psychology and a professional interest in assessing intellectual capacity, giving remedial teaching and vocational guidance, and treating educational disabilities. Increasingly, educational psychologists possessed some post-graduate training in psychology; often they had also worked for a while as a teacher and earned a teaching qualification. They were quite distinct from *psychiatrists*, *psychotherapists*, and *psychoanalysts*. *Psychiatrists* were registered medical practitioners who possessed special qualifications and experience in

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diagnosing and treating mental conditions, and who devoted themselves to some branch of medical health. *Psychotherapists* were registered medical practitioners who specialised in treating mental disorders or the functional disorders of the nervous system. *Psychoanalysts* were the most highly specialised of all medical health workers: medical practitioners who had trained as psychiatrists and then gone on to train as analysts, undergoing analysis themselves with a registered psychoanalyst.

Educational psychology A branch of psychology which is concerned with:

- (1) the psychological study of the processes and problems of education;
- (2) the application to educational practice of psychological principles and findings.

Eugenics Widely regarded between the wars as the branch of biology which studies the inherited characteristics of human beings, with particular emphasis on their tendency towards improvement or degeneration; in its applied or practical form it dealt with the measures necessary to secure improvement or check decline. Positive eugenics aimed at 'increasing the productivity of the best stock', negative eugenics at 'repressing the productivity of the worst' (Galton).

Factorial analysis Statistical or mathematical analysis of the factors which determine mental or physical performance in a series of tests. It aims to reduce a complex system of correlations into fewer dimensions.

Faculty In the broadest sense, the ability, natural or acquired, to perform a certain act.

Faculty psychology Finding its most extreme expression in the phrenologists, it tried to explain mental phenomena by referring them directly to the activity of certain agencies or faculties, such as memory, imagination, reasoning, as if these were independent entities.

General ability (*g*) A general factor present in different degrees in different individuals, and affecting all kinds of mental performance; contrasted with *special abilities*, which only affect special types of performance or activity (e.g. numerical or verbal). Spearman noted that all tests of mental abilities tended to overlap or to correlate positively with one another to some extent. Those who scored above average results on one test tended to score above average results on another. This was explained in terms of the existence of an underlying or 'general' ability, *g*, which ran through all the tests. Burt argued that *g* was the highest common factor which could be extracted from analysing any set of test scores. Mental testers argued that tests which involved higher mental faculties (thinking, reasoning, classifying, grasping relationships) involved *g* to a much greater extent than tests of sensory or manual capacities. The aim of mental testers (at least in England) was thus to find test items which could be shown to be highly dependent on *g*, thus providing a 'saturated' *g* test.

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Group factors Factors emerging in the results of intelligence tests, treated statistically, which appear to influence more than one, but less than all, of the types of efficiency being tested.

Group tests Tests suitable for application to groups of pupils which consist in general of printed booklets containing a large number of questions ranging from the very easy to the very difficult. Only one correct answer is possible for each question, and they usually adopt a multiple choice system, encouraging children to pick the correct answer from four or five alternatives. The most common types of problems in such tests are analogies, classification, number series, reasoning etc. Such tests are usually given by an untrained tester (usually a school teacher) rather than a qualified psychologist. They formed the basis of mass testing in the selective educational system.

Guidance A term employed in three technical connections:

- (1) Child guidance: the co-operation of medical, psychological, educational, and psychiatric advice and treatment, organised through special clinics, in dealing with delinquent, difficult, and backward children.
- (2) Educational guidance: the employment of standardised psychological tests, combined with teachers reports and progress records, in order to give a child advice on appropriate educational career after elementary school.
- (3) Vocational guidance: the assistance of children and their parents in choosing a suitable vocation for the child by means of systematic psychological procedures, such as intelligence tests, educational tests, personality tests, tests for particular aptitudes, combined with teachers' records.

Individual differences Variations or deviations from the average of the group, with respect to mental or physical characteristics, occurring in the individual member of the group.

Individual psychology The psychology of individual differences. The systematic investigation and measurement of these differences.

Individual tests Tests which are administered to one child at a time, almost always by a trained tester. The original Binet-Simon tests were first drawn up in France in 1905 (revised in 1911) and were designed to diagnose mentally defective children. They were subsequently revised to adapt them to conditions in the rest of Europe and the United States. They consisted, in general, of short sets of intellectual tasks chosen as appropriate to the mental level of the average child of any particular age. The most widely used individual tests were Terman's Stanford-Binet scale (1916) and the Terman-Merrill or New Stanford Revision (1937). All these tests obliged a skilled tester to spend between half and one hour with each child, so that they could not be used for testing large numbers. They were preferred to group tests in assessing children attending Child Guidance or Educational

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Clinics and in recommending transfer to special schools. Some LEAs also arranged for borderline or doubtful 11-plus candidates to be individually tested.

Intelligence quotient or IQ The ratio of mental age to chronological age, expressed as a percentage. Obtained by dividing the mental age (as measured by a general intelligence test) by the chronological age and multiplying by 100. The average score for each age group of children is calculated: for instance, the scores of children aged eleven years and four months may average out at 130. Then any child, whatever his chronological age, who scores 130, is said to have a 'mental age' of eleven years four months. From this result the IQ is worked out by using the following formula:

$$\frac{\text{Mental Age} \times 100}{\text{Chronological Age}}$$

Lamarckism The belief that, over time, species change to a higher – i.e. better adapted and more complex form – as a result of the inheritance of acquired characteristics.

Mental defective All those individuals whose level of mental development is so below average that they are unable, as children, to profit from ordinary education and, as adults, to perform anything more than the simplest tasks. Includes: feeble-minded, moron, imbecile and idiot.

Normal distribution (Also Gaussian law, Law of frequency of error, error curve). A distribution of results cluster about the average mark; only a few extreme measures are recorded, and the number of measurements at given intervals above the average height, with relatively few dwarfs and giants, and a symmetrical tapering off of numbers in between. The psychometricians argued that intelligence was distributed in much the same way as height.

Ontogeny The development of the individual from the fertilised egg into adulthood. The (now discredited) law that ontogeny recapitulates phylogeny holds that the development of the individual recapitulates the evolution of the race.

Phrenology A 'science' of the brain or mind, which argued that the brain consists of a number of separate organs, corresponding to the various faculties of the mind; that the physical size of the organ is related directly to its power; and that it is possible to measure someone's mental capabilities and characteristics by the direct observation of the size of areas on the external surface of the skull.

Psychiatry A study and practice which deals with mental disorders and nervous problems.

Psychometry

- (1) A branch of knowledge, which is concerned with the development and applications of mathematical and statistical methods to psychological data;

Glossary

- (2) **Mental measurement in general.** Psychometrists are those psychologists whose main concern is with the technique and practice of mental measurement.

Transfer of training The improvement of one mental or motor function, by the systematic training of another allied function. Often used as a defence of Latin as the best mental gymnastic for the general training of the reason.

Two factor theory A theory of intelligence, advanced by Charles Spearman, which maintained that all modes of cognitive activity have one fundamental factor in common (*g*), while, apart from any group factors, they also depend on a specific factor (*s*), not present in any of the others. Therefore, according to this theory, the correlations of a test battery were to be described by a single factor common to all the tests and by a specific factor for each test.

Vocational selection Method of selecting, by means of psychological tests, the most suitable individuals among those applying for particular jobs. Choosing individuals for occupations, as contrasted with choosing occupations for individuals (vocational guidance).

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