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Article title: Intelligence

Year of publication: 2006

Citation: Robbins, D. (2006) 'Intelligence' in Turner, B. (Ed) *The Cambridge Dictionary of Sociology*, Cambridge: Cambridge University Press pp 302-303

Link to published version: <http://dx.doi.org/10.2277/0521540461>

DOI: 10.2277/0521540461

ISBN 10: 0521540461

ISBN 13: 978-0521540469

Intelligence.

The publication of Francis Galton's *Hereditary Genius* (1869) pre-dates by several decades the period which is normally taken to be the moment marking the beginning of modern sociology. Writing in the aftermath of Charles Darwin's *Origin of Species* and *The Ascent of Man*, Galton maintained the real objective existence both of racial differences and of social class differences in mental ability. **Emile Durkheim**'s insistence, in his *Suicide* (1896), that this phenomenon was to be explained primarily by collective rather than individual factors can be seen as a deliberate reaction against the prior tendency to suppose that human behaviour is biologically or genetically determined. The question of the 'heritability of intelligence' was critical in resolving whether or not a sociology of **education** might be necessary or possible and whether it was justifiable to expend public finance in order to expand educational provision. The acceptance in general that human behaviour is at least partly modified by social interaction, that human character is at least partly the product of 'nurture' rather than wholly determined by 'nature' is a sine qua non for sociological research, and the debate about intelligence has provided a case study for this larger issue at significant moments in Western social history since 1869.

In 1953, Brian Simon wrote a small book entitled *Intelligence Testing and the comprehensive school*. In the Preface to the text, a teacher asked: 'Have we achieved 'secondary education for all', the reform that was the keystone of the Education Act, 1944? If not, why not? What are the fundamental misconceptions and practices that stand in our way?'. What was at stake was the widening of opportunity within the British educational system that was projected immediately at the end of the Second World War. The teacher believed that Simon had exposed the obstacle to progress towards egalitarianism: 'He shows how the practice of intelligence testing is used to justify the curtailment of opportunity from the junior school onwards; he shows also how theories based on intelligence testing uphold a form of school organisation, and forms of teaching, which make secondary education for all impossible.' The book was reproduced in entirety in Simon's *Intelligence, Psychology and education. A Marxist critique* (1971) and he asked in a new introduction why a publisher should want to reprint the earlier text, since the reorganisation of secondary education on comprehensive lines was 'now well under way'. He indicated, however, that victory was far from secured in the U.S. He suggested that 'attempts to reanimate the ideology of "intelligence" testing in the United States, as a barrier to the declared policy of desegregating schools, indicate that there are powerful social and political forces in favour of reinstating the doctrine that intelligence is innate and impervious to educational influences, to the detriment of social and educational advance.' He was especially referring to the article by Arthur Jensen which appeared in the *Harvard Educational Review* in 1969 with the title: 'How Much Can We Boost IQ and Scholastic Achievement?'. This article relied on data on identical and fraternal twins reared apart which had been accumulated by Cyril Burt from the 1920s and presented in his *Factors of the Mind* (1940). Simon's text of 1971 criticised Burt's work but, in the second edition of 1978, he was able to quote L.J. Kamin's *The Science and Politics of I.Q.* (1977) to suggest that Burt's research had 'fudged' the evidence.

Nevertheless, the debate continued and still continues. *The Burt Affair* (Robert B. Joynson, 1989) questioned Kamin's criticisms and a new statement of the heritability thesis appeared in 1994, occasioning much comment and political dispute. In *The Bell Curve* (1994), Charles Murray and Richard Herrnstein asserted, on the basis of statistics derived from the U.S. National Longitudinal Survey of Youth, that intelligence is largely inherited and that genes play a part in the fact that African-Americans score lower than whites on intelligence tests. The debate about intelligence has always had important implications for developments in social and educational policy. Michael Young's satire of 1958 entitled *The rise of the meritocracy, 1870-2033* was

sub-titled: an essay on education and inequality. The book coined the word ‘**meritocracy**’ which then became part of the language of subsequent thinking about education and society, linking with the assumption of **credentialism** that occupational and social advancement are the consequence of individual merit. Young proposed the formula that $I.Q + \text{Effort} = \text{Merit}$ and expressed scepticism that social engineering might be achieved without reference to class assumptions or prejudices. The implications of the debate now seem more serious as rapid developments occur as a result of research in genetics, cognitive neuroscience and molecular biology. After some discussion of Spearman’s postulate that there must be a general factor of intelligence, labelled *g*, that is the underlying cause of an individual’s performance in varied tests, Francis Fukuyama commented in his *Our Posthuman future. Consequences of the Biotechnology Revolution* (2003) that scientific advances will soon generate a more refined understanding of this phenomenon, and that there is a possibility that the consequences of such good knowledge will be beneficial. He suggests that brain imaging techniques can chart blood flow and neuron firings and that it may then become possible to correlate these with different kinds of mental activities so as to determine with some finality whether ‘*g* is one thing or many things’. Bad science has been used for bad ends in the past but, as Fukuyama optimistically concludes his discussion of the sciences of the brain and the heritability of intelligence, this should not rule out the possibility that good science may serve us well in the future.

932 words.

Derek Robbins.