

## Reviews

church across the way. . ." (p. 123). He proudly proclaims the students were "heirs to the great outdoors" (p. 52). Young women-teachers, not all of them "nubile" (sic!) "went out to slay the dragon 'ignorance'" (p. 59). Fuller deplors the "blandishments" of a consolidation policy which "never really lived up to its advocates' claims" (p. 99). He tilts at those modern educators who "determined that being a good school was not an effective way to teach values" (p. 62). The occasional personal opinion creeps in, as in "larger, if not better, schools" (p. 122). Certainly, he doesn't like "urban sophisticates" (p. 94).

The text is copiously illustrated with small black-and white photographs, sometimes several to a page. These are excellent. But other tables containing miscellaneous statistical data are less successful because of minuscule print (as on pages 77, 101, 108). A minor misprint appears on page 84. For those who would write off the quality of the education these small schools once provided, Fuller points to the local pride farmers had in "their" school; to the low illiteracy rate among school-leavers; to the great contribution they made to an emerging professional class. His last page is a ringing defense of the quality of this education.

In brief then, this book is less of a critical research study and more of a family album for the lay public to read, full of fascinating vignettes of a bygone era.

E.L. EDMONDS *University of Prince Edward Island*

Professor Edmonds is the co-author, with Professor F. Bessai, of *Small Rural Schools on Prince Edward Island*.

RICHARD J. HERRNSTEIN & CHARLES MURRAY.

*The Bell Curve: Intelligence and class structure in American life.* New York: Free Press (1994).

845 pp. \$40.00.

Who says there is no reincarnation? Henry Goddard, a leading figure in the field of mental retardation at the turn of the century, has lived not one but at least five lives: as himself, as Arthur Jensen, as Philippe Rushton (the Canadian reincarnation), and most recently as Charles Murray and the late Richard Herrnstein. The latter two claim in the controversial *Bell Curve* that the issue of race, class, and intelligence has been settled by scientific research, and make pretty much the same arguments that other representatives of the classical tradition of intelli-

gence theory (Goddard, 1910, 1914; Jensen, 1969; Rushton, 1988, 1990) have made throughout the twentieth century: that IQ scores accurately measure intelligence; that IQ is inherited and relatively unchangeable, and determines success in life; that whites are on average more intelligent than blacks; that low IQ scores in people are responsible for crime, immorality, unemployment, and all other social evils; and that the influx of inferior immigration in the United States and the increase of births among Americans with low IQ scores are threatening civil society. These are potentially explosive arguments, especially when it is claimed that there are scientific findings to support them. Before examining the validity of these arguments, it would be informative to place the *Bell Curve* within the context from which it has evolved.

### *The legacy of Henry Goddard*

Goddard spent a number of years as director of the research laboratory at the Training School at Vineland, New Jersey, in the early twentieth century. He was closely associated with eugenics organizations, such as the American Breeders Association. Eugenics organizations, whose objective was the promotion of racist research and social policy, were prominent during that time and even exist today but keep a low public profile. Goddard was the author of several studies supported by such organizations, the most well-known one being the *Kallikak Family* (name invented by Goddard) in 1912 in which he claimed that he had located the point in this family where it split into two branches: the *kalli* (pure or eugenic in Greek) branch and the *kaki* (defective) branch. According to evidence that he collected, offspring of the eugenic branch had normal or superior intelligence and those in the defective branch were 'feeble-minded'. He based his conclusions, among other things, on dubious evidence such as physiognomic features of members of the family as shown in photographs. In subsequent years, it was discovered that these photographs had been doctored by Goddard to give *kaki* offspring a sinister, "moronic" appearance.

In other studies Goddard administered IQ tests to large numbers of south and east European immigrants who had just arrived at Ellis Island after days of an exhausting boat trip crossing the Atlantic. These pseudo-scientific studies contributed to social hysteria that American democracy was under siege by 'morons', to segregation of American 'feeble-minded' citizens, and to immigration quotas to keep out 'inferior' immigrants. Stephen Jay Gould (1981), in the *Mismeasure of Man*, has given a comprehensive account of the main fallacies of the pseudo-science of eugenics and its relation to the classical tradition of intelligence theory.

### *Bell Curve and the Kalli-Kakization of American society*

Similarly to Goddard, who claimed that morons were taking over civil society by overpopulating it and by being the source of all social evils, Herrnstein and Murray state their fears: that for “most of the worst social problems of our time, the people who have the problem are heavily concentrated in the lower portion of the cognitive ability distribution (p. 369); that “often they are near the definition for mental retardation” (p. 386); and that they are “less likely to marry than others and will themselves produce large proportions of the children born to single women of low intelligence” (p. 519). They claim that in the *Bell Curve* they present and synthesize findings of research about IQ which has been conducted according to generally admissible scientific standards:

We will be drawing most heavily from the classical tradition. . . . By accepted standards of what constitutes scientific evidence and scientific proof, the classical tradition has in our view given the world a treasure of information . . . to understand contemporary policy issues. (p. 19)

Upon close inspection of the evidence, however, it is apparent that their work suffers conceptually, methodologically, and interpretively.

#### *Conceptual fallacies*

Herrnstein and Murray claim that IQ tests measure with accuracy the true nature and different levels of intelligence of all social groups in the United States and even in the rest of the world. The faith they (Herrnstein and Murray) place in IQ tests is disconcerting: “an employer can get a better idea of how well a job applicant will perform in job training by giving him an inexpensive twelve-minute intelligence test” (p. 439). There is a massive body of literature (see Chapman, 1988) in a variety of social science disciplines, however, which points to the conclusion that IQ tests measure a limited spectrum of culturally valued skills by certain segments – not even by the whole – of US society. Attempting to understand human abilities on the basis of IQ scores is a naive, and in many instances distorted, way which fails to appreciate the diversity and richness of human intelligence.

#### *Methodological fallacies*

Herrnstein and Murray drew most of their sources from the so-called “classical tradition” of intelligence theory. In effect, they excluded unfavourable findings from the other two major traditions of intelligence theory and from other fields of social science and education. The data and findings on which they based their sweeping generalizations are representative of a rather small number of “scholars”. It is arguable

whether they, and many of their sources such as Richard Lynn and Philippe Rushton, can be referred to as scholars. The data they routinely use are biased and interpreted inappropriately.

### *Interpretive fallacies*

First, the bulk of studies they conducted or used as sources are correlational ones. Any introductory statistics textbook cautions against making causal statements between two variables when the measure is a correlation, even when this correlation is a perfect one. For example, the fact that the distance between the North American continent and Europe and the size of your big toe from birth to the end of adolescence are almost perfectly correlated (both this distance, due to the move of the tectonic plates, and your toe, due to physiological growth, increase) does not mean that the one causes the other. Yet, Herrnstein and Murray make exactly this mistake in concluding that IQ scores cause success or failure in life.

Second, the fact that a correlation, or any other statistical measure, is statistically significant does not necessarily mean practical significance. Both statistical significance and a relatively large correlation are important in concluding whether there is a sizable relationship between two variables (still not causally related). But Herrnstein and Murray insist on “keep[ing] the following figure in mind [0.33], for it is what a highly significant correlation in the social sciences looks like” (p. 67). What they are really saying is that if one suspects that the correlation in a certain study is going to be fairly small, which is the case for most studies in the classical tradition of intelligence (e.g., Lynn, 1990), then one can perform a statistical power analysis to find out how many subjects (study participants) are needed to get statistical significance. Provided a large enough number of subjects, statistical significance is quite likely for even a small correlation of 0.20. A statistically significant correlation of 0.33 means that two variables have approximately 11% in common. So if IQ scores and criminality for a large sample have a correlation of 0.33, they have in common 11% (other hidden variables not explicitly included in the study may be responsible for this 11%) and the rest (89%) in explaining criminality cannot be accounted by IQ scores. Such a study would have little if any practical significance.

### *Science versus pseudoscience*

The ability of a discipline to engage in scientific research comes when its scholars are able to move beyond the superficial. This does not imply that correlational studies are useless; they are the initial step. The field

of classical tradition of intelligence theory has engaged only in correlation research for at least one hundred years – a long time if there is ever going to be movement from pseudoscience to science.

Were Herrnstein and Murray real scientists, they would give a small role to IQ tests in their research conceptualization; methodologically expand their sources to include findings from other traditions and social science disciplines, which methodologically would make most of the findings from the classical tradition irrelevant; and interpret results with caution and objective judgments. Were they to do all of the above, which is reasonable to expect given their claims to science, the *Bell Curve* would be stripped of all its scientific pretensions and the structure of illusions on which it is based would collapse. What would remain is a *politically biased* book with highly controversial beliefs and suggestions for research and policy decision-making: focusing on the physiological determinants of intelligence; abandoning the role of education as an equal opportunity institution; relinquishing welfare programs; discontinuing affirmative action programs; and instituting standardized testing for hiring, establishing an elaborate custodial system to monitor the disadvantaged, and treating what he calls the “cognitive elite” to the best education money can buy to make sure that they become “thoughtful” leaders.

### *Of drunken men and lamp posts*

All these suggestions are questionable. In the *Bell Curve*, Herrnstein and Murray have hidden their conceptual, methodological, and interpretive fallacies in a web of rhetorical exploitation of the current social-political situation. To their credit, they go to great pains to describe some of the current social trends in the United States, but distort their meaning because they are preoccupied with IQ scores as the panacea explanation for guiding social policy. Being part of the United States “cognitive elite”, whose isolation from the rest of the country they portray in their book, is perhaps Herrnstein and Murray’s best self-description: “When people live in encapsulated worlds, it becomes difficult for them . . . to grasp the realities of worlds with which they have little experience but over which they also have great influence” (p. 50). Being segregated in a small world is like being drunk for there is little if any touch with reality. Scottish author Andrew Lang, quoted by Alan Mackay (1977), has graphically described the “drunken men” who aspire to become scientists: they use statistics as lamp-posts – for support rather than illumination.

ANASTASIOS KARAGIANNIS *McGill University*

## REFERENCES

- Chapman, P.D. (1988). *Schools as sorters: Lewis M. Terman, applied psychology, and the intelligence testing movement, 1890-1930*. New York: New York University Press.
- Goddard, H.H. (1910). Heredity of feeble-mindedness. *American Breeders Magazine*, 1, 165-178.
- Goddard, H.H. (1912). *The Kallikak family*. New York: Macmillan.
- Goddard, H.H. (1914). *Feeble-mindedness: Its causes and consequences*. New York: Macmillan.
- Gould, S.J. (1981). *The mismeasure of man*. New York: W.W. Norton
- Jensen, A.R. (1969). How much can we boost IQ and scholastic achievement? *Harvard Educational Review*, 39, 1-123.
- Lynn, R. (1990). New evidence on brain size and intelligence: A comment on Rushton and Cain and Vanderwolf. *Personality and Individual Differences*, 11 (8), 795-797.
- Mackay, A. (1977). *The harvest of a quiet eye*. Bristol, UK: Institute of Physics.
- Rushton, J.P. (1988). Race differences in behavior: A review and evolutionary analysis. *Personality and Individual Differences*, 9, 1009-1024.
- Rushton, J.P. (1990). Race, brain size and intelligence: A rejoinder to Cain and Vanderwolf. *Personality and Individual Differences*, 11, 785-794.

JOHN C. COLEMAN (EDITOR). *The School Years: Current issues in the socialization of young people (2nd Edition)*. London & New York: Routledge (1992). 209 pp. C\$87.50 cloth; C\$21.50 paper. (ISBN 0-415-06170-9).

In this book, John Coleman presents some of the major issues that affect the socialization of adolescents – these range from moral development and the influence of peer groups to the development of self and juvenile delinquency. Early in the introduction, the editor acknowledges that even though there have been major social changes since the first printing of the book in 1979, many of the issues that affect the socialization of young people have remained the same. Within this context, the seven chapters of the book focus on some of these issues.

The first chapter, written by Coleman himself, examines current perspectives of the adolescent process. In particular, he reviews both psychoanalytic and sociological theories on how young people develop. He then examines the concepts of puberty, cognition, and social relationships. One part of this chapter that is particularly noteworthy is Coleman's description of the "imaginary audience", a term that Elkind (1967) uses to describe the egocentricism characteristic of adolescence.

Peter Kutnick, author of the second chapter, examines the moral development of young people. In reviewing the literature in this area, Kutnick