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Breaking the Last Taboo

A review of

The Bell Curve: Intelligence and Class Structure in American Life
by Richard J. Herrnstein and Charles Murray
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Reviewed by

Thomas J. Bouchard, Jr.

"We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain inalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness." With these words Jefferson introduced one of America's most treasured documents, the Declaration of Independence. Successive generations of Americans have not only embraced Jefferson's noble sentiments, they have embellished them. Equality of political rights and legal standing has been expanded into a belief in literal equality; today, differences in outcome are taken as prima facie evidence of unequal opportunity. In an egalitarian society such as ours, the existence of significant and enduring individual or group differences in intelligence is seen as a challenge to our highest ideals. This challenge is taken up by Richard J. Herrnstein and Charles Murray in *The Bell Curve*.

The Bell Curve has a simple but powerful thesis: There are substantial individual and group differences in intelligence; these differences profoundly influence the social structure and organization of work in modern industrial societies, and they defy easy remediation. In the current political milieu this book's message is not merely controversial, it is incendiary. As scholars such as Daniel Moynihan, Arthur Jensen, and E. O. Wilson have learned, the mainstream media and much of the scientific community have little tolerance for those who would question our most cherished beliefs. Herrnstein and Murray have received similar treatment. They have been cast as racists and elitists, and *The Bell Curve* has been dismissed as pseudoscience, ironically by some commentators who broadly proclaim that their critique has not benefited from a reading of the book. The book's message cannot be dismissed so easily. Herrnstein and Murray have written one of the most provocative social science books published in many years. The issues raised are likely to be debated by academics and policymakers for years to come.

The emergence of a cognitive elite

Commentators from across the political spectrum have documented the profound social changes that all industrialized societies are undergoing at the end of the 20th century—erosion of the middle class, loss of well-paying manufacturing jobs, and an emerging information age in which individual success will depend on brains not brawn. *The Bell Curve* tells a similar story regarding the United States. It differs from other works by focusing on intelligence, rather than education or social class, as a causal variable. The authors tell us that true educational opportunity as a function of ability (measured by IQ tests) did not arrive in the United States until about 1950. Until that date only about 55 percent of high school graduates in the top IQ quartile went directly to college. From 1950 to 1960, this number jumped to 72 percent, and in 1980 over 80 percent of graduates in the highest ability quartile went to college. In addition, sorting by cognitive ability continues as students move through college. It also occurs across colleges, with the elite schools selecting the more intellectually talented students. Finally, it continues across careers in the world of work. The authors argue that intellectual stratification through occupations is driven by powerful economic pressures. This argument is based on a number of different and compelling lines of evidence. If Herrnstein and Murray are correct, current social inequalities reflect, in large part, the achievement of a meritocracy based on cognitive ability.

The notion of a meritocracy is not, in itself, an affront to American sensibilities. Social scientists have carefully

documented that social mobility does occur from one generation to the next and that cognitive ability is a major factor in determining whether an individual will achieve greater or lesser social status than did his or her parents (Waller, 1971). When each generation resorts in this way, the elements of fairness and opportunity are preserved. If, however, as *The Bell Curve* asserts, the heritability of IQ is quite high and there is a strong tendency for those similar in ability to marry, there will be less regression toward the mean in the cognitive ability of children of the intellectually talented and, therefore, less intergenerational reassortment. Under these circumstances a meritocracy begins to look like an aristocracy, a perception that is strongly reinforced when the intellectual elite segregate themselves from the rest of society by living in separate neighborhoods, sending their children to private schools, and supporting social institutions that cater to their own unique interests.

The authors do argue that general cognitive ability (i.e., "g") is a major determiner of social status and that variance in general mental ability is largely attributable to genetic factors—propositions that are certainly endorsed by many experts in the field. The book explicitly disclaims, however, that general mental ability is the only determinant of social status, or that g is the sum total of an individual's social worth.

The role of social class of origin

The Bell Curve carefully documents in table after table, graph after graph, that cognitive ability has become a more important determinant of social status than social class of origin. Although this may come as a surprise to many, it is consistent with a large body of evidence. Research methodology in the domain of individual differences has changed dramatically in the past 20 years. Many investigators in this domain now accept two major methodological principles: that single studies based on small samples are inherently uninformative and that correlations calculated from data gathered within biological families are seriously confounded. Understanding both of these principles is important when evaluating evidence often brought to bear against *The Bell Curve*.

Results from a single modest study carry little more weight than does a single anecdote, no matter how compelling the finding. Most social scientists, but certainly not all, have adopted the methodology of meta-analysis, a statistical tool that systematically combines the results from many studies to provide a single reliable conclusion. In a similar fashion, behavioral geneticists combine the results from numerous kinships weighted by their sample sizes to provide the best estimate of the degree of environmental and genetic influence on any particular trait. Any single study is viewed as providing only weak evidence on its own.

The confound generated by data drawn from within biological families provides numerous pitfalls when assessing this book's claims and reviewers' counterclaims. Within a biological family, correlations (e.g., parental socioeconomic status X child's IQ) are ambiguous because the cause of the correlation could be the family environment or the parent's genes. Within biological families, the correlation between parental socioeconomic status (SES) and child's IQ, based on a meta-analysis of the literature, is .333 (White, 1982). However, in studies where genetic effects are held constant, through twin or adoption designs, the correlation drops dramatically (Bouchard, Lykken, McGue, Segal, & Tellegen, 1990; Scarr & Weinberg, 1978). Another striking exemplar of this phenomenon is the IQ correlation between unrelated individuals reared together who share a common family environment but lack a common genetic background. When the cognitive ability of these "unrelated siblings" is measured in adult-hood the correlation is zero (McGue, Bouchard, Iacono, & Lykken, 1993). Thus the correlation between parental SES and offspring IQ in biological families is due, in some measure, to genetic endowment. Consequently, when examining the relationship between IQ and a dependent variable, to "hold constant" the SES of biological parents (on the grounds that SES is a competing "environmental explanation") results in an underestimate of the true influence of IQ. As early as 1970, Paul Meehl warned that "the commonest error in handling nuisance variables of the 'status' sort (e.g., income, education, locale, marriage) is the error of suppressing statistically components of variance that, being genetic, ought not to be thus arbitrarily relegated to the 'spurious influence' category" (pp. 393–394). In this book, intended for lay readers as well as academicians, the authors have purposefully provided simple and straightforward analyses of SES and cognitive ability. They have, in many instances, understated the role of cognitive ability by holding SES constant. We can expect to see numerous reanalyses and the presentation of many more complex models derived to support both sides of the debate. The careful reader will remember Meehl's caution when examining the data and drawing conclusions.

Cognitive classes and social behavior

Part II of *The Bell Curve* reviews the role of cognitive ability in areas of social dysfunction. In this section, the data are more complicated, conclusions more equivocal. In spite of claims to the contrary by some reviewers, the book makes it clear that with regard to the issues discussed in this section of the book (e.g., poverty, schooling, unemployment, idleness and injury, family matters, welfare dependency, parenting, crime, civility and citizenship), IQ "almost always explains less than 20 percent of the variance, … usually less than 10 percent and often less than 5 percent" (p. 117). These analyses deal only with non-Latino Whites and make use of the National Longitudinal Survey of Labor Market Experience of Youth (NLSY). This large nationally representative survey, begun in 1979, incorporated the Armed Forces Qualification Test (AFQT). The AFQT provides an excellent measure of g, and the survey contains sufficiently detailed information that questions *regarding* the influence of g on the outcomes listed above can now be addressed systematically.

I discuss the results regarding poverty as an exemplar. First, it must be noted that the decline in poverty from 1940 to 1970 is dramatic and linear, dropping from over 50 percent to less than 15 percent. It has remained nearly constant since 1970. This means that the rise in crime, drug abuse, and many other discontents over the past 25 years cannot be ascribed to poverty per se. It also means the analyses in *The Bell Curve* are being carried out on a very different population than would have been used had the analysis been carried out before 1970. Consequently, comparisons with earlier research are problematical. The evidence strongly supports the conclusion that high IQ is an important protective factor, and low IQ is an important risk factor. Parental SES is not nearly as protective or nearly as debilitating. IQ has an effect even when education is held constant. When one looks at poverty among women with children, the situation is quite different. For separated, divorced, or never married White mothers with very low IQs, the probability of being in poverty is almost 70 percent. For the same group of mothers with very high IQs, the risk of poverty is about 10 percent. For married mothers, however, the range is from under 20 percent to near zero. IQ is influential, but marriage is clearly more important. Thus poverty among children is strongly associated with the marital status of their mothers. Holding IQ constant washes out any influence of parental SES for both types of mothers but leaves a large marital effect. Similar empirical demonstrations, with numerous twists and turns, are made regarding the other dependent variables enumerated above.

The national context

Part III of *The Bell Curve* contains the most controversial chapter in the book, "Ethnic Differences in Cognitive Ability." The data reviewed here are neither new nor surprising and find strong support in the current psychological literature (Humphreys, 1988). East Asians, living in Asia or America, score above White Americans in tests of cognitive ability; the best estimate of that difference is about three points with findings ranging from no difference to a 10–point spread in test scores. The difference in measured IQ between African Americans and Whites has remained at about 15 IQ points for decades, although there is some indication of very modest convergence due to fewer low scores in the African American population. Controlling for SES reduces but does not eliminate this difference, and of course, controlling for SES in ethnic group contrasts may eliminate a valid source of IQ variance. Moreover, ethnic differences on cognitive tests cannot be attributed to test bias.

As described earlier, *The Bell Curve* asserts that differences in cognitive ability between individuals are due in part to differences in their genetic endowment. A great deal of research supports this conclusion (Bouchard, 1993; Pedersen, Plomin, Nesselroade, & McClearn, 1992). The question is, What can we infer from these findings about the origins of ethnic group differences? As any graduate student knows, the source of individual differences in a trait cannot be taken as evidence for the source of group differences in the same trait. A great deal of indirect evidence points to both genetic and environmental contributions to ethnic group differences in IQ. None of this evidence, however, is as firm as the evidence for genetic influence on individual differences in IQ. Many experts in the field (Snyderman & Rothman, 1988) agree with Herrnstein and Murray when they state that "it seems highly likely to us that both genes and the environment have something to do with racial differences. What might the mix be? We are resolutely agnostic on the issue; as far as we can determine, the evidence does not yet justify an estimate" (p. 311).

Science, ethics, and social policy

The Bell Curve closes with a review of the policy implications of their findings. What is the role of the social scientist in the formulation of social policy? I agree with Kendler (1993) that it is clearly within the scientific realm to comment on

the likely consequences of competing social policies. Judging the value, as opposed to the costs, of such policies is, however, a matter of political rather than scientific discourse. As Kendler documents, many social scientists confuse these two functions. Herrnstein and Murray have been vigorously chastised for discussing policy implications on the basis of the work reviewed and the data analyzed in their book. Similar assertions are, however, regularly made by many investigators in the social sciences. For example, the implications of specific research projects are regularly found in grant applications where they are used to justify the request for funds. Seldom are the value judgments underlying these implications explicitly stated, but they are easily inferred. Herrnstein and Murray have, in my opinion, been much more "up front" about these matters than many social scientists, and their discussions fall clearly within the boundaries discussed by Kendler. They argue, for example, with regard to affirmative action, "Our contribution (we hope) is to calibrate the policy choices associated with affirmative action, to make costs and benefits clearer than they usually are" (pp. 387–388).

In writing the Declaration of Independence, Jefferson was attempting to give birth to a shared political goal—freedom, as expressed in the right to life, liberty, and the pursuit of happiness. Herrnstein and Murray also address this important theme. They make it clear that a meritocracy need not be a Darwinian jungle and that a responsible society should make a place for everyone. Their description of the ideal meritocracy will not be to everyone's taste, but it is neither more foolish nor more naive than many proposals that have been suggested in the past. Nevertheless, predicting the future is an extremely hazardous enterprise. We have recently seen the virtual collapse of a number of societies that were based on a totally different conception of human nature than that underlying *The Bell Curve*. Virtually no one predicted this dramatic outcome for one of history's largest social experiments. Undoubtedly, Herrnstein and Murray's arguments are wrong in some of the details, and they may be wrong about the larger picture. Nevertheless, one of the goals of the intellectual enterprise is to question received wisdom, to ask difficult questions, and to seek novel and "better" solutions to both new and old problems. They have succeeded admirably at this task.

This is a superbly written and exceedingly well-documented book. It raises many troubling questions regarding the organization of our society. It deserves the attention of every well-informed and thoughtful citizen.

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