

Why America's Top Pundits Are Wrong

ANTHROPOLOGISTS TALK BACK

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ELEVEN Anthropology and *The Bell Curve*

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I can measure a rod one foot long and add another foot in length, but I can not add two amounts of intelligence and make it a double intelligence.

Franz Boas, "Recent Anthropology"

The Bell Curve was one of the most talked-about books of 1994–1995.¹ In rehashing many old scientific and pseudoscientific fads, it capitalized on the notoriously short memory of the American public. Mercifully, that same feature has worked against it: a few years later, when I ask undergraduates about *The Bell Curve*, they have some vague idea of it as a ponderous and frightening old piece of literature that they'd rather not read, like *The Brothers Karamazov* or *Martin Chuzzlewit*.

On the other hand, it may have had a real impact on public policy. Those of us who value scientific work in the formation of policy must be embarrassed at that prospect, for it represents far from the best of what science has to offer, and in some ways it demonstrates the worst.

Its central argument was that (1) intelligence is an organic property, set largely genetically, and accurately assessable by testing; (2) some people

have more of it than others; (3) social status and income are consequences of it; (4) disparities among groups in social status and income are consequences of innate intellectual shortcomings; and therefore, (5) social programs designed to ameliorate inequality are futile and should be dismantled. The first author, Richard Herrnstein, was a longtime professional advocate of the first point; the second author, Charles Murray, has long been a professional advocate of the last point.

None of this was a novelty to anyone familiar with the course of ostensibly scientific arguments about human diversity over the last century or so. Thus, in this chapter, I review *The Bell Curve* from the standpoints of science, history, anthropology, and genetics and demonstrate the scholarly poverty of the work.

THE BELL CURVE COMES DRESSED AS SCIENCE

Anthropologists in recent years have come to subject their own cultural practices and discourses to the same kind of scrutiny and analysis as those of residents of Samoa or the Trobriand Islands. Recognizing that science often plays a cultural role as authority—"nine out of ten doctors smoke Lucky Strikes," or some such, as advertisers used to tell us—one can ask, "Where does that authority come from? What does science look like? How do I know it when I see it?"

Science has familiar features, which are naturally the very features exploited by works attempting to masquerade as science. They are not only common features of science but also effective symbols of science.

The most familiar feature of science is "white men in white coats": science is a classically and stereotypically gendered, raced, and uniformed activity. While *The Bell Curve* is not laboratory science and thus lacks the uniforms, it fits the stereotype in other ways quite nicely: it is the joint product of a distinguished-looking Harvard professor of psychology and a scholarly writer from a think tank. *It looks like it is by people who know what they're talking about.*

The next stereotypical feature of science is the generation and presentation of new data. This feature is so thoroughly ingrained—science as

novelty!—that it affects self-perceptions of science as well. New findings and discoveries are fundable; critique and debate are not. This creates pressure to collect more and more data, however useless they may be, and pressure to make everything seem newer than it really is.

More important, science frequently progresses more through (unfunded) critique and reanalysis than through the initial discovery and presentation. Consider, for example, paleoanthropology, in which the initial interpretation of a fossil is rarely the one ultimately settled upon. Nevertheless, the achievement is ascribed to the finder (or describer, since frequently the literal finder is an invisible employee of the scientist), rather than to the reviser, who has often made better sense of the fossil's real biological meaning.

Thus, although critique and debate are vital to the production of knowledge, there is nevertheless a popular image that holds them to be the province of poseurs and troublemakers, and the generation of new discoveries and findings to be the province of "real" scientists. This attitude makes it easier for incompetent or even falsified data to be accepted, because, as new data, it looks more "real" than the reanalysis, revision, or reinterpretation of old data. *The Bell Curve looks like a new discovery, and places its critics on the defensive.*

Finally, statistical analysis is a popularly perceived signature of science. On the one hand, statistical analysis can legitimately be said to have marked the transformation of premodern descriptive to modern analytic natural science. On the other hand, we all know what Benjamin Disraeli meant when he grouped statistics along with "lies" and "damned lies." *The Bell Curve* utilizes data transformations and graphic treatments ranging from the mundane to the esoteric, and presents simple results ostensibly derived from them that necessitate considerable faith on the part of the reader. *The Bell Curve looks like a sophisticated analysis.*

The Bell Curve is thus carefully crafted to look like traditional science, to claim the authority of science and the high ground as novelty over and against any critics and detractors. It effectively mobilizes the symbols of science—the stature of the authors, new data, statistics—to evoke the respectful reaction properly accorded to a scholarly scientific work.

However, as Alan Ryan notes, "There is a good deal of genuine science in *The Bell Curve*; there is also an awful lot of science fiction and not much care to make sure the reader knows which is which."²

There are very few reasons why a piece of ostensibly scientific literature would not wish to distinguish itself fully and explicitly from a non-science doppelgänger. The most obvious is that it is not to the advantage of the work to have the reader view it through too critical eyes. As Jesus is reputed to have said, "Why light a candle, just to cover it up or put it under the bed?" (e.g., Luke 8:16)—to which the answer, obviously, is that you really don't want *too much* illumination.

THE BELL CURVE HAS NOTORIOUS CONNECTIONS

The Bell Curve does a poor job of discussing the historical antecedents for its views.³ This, of course, helps to create the strategic illusion of originality. Ultimately, the use of science to inform and direct social policy can arguably be laid at the foot of Plato. In its modern form, however, the most direct antecedent of *The Bell Curve* is a loose confederacy of ideas collectively known as social Darwinism, popular in America in the latter portion of the nineteenth century. Its core was the justification of social hierarchy as the expression of an underlying natural hierarchy: people were where they deserved to be. Any attempt to alter this—from unionization to child labor laws to welfare—would be a subversion of the natural order.⁴

Social Darwinism's leading American exponent was a Yale professor named William Graham Sumner, who saw unfettered competition and Puritan morality as the keys to social progress: "Let every man be sober, industrious, prudent, and wise, and bring up his children to be so likewise, and poverty will be abolished in a few generations." And the cream, it was argued, rose naturally to the top: "The millionaires are a product of natural selection. . . . They may fairly be regarded as the naturally selected agents of society for certain work. They get high wages and live in luxury, but the bargain is a good one for society."⁵

Needless to say, such views were popular among the industrialists,

monopolists, tycoons, and robber barons of the age, who saw in these views not only a vindication of their own successes but also an absolution for the poverty and misery they were accused of inflicting upon others. Their successes were fated by the strength of their own resolve and mettle—whether inborn or acquired. The destitution of the masses was their own damn fault. But those views were unpopular with most other listeners, who saw the merciless exploitation of impoverished laborers as evil, the causes of wealth and poverty as more historically and socially complex, and the invocation of natural law as a vulgarly self-serving justification for the status quo and, especially, for the infliction of poverty and misery upon the workers. Consequently, social Darwinism did not last far into the twentieth century.

Ultimately social Darwinism was a theory about destiny and about rugged individualism: people were the masters of their own fates, either through their constitutional endowments or the sweat of their brow—it didn't much matter; the rich were entitled to theirs, while the poor had simply gotten what they deserved. At some level, however, the existing social hierarchy was almost ordained, simply nature taking its course. The fact that some people lived in opulence and many in squalor was just a fact of life. To try to alter it, therefore, was not only vain but also tantamount to a crime against nature.

Anthropology arose in the late nineteenth century as "essentially a reformer's science," in the words of its first academic professional, Edward Tylor. In Tylor's hands, the central concept of the field became culture (or civilization). Culture was conceptually distinct from the endowments of nature and was achieved by all peoples, to greater or lesser degrees, although all were potentially equal participants. Independently invented in America from the German concept, "culture" became, in the hands of Franz Boas, something more localized, a mental tincture that suffuses every aspect of human thought and behavior with localized and distinct meaning.

The Boasian paradigm, however, also had a more subversive element. It successfully showed that many group differences commonly ascribed to differences in nature were actually differences of culture, that is, ascribable to the history and circumstances of life. Not only were stereotypical

behavioral features of populations highly mutable but so were many physical features, such as head form and body proportions. More important, this view undercut the traditional explanation that associated the degree of civilization with the innate intellectual capacity of its members. Wrote Boas in his classic explication *The Mind of Primitive Man*, "In short, historical events seem to have been much more potent in leading races to civilization than their faculty, and it follows that achievements of races do not warrant us in assuming that one race is more highly gifted than the other."⁶

The subversion lies in appreciating that the accumulation of economic, political, or social power lies in the vagaries of history, and not in the innate qualities of those who happen to be the most civilized, most powerful, or most wealthy at any point in time. It is not biological kismet or karma that creates cultural differences and social or economic hierarchies.

Modern anthropology thus cast itself in opposition to older, deterministic theories of social forms, most notably social Darwinism and eugenics.⁷ Both, it is important to note, carried political implications: social Darwinism justified bellicose colonialism, and eugenics justified immigration restriction and involuntary sterilization of the poor.⁸ Boas was at the forefront of scholarly critique of eugenics, because he studied and appreciated the historically ephemeral aspects of the phenomena the movement ascribed to biology, in postulating genes for "feble-mindedness" to be the root cause of poverty and crime.

The political, social, and economic history of the twentieth century seems to bear out the Boasian position quite well. The upward mobility of immigrants and shifting of geopolitical power certainly testifies to the awkwardness of using transcendent natural difference to explain social hierarchies narrowly localized in time and space. Such hierarchies are notably precarious: dynasts beget dolt, peasants beget moguls, the strong overtake the smart and are in turn overthrown by the stronger or smarter—and all in spite of their gene pools. In other words, it is impossible to explain a variable with a constant.

And yet there have been periodic attempts to return to the old determinist perspective. In 1962, the anthropologist Carleton Coon proposed

that whites and blacks had evolved separately from *Homo erectus* into *Homo sapiens*, whites having attained that goal two hundred thousand years before blacks. Thus, "it is a fair inference," Coon declared, that whites "have evolved the most, and that the obvious correlation between the length of time a subspecies has been in the *sapiens* state and the levels of civilization attained by some of its populations may be related phenomena."⁹

Segregationists such as the psychologist Henry Garrett of Columbia University; the anatomist Wesley Critz George of the University of North Carolina, Chapel Hill; and Carleton Putnam seized upon the anthropological work to support their position, with Coon's blessings.¹⁰ At the end of the decade, the Berkeley psychologist Arthur Jensen asked famously, "How much can we boost IQ and scholastic achievement?" and concluded, infamously, that genetic limitations would prevent much boosting, and that, consequently, the well-known gap in IQ scores between blacks and whites reflected an irremediable deficit in the native intellectual abilities of blacks.¹¹ Jensen's claim, while published in a mainstream forum, has not held up well, as I detail below.¹²

By the second half of the twentieth century, these scholars had been marginalized by the postwar orthodoxy that group differences in intelligence were effectively negligible. They nevertheless found an outlet: a journal founded in 1960 called the *Mankind Quarterly*, which congealed around a few unrepentant hereditarians. Paramount among them were the journal's two associate editors. One was a botanical geneticist named R. R. Ruggles Gates, who was effectively the last formal polygenist, arguing that the human races were actually distinct species.¹³ Gates was such a vile figure to the geneticist and lifelong socialist J. B. S. Haldane, that the latter, living in India, resigned from the Indian Statistical Institute rather than host a visit from Gates.¹⁴ The other associate editor was the psychologist and segregationist Henry Garrett, who maintained that "the equalitarian dogma" was the nefarious work of anthropologists, Jews, and communists.¹⁵

Shortly after the journal began publication, it was savaged comprehensively in a major review for *Current Anthropology* by Juan Comas.¹⁶ Some anthropologists who had innocently accepted an association with

the journal were scandalized by it.¹⁷ A letter to *Science*, the magazine published by the American Association for the Advancement of Science (AAAS), declared that, because "*The Mankind Quarterly's* attitude is so harmful . . . I hope the AAAS takes some action."¹⁸ The Oxford anthropologist G. A. Harrison wrote in the British journal *Man*, "Few of the contributions have any merit whatsoever, and many are no more than incompetent attempts to rationalize irrational opinions. . . . It is earnestly hoped that *The Mankind Quarterly* will succumb before it can further discredit anthropology and do more damage to mankind."¹⁹

The *Mankind Quarterly* remained intact and in print, however, because it was subsidized by a foundation called the Pioneer Fund. The fund maintained a rather shadowy philanthropic existence until being "outed" by articles in *Rolling Stone*, *GQ*, and the *New York Review of Books* in the wake of the notoriety of *The Bell Curve*.²⁰ The Pioneer Fund, it turned out, was a goose laying golden eggs for academicians interested in advancing the notion that innate factors determine one's life course. Begun in 1937, its first president was the eugenicist Harry Laughlin (who had stunned even other eugenicists by accepting an honorary doctorate from the Nazi-controlled Heidelberg University a year earlier). It has since supported many of the most famous hereditarian scholars, paramount among them Arthur Jensen (to the tune of over a million dollars).

Charles Lane's scrutiny of *The Bell Curve's* references turned up citations to five articles published in the *Mankind Quarterly* and seventeen researchers who have published there. The *Mankind Quarterly* is not, however, a mainstream scholarly outlet, and publishing within it constitutes a statement of identity. Perhaps the most interesting aspect of *The Bell Curve's* bibliography is the citation of eleven articles by the Canadian psychologist J. Philippe Rushton, and a preemptive coda to appendix 5 defending Rushton's work as "not that of a crackpot or a bigot" and "plainly science" (p. 643).

So it is worth asking why *The Bell Curve* is so defensive about J. Philippe Rushton. What are his ideas? The answer is that Rushton's ideas are weird and scandalous: that Africans have been the subjects of natural selection for high fertility and low intelligence, Asians for low fertility and high intelligence, and that Europeans are a happy medium; and,

moreover, that these traits can be read in surrogate variables, such as brain size, degree of cultural advancement, crime rate, and penis size.²¹ Said Rushton to an interviewer, "It's a trade-off; more brains or more penis. You can't have everything."²² Sensitive to the possibility that Rushton's work might give sociobiology a bad name (as if such a thing were possible) David Barash reviewed it in *Animal Behaviour* in the most uncompromising terms: "[Aggregating unreliable and incomparable data sets, Rushton's work holds out] the pious hope that by combining little turds of variously tainted data, one can obtain a valuable result; but in fact, the outcome is merely a larger than average pile of shit." And, lest his feelings be misconstrued, he says, "Bad science and virulent racial prejudice drip like pus from nearly every page of this despicable book."²³ Rushton's work is never cited favorably by mainstream scholars.

In 2000, Rushton's publisher purchased mailing lists from the American Anthropological Association, American Sociological Association, and American Psychological Association and sent their members unsolicited copies of an abridgement of Rushton's book, an unprecedented act more like that of a propagandist than a scientist and precipitating much controversy in, for example, *Anthropology News*. This printing and mailing was underwritten by the Pioneer Fund.²⁴

With friends like these, suffice it to say, *The Bell Curve* hardly needs enemies. The book's associations with a source of funding rooted in archaic ideologies and its screwy contemporary outlet, and the extensive citation and defense of the bizarre work of Rushton, make it clear that this is no ordinary work of scholarship.²⁵ It is, rather, a radically partisan work, a work of advocacy in the manner of a lawyer's brief, not a scientist's ratiocination. It fails to make the crucial distinction between possibly credible support for its position and that of the lunatic fringe. It thus requires an adversarial approach modeled on the judicial system to be understood properly, rather than the approach reserved for more familiar scientific work.²⁶

To say, then, that *The Bell Curve* was controversial is to miss the point. It was an adversarial argument framed in a nonadversarial venue, a prosecutor without a defense attorney. No wonder it might have seemed reasonable at first glance!

IQ IS NOT AN INNATE BRAIN FORCE

Central to *The Bell Curve*'s argument is the possibility of assessing intelligence with some degree of accuracy. Two assumptions enter into it: (1) that intelligence is a property that can be linearized—reduced to a single scale on which everyone can be placed and then compared meaningfully; and (2) that it can be discerned in pencil-and-paper tests.

Once again, some history is valuable. A French psychologist named Alfred Binet developed the idea of posing standardized problems to French schoolchildren in the early 1900s in order to identify those who required extra attention. He did not intend his test to represent anybody's basic mental capacity; rather, he intended it simply to help teachers discern who was progressing faster or slower than others in school.

The score soon became a "quotient" by dividing the result by the subject's age, creating a ratio of the subject's "mental" age and chronological age. In other words, it asked whether the child was doing things done mostly by older children. The IQ concept was imported into the United States by Herbert Goddard, Lewis Terman, and Robert Yerkes and transformed into a measure supposed to assess someone's innate brain power.

This American twist on IQ was augmented by the British psychologist Charles Spearman, who found that children's performance on different kinds of tests was often correlated: a child who did well on one kind of test generally did well on another. He developed a statistical tool called "factor analysis" to analyze the correlations among data sets, and ultimately concluded that the correlated test scores indicated the presence of a general factor underlying intelligence, which he called "g."²⁷

Early tests given to recruits during World War I and to immigrants entering America often quizzed them on knowledge of popular culture or urban American society. Giving tests to illiterates posed only minor problems, as a parallel test was devised that required no reading or writing. Not surprisingly, the best scores were consistently obtained by well-educated and acculturated urban whites.

Even as the tests were redesigned, however, their results came under fire because they were promoted by their administrators as evaluating

something more than the degree of formal and informal Euro-American education obtained up to that point by the subject. As early as the 1920s, researchers giving IQ tests to non-Westerners realized that any test of intelligence is strongly, if subtly, imbued with cultural biases. In an appendix to *Coming of Age in Samoa*, Margaret Mead relates that Samoans, when given a test requiring them to trace a route from point A to point B, often chose not the most direct route (the "correct" answer), but rather the most aesthetically pleasing one.²⁸ Australian aborigines found it difficult to understand why a friend would ask them to solve a difficult puzzle and not help them with it.²⁹ Indeed, the assumption that one must provide answers alone, without assistance from those who are older and wiser, is a statement about the culture-bound view of intelligence.³⁰ Certainly the smartest thing to do, when faced with a difficult problem, is to seek the advice of more experienced relatives and friends!

Other ethnographic examples abound.³¹ Among the Yakima of the Pacific Northwest, the charge to complete the intelligence test as rapidly as possible was senseless; they wanted to do it correctly and saw no need to hurry about it. Among the Dakota, to answer a question that someone else could not answer would be considered arrogant.

Thus if the subjects do not share the same assumptions as the researchers, and are not motivated in precisely the same manner as the designers of the tests and the initial subjects, they will not score as well. Seeing middle-class white American values such as haste, directness, and individualism rewarded disproportionately as if they were transcendent measures of innate cerebral power, one can only marvel at such naïveté. Moreover, it is hard to imagine that the ability to participate successfully in a buffalo hunt, say, is in any way measured by pencil-and-paper tests.

Nevertheless, the tests measure something. What they measure well is exactly what they were originally designed to measure: performance in school. Children with high IQs often do well in school, and since children who do well in school often go on to higher education and better-paying jobs, it should come as no surprise that one can readily find correlations among the variables of IQ, school performance, and income.

One of the basic mantras of science education is that correlation does not imply causation. What this means is that, although two measures

may vary together, so that knowing one permits you a better-than-random estimate of the other, that simple pattern does not tell you whether A causes B, B causes A, or both are caused by something else. Simply by *observing* the relationship between two variables, we are not in a position to *explain* that relationship.

The Bell Curve is chock-full of correlations, the kind that anyone can get out of a basic sociology database. Yes, people who go to college tend to have higher IQs than those that do not. Yes, people who go to college tend to earn more than people who do not. Yes, blacks in America tend to earn less, go to college less frequently, and have a lower average IQ score than whites. *The Bell Curve's* interpretation, however, is that blacks go to college less often and earn less *because* their average IQ is lower. Whether the truth lies in correlation ("*and* their average IQ is lower") or causation ("*because* their average IQ is lower"), the next question is the important one: What can be done about it? This was the question posed by Arthur Jensen, the most cited researcher in *The Bell Curve*, and the recipient of the greatest amount of the Pioneer Fund's largesse. *The Bell Curve* argues that, because IQ is a set, genetic trait, we simply cannot boost IQ or scholastic achievement much.

THE ENVIRONMENT IS SUBTLE AND COMPLEX

It has become axiomatic in the social sciences that the more social variables you control, the more similar two populations become in their IQs. Herrnstein and Murray recognize this and acknowledge that their own data—the National Longitudinal Survey of Youth, part of which included an IQ-like Armed Forces Qualifying Test—show it too. The raw difference in IQ by race in their database is reduced by over 35 percent when they compare blacks and whites of roughly the same socioeconomic status.

Their socioeconomic status measure is rather crude, however: it consists of a combination of parental education, parental occupation, and family income, with the latter constituting "by far the most common missing variable" in over one-fifth of the data (p. 574). If the gap is

reduced by over one-third with such a measure of "environment," one could imagine that the remaining 65 percent—nine points or so—must be due to heredity.

Alternatively—and perhaps more scientifically—one might imagine that if controlling in such a facile way reduces the gap by over one-third, then perhaps the rest of the gap can be accounted for by controlling for other, more subtle social variables. That is exactly what other studies have attempted and demonstrated, and what *The Bell Curve* either ignores or actually *criticizes*: notably, J. R. Mercer's 1988 study which found that IQs of Latino and non-Latino students converged once eight variables were controlled: (1) "mother's participation in formal organizations, (2) living in a segregated neighborhood, (3) home language level, (4) socioeconomic status based on occupation and education of head of household, (5) urbanization, (6) mother's achievement values, (7) home ownership, and (8) intact biological family."³² Put another way, *The Bell Curve* itself controls grossly and inadequately for social and cultural differences, and it minimizes work that did so more comprehensively and came to the opposite conclusion. This is surely as great a perversion of ordinary scientific standards as any creationist could devise!

In fact, a reanalysis of the database actually used by Herrnstein and Murray showed that more subtle social variables did have a major impact on the difference in scores. Factoring in community context, urbanism, and family size reduced the gap dramatically. Indeed, the very way in which *The Bell Curve* created an "index" for socioeconomic status diluted the strong effect of family income on IQ score.³³ In their own data, "the black-white gap in math and reading scores could be totally accounted for by the following differences between black and white children: family income, size of household, proportion of students in the school the mother attended who were poor, the age the child was weaned, whether the child was read to, and, most important, how much the home was emotionally supportive and cognitively stimulating. Black and white children similar to one another in these conditions performed similarly on the tests."³⁴

It would be extraordinarily naive to suppose that simply controlling for income could make two racialized samples comparable.³⁵ Black peo-

ple making \$60,000 and white people making \$60,000 do not lead identical lives; the experience of growing up black in America is simply different from the experience of growing up white in America. A banal observation, I should think (yet apparently lost on the authors of *The Bell Curve*), and demonstrated nicely in a recent study of birth weight.

Black mothers are at considerably higher risk for low birth-weight babies than white mothers, a fact duly noted even in *The Bell Curve* (pp. 332–33). A large difference remains even when you compare white mothers and black mothers at the same income levels. Biological? Yes. Birth weight is certainly a biological attribute. Racial? Yes. The sample is contrasted on the basis of race. Innate? Possibly. But what R. J. David and J. W. Collins Jr. did was to introduce a third group of mothers as a control—African-born women who had immigrated to the United States. This group clustered not with the African American mothers, but with the *white* mothers.³⁶ The obvious conclusion, drawn by the authors, is that the higher probability of having a low birth-weight baby is biological and "racial"—but is a consequence of the experience of growing up black in America, not a feature of the African gene pool.

We may note that low birth weight also correlates with reduced IQ; so once again, this is a subtle feature emphasizing the difference between growing up black and growing up white in America. Parsing a data set so that the only nongenetic variables you control for are parental occupation, education, and income hardly scratches the surface of the differences in the circumstances of life between black and white people in America. No wonder *The Bell Curve*'s analysis found it couldn't account for the entire IQ gap!

HERITABILITY IS A RED HERRING

In fact, it is well known that minorities commonly fare poorly on IQ tests, in rough proportion to the degree of oppression and social prejudice they are obliged to endure. Historically, eastern European Jews did so poorly on IQ tests that the tests "would rather disprove the popular belief that the Jew is highly intelligent."³⁷ In 1924 these Jews would be specifically

targeted by the Johnson Immigration Restriction Act, on account of their bad "germ-plasm," but seventy years later they comprise Herrnstein and Murray's "cognitive elite"!

Likewise, Koreans in Japan, where there is strong prejudice against them, do significantly worse on IQ tests than Japanese. In America, Koreans and Japanese are on a par in IQ, and both are among Herrnstein and Murray's "cognitive elite." In South Africa, whites of Dutch ancestry consistently fared worse than whites of English ancestry (whose ancestors beat them in the Boer War)—but they reached parity in the 1970s, after a few decades of Afrikaner political dominance. In many cases, the socially inferior group is necessarily bilingual, and the children take the test in what is in effect their second language.³⁸ As the anthropologist John Ogbu has noted, there is a widespread tendency to interpret such differences in naturalistic terms—it relieves the dominant classes of responsibility for the disparities in social and economic circumstances.³⁹ But the historical ephemerality of those very group differences in IQ makes it difficult to sustain the "biological" explanation in any of those cases.

The most compelling argument invoked for the innateness of IQ is the fact that it has a significant "heritability." This was raised by Arthur Jensen in 1969 and provoked a considerable amount of discussion; and it is still raised by Richard Lynn—another favorite source in *The Bell Curve*, regular contributor to the *Mankind Quarterly*, and beneficiary of the Pioneer Fund.⁴⁰ Consequently, the term requires a bit of exegesis.

Heritability is technically the amount of variation associated with genetic factors divided by the total observable variation for a particular trait. I say "associated with genetic factors" rather than "caused by genetic factors" because there is no mechanistic argument involved—no genes isolated and transcribing messenger RNA in this analysis; the measure is correlational.⁴¹ Consequently, heritability is *not* an estimate of the genetic contribution to a trait. If this sounds paradoxical and confusing, it is. This is a term whose ambiguity has been exploited to great effect. Since the denominator—the total observable variation—incorporates environmental factors, it follows that by changing the environment you can change the measured heritability. Thus, the measure can have only local and specific relevance, since the environment is local and specific.⁴²

This in turn means that heritability estimates cannot be applied across populations: an estimate of heritability is specific to the population and situation in which it was measured, for the simple reason that it incorporates variation due to environmental factors, which must be population specific and situation specific.

Heritability, then, is a contextualized description of a population, not a property of the trait.⁴³

In Richard Lewontin's famous example from the Jensen years, imagine two identical plots of soil.⁴⁴ A handful of seed is sown in each; the seeds are genetically different from one another. One plot of soil receives sunlight, water, and fertilizer; the other does not. In the first plot, the plants vary in size, and that variation is largely associated with (and presumably due to) their genetic differences. Plant height in that plot has a very high heritability. In the other plot, the plants also vary in height, also on account of their genetic differences, and so plant height also has a high heritability there. But these plants are all somewhat stunted due to their environmental deprivation. Thus the two populations of plants both have high heritabilities for height, but the large difference between the two populations is entirely due to environmental factors. Lewontin also did the opposite mental experiment: Seed drawn from two different inbred lines will yield plants that vary in size across the plots because of the genetic differences between the strains; yet the heritability will be zero for both plots, for there is no genetic variation in either. *Heritability is not a measure of the innateness of a trait.*

Coming at it from the other side, consider the number of digits a human being has, strongly determined genetically to be exactly twenty, an inheritance from a remote aquatic pentadactyl ancestor.⁴⁵ Yet the heritability of digit number in a modern population is quite low. Why? Because although some rare people have a genetic condition of polydactyly, the leading causes of deviations from twenty are physical accidents (i.e., loss of fingers or toes). Very little of the observable variation is associated with genetic variation; nevertheless the trait is very strongly genetically programmed. Among the Pennsylvania Amish (in whom Ellis-van Creveld Syndrome is found, which includes a phenotype of polydactyly, and in whom there are presumably fewer industrial acci-

dents), we would expect the heritability of digit number to be higher. Again: *heritability is not a measure of the innateness of a trait*.

You can measure heritabilities of anything in any population. N. Block notes that "wearing earrings" had a high heritability in America prior to about 1980, when it was strongly negatively associated with a Y-chromosome; since that time the heritability has decreased.⁴⁶ Any gendered activity would have a significant heritability, since it would be associated with the genetic distinctions of sex: thus, the heritability of "baby-sitting" has been measured to be about .4! The result, he notes, can be "*intelligible*, but it does show that heritability is a *strange* statistic."⁴⁷

Another example that may be illustrative of the absence of causality is the heritability statistic. Imagine a society in which people with a particular genetic trait—say, blue eyes—are routinely shunted off to deprived, intellectually unstimulating sites. Someone with blue eyes will thus tend to have a low measured IQ, and variation in IQ will tend to have a strong association with genetic difference, since a genetically rooted feature is forming the basis of this imaginary segregation. Blue eyes may thus be considered a significant cause of the low IQs, but only in an indirect sense. The real cause is the action of this odious social program upon the relatively innocuous natural variation. But the measurement of heritability will not permit that crucial inference to be drawn.

Let us return, then, to the extensive arguments by Herrnstein and Murray that IQ has a heritability of .6–.8. Whether that is true, or whether the heritability of IQ is substantially lower, as others have argued, the calculation is irrelevant to the issue at hand.⁴⁸ The issue was supposedly the observed difference between populations on standardized tests, and what can be done about it.

Given that the genetic-statistical argument of the innateness of the black-white difference in IQ is spurious, we are then in a position to ask, "What other kinds of evidence are there?" And, as in earlier debates about innateness, we can turn for powerful data to the historical changes between generations of the same population.

Here we encounter a phenomenon that Herrnstein and Murray acknowledge as troubling. It is simply that, as intelligence tests have remained stable over the last few decades, various modernized populations have increased substantially in IQ.⁴⁹ People today do better on the

same tests than their parents did. Describing a seven-point increase in IQ over the course of a generation for the Japanese, A. Anderson properly classifies it along with the changes in height, body proportions, health, urbanism, and education that have occurred over the same period.⁵⁰ In Holland, the mean IQ rose twenty-one points in thirty years; in America the change is closer to fifteen points. As Douglas Wahlsten puts it bluntly, "More recently born children exceed the raw intelligence of their own parents at a comparable age by almost the same average amount as Americans of European ancestry exceed Americans of African ancestry."⁵¹

Could any reasonable person then deny the sensitivity of IQ to the conditions of life and the obvious possibility of blacks and whites ultimately equilibrating? Herrnstein and Murray could, and do (pp. 308–9). Apart from the evidences of secular trends in IQ, there is of course a considerable body of data on the importance of the circumstances of life for determining the IQ. The researchers C. Capron and M. Duyme found a major difference in IQ between French children adopted by wealthy parents and those adopted by poor parents, and a difference between children born to wealthy parents and those born to poor parents, which they attributed to prenatal conditions.⁵² C. Jencks and M. Phillips summarize the effects of race and parenting: "Black children adopted by white parents had IQ scores 13.5 points higher than black children adopted by black parents. . . . Mixed-race children who lived with a white mother scored 11 points higher than mixed-race children who lived with a black mother."⁵³

THE CONTRIBUTION OF ANTHROPOLOGICAL SCIENCE

The Bell Curve is an ideological treatise that selectively reviews and selectively criticizes existing literature and tortures a new database to defend the proposition that American social policy should be predicated on the inability of social conditions to ameliorate economic and academic disparities between the nation's black and white populations.⁵⁴

The relationship between the observed disparities and the inferred differences in "cognitive ability" recalls a dispute in early-twentieth-century

anthropology. Does the fact that someone does not do something mean they cannot? When Franz Boas distinguished formally between race and culture (or biology and history) in *The Mind of Primitive Man*, he was arguing specifically against the proposition that it was possible to infer properties of individual mental capacity from observing the achievements of groups.⁵⁵ Lurking always in the shadows was the ghost of Count Arthur de Gobineau, who had asked rhetorically, "So the brain of a Huron Indian contains in an undeveloped form an intellect which is absolutely the same as that of the Englishman or Frenchman! Why, then, in the course of ages, has he not invented printing or steam power? I should be quite justified in asking our Huron why, if he is equal to our European peoples, his tribe has never produced a Caesar or a Charlemagne among its warriors, and why his bards and sorcerers have, in some inexplicable way, neglected to become Homers and Galens."⁵⁶

What Gobineau took for granted is that "did not" means "could not." What the inhabitants of a country do not accomplish is a poor guide to their abilities: Europeans did not build the pyramids, but thousands of years later they do build skyscrapers. The fact that Gobineau could not name a Huron poet or healer says something about the bias provided by written records and, of course, about Gobineau's own ignorance. The fact that Gutenberg and Fulton were not Hurons does not mean much, considering that they weren't French either, so Gobineau's claim to their inventions lies merely in sharing the continent of their origin—a tenuous (if democratizing) connection, to be sure. The Hurons shared their continent with many peoples who did some pretty impressive things too, after all, like the Maya, Anasazi, and Incas. And of course, cultural history is contingent on its precedents: it took several thousand years of European history before Fulton could perfect the steamship. If the Hurons had known they were in a race, they might have worked harder at it!

Thus, there is a basic asymmetry between "didn't" and "couldn't." The fact that someone does something means that they could do it; the fact that they did not do it *does not* mean that they *could not* do it.

This can be more readily expressed as an epistemological dilemma: the difference between ability and performance. On the one hand, we have a cultural notion of ability, a set of potentials with an existence indepen-

dent of the contexts that make them manifest. It is a transcendent property, a reality that underlies any particular example of a subject's life and achievements. On the other hand, we have no way to measure it, or to perceive it. All that is accessible to us is performance, what real people do, either in the course of their lives or simply in an afternoon. And performances are predicated on many things, only one of which is ability. Thus, the asymmetry: if you score 160 on an intelligence test, it means you had the ability to do so; but if you don't score 160, it doesn't mean you did not have the ability.

The very vocabulary used by Herrnstein and Murray, and by psychologists widely and unfortunately, is telling: they claim that tests measure "cognitive ability."

But they do not.

They cannot.

Nothing can. Cognitive ability is a metaphysical concept; *any* ability is a metaphysical concept if it is taken to be decontextualized and separate from the conditions of life. Any measured attribute of a human being is already partly determined by the life that has already been lived, and shaped by its experiences. In more concrete terms, consider that the tests used by Herrnstein and Murray, the Armed Forces Qualifying Test, had a component of vocabulary. One does not have to be much of a philosopher to recognize that it must be testing, in part, *the words you have been exposed to*, or the degree of sophistication of speech you have already experienced. There is no sense in which it could possibly be measuring innate cranial potential, for that potential, if it ever existed, has been molded and given expression by the conditions of life.

It is, however, possible to make sense of the relationships among genetics, IQ tests, and intelligence if we begin by considering the pattern or structure of the variation. Human behavior differs principally from group to group. Its variants constitute what we mean by "culture"—*between-group* variation in thought and deed. Genetic variation, on the other hand, has a very different structure. Paradigmatic is the ABO blood group, in which all populations have all three variants in varying proportions. That pattern seems to account for over 80 percent of the detectable genetic variation in the human species: it is *within-group* vari-

ation. In addition to the different patterns of variation, immigrant studies make it quite clear that the between-group variation in behavior that we call "cultural" is, as Boas noted, historical in origin, not biological. This creates an a priori difficulty in seeing how genetic variation could be a major component of behavioral variation. All of which is not to deny a genetic component to human behavior, of course: it is simply that most human behavior varies from group to group and is nongenetic (it is cultural-historical in origin); yet within a group, people may differ from one another for reasons ranging from family experiences and ethnic tradition to genetics. However, from the patterns detectable in the human gene pool now, it is most likely that any such genetic variation would have a much larger within-group component than between-group component; thus, any average differences in the distribution of such alleles are very likely to be tiny and overwhelmed by other factors. Consequently, the existence of IQ alleles should not be particularly threatening, given what we already know of real-world genes and their effects. No such discussion, of course, is to be found in *The Bell Curve*, which relies heavily on more archaic concepts, such as innateness, immutability, and constitutional differences.⁵⁷

CONCLUSION

The most basic lesson in the human sciences is that statements about human biology are invariably political, particularly at the level of group comparisons, where one is looking for ostensibly innate features. *The Bell Curve* leads its reader from scientific-looking data and arguments to an endpoint about social policy, concluding that programs of social intervention are effective only for a very small number of people and, by implication, should be scaled back (pp. 549–50). Social diversity reflects a diversity of endowments, and unequal endowments, it tells us, are just a fact of life (p. 551). And to the extent that a civil society strives to maximize the quality of life for all, that responsibility should be borne by the neighborhood, not by the government (p. 540).

One of the instructive lessons of the controversy over Carleton Coon's 1962 *Origin of Races* is that scholars on the political left and scholars on

the political right recognized the political import of the work. Only the author himself—perhaps disingenuously, but certainly it was his public stance—denied it.⁵⁸ It is, of course, a self-serving stance to deny all responsibility for one's scientific writings. But ultimately such a position calls into question the very nature and validity of science itself.

At the dawn of the modern era, Francis Bacon articulated the value of science to an intellectual community that was, at best, suspicious of it.⁵⁹ Bacon's ultimate justification for supporting the new scientific philosophy was that it would improve people's lives. But four centuries later we are faced with an inversion of the Baconian promise for science: some science actually exists with the goal of increasing the level of *misery* in the world. Given its scholarship, citations, and associations, it is hard to see the goal of *The Bell Curve* as other than to rationalize economic inequality, to perpetuate injustice, and to justify social oppression. Such science gives the rest of the field a bad name. Moreover, it is tempting to speculate upon the ultimate fate of science (and subsequent European history) if works like *The Bell Curve* had been known in the seventeenth century, when early advocates were risking their fortunes and reputations to convince their readers that this new thing, science, was both benign and oriented toward human betterment.

CODA

J. Philippe Rushton became president of the Pioneer Fund in 2002, upon the death of Harry F. Weyher. Weyher's recollections, published in 2001, included vacationing with the segregationist activist Henry Garrett ("a fun person") and polygenist Ruggles Gates ("also a good companion").⁶⁰ Upon succeeding to the presidency, Rushton embarked upon a perfervid defense of the Pioneer Fund in response to extensively documented critiques by W. H. Tucker and P. A. Lombardo.⁶¹ Rushton's own work, ostensibly showing that the average IQ of indigenous Africans is set at seventy, is invoked favorably by V. Sarich and F. Miele, whose problematic book on race comes adorned with jacket blurbs by Arthur Jensen and Charles Murray.⁶²

11. ANTHROPOLOGY AND THE BELL CURVE

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