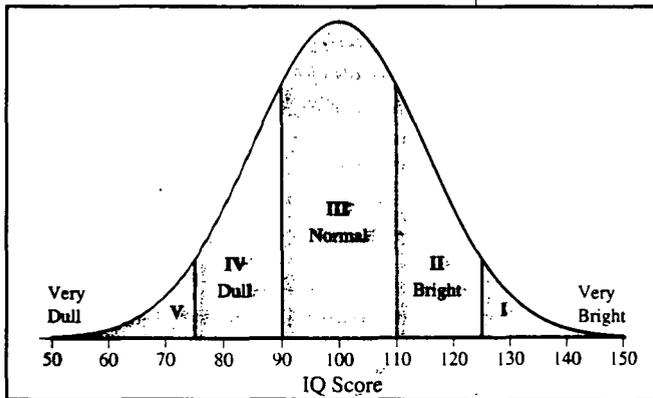


Frauds At the Heart of the Bell Curve

After enduring weeks of solemn hagiography on the topic of Herrnstein and Murray's scientific integrity in fearlessly confronting unpalatable truths about race and intelligence, **CounterPunch** enlisted the help of a first-rank statistician, Pierre Sprey, in reviewing the statistical assumptions and diagrams that crowd the 845 pages of *The Bell Curve*.



Sprey has spent over 35 years working with real world data in fields as various as the environment, military aircraft testing, infantry combat effectiveness, genetics and behavioral psychology. His analysis shows that the intellectual procedures of what promises to be the least-read best-seller since *The Satanic Verses* are marked by semantic evasiveness and willful mutilation of data. Unsustainable conclusions flow inevitably from a hopelessly corrupt, though academically fashionable, methodology.

The bell curve – that is, normal probability distribution curve – was derived independently in the mid-19th century by two famous mathematicians, Gauss and Laplace. The curve (see above) purportedly describes a way in which data or measured characteristics scatter. It is a mathematical construct that is very useful in the academic world, and indeed is universally taught in college statistics, particularly statistics for the soft sciences.

There is one fundamental problem

with the bell curve. No natural set of data, whether to do with physical, sociological or economic measurement, was ever distributed along such a curve. It is purely a mathematical figment permitting elegant calculations with no purchase on reality. Back in the 1920's one leading statistician offered a prize to anyone coming forward with a set of data points of real measure-

ment of the physical universe or of human attributes that could actually be demonstrated to follow the bell curve. The reward, rising over the years to some \$200,000, has never been claimed.

Nearly all the conclusions in Herrnstein's and Murray's polemic tract are based on the bell curve, and on correlation and regression analysis – supposedly scientific ways of uncovering relationships between multiple variables – which derive from the bell curve, and which duly exacerbate the follies of assuming a bell curve in the first place.

A far less misleading way of presenting data is to put the real data points on a scatter diagram, which simply plots actual data values on a two-axis graph, with one point representing each pair of measured values. With suicidal alacrity, Herrnstein and Murray on page 68 of their book offer readers the only scatter diagram in their entire book, which is reproduced here. They urge their readers to “keep [it] in mind, for it is what a highly significant correlation in the social sciences looks like.”

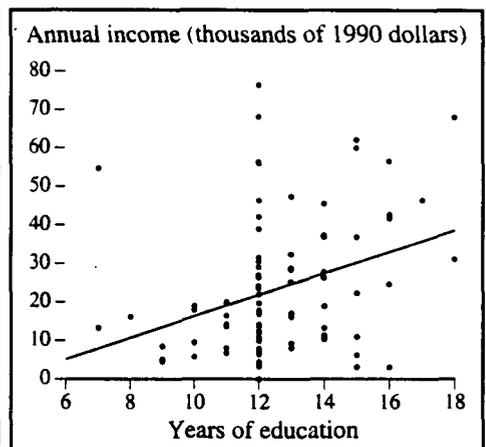
With data from a randomly selected 1 per cent of a nationally representative sample (in fact doctored to conceal embarrassingly large scatter)

and using two axes of income and education, the authors offer a straight line purportedly showing expected change in income for each increment in years of education. They claim the correlation is “a statistically significant .33,” and the expected value of an additional year of education is an additional \$2,800 in family income, a major substantive increase.

As if uneasily aware that the scatter chart shows nothing of the sort, the authors warn readers about how “numerous are the exceptions,” adding that the same is true of virtually every topic in the book. Furthermore, “a plot of the raw data would reveal as many or more exceptions to the general statistical relationship.”

Now the straight line rising diagonally across the chart and supposedly showing the “statistically significant .33 relationship” (by ordinary statistical standards a very low correlation coefficient) should be dependent on at least two stringent assumptions: the scatter of the data must follow a bell shaped curve, and there has to be an underlying linear relationship between the two variables, income and education.

But there is no bell curve. Merely look at the chart.



A bell curve says data scatter in such a way that the most frequent occurrences are in the middle, where the bell curve peaks. As you move upward or downward from the mean in the middle, the frequency of occurrence is supposed to diminish symmetrically, exactly as the curve describes.

But, in looking at the line up from the 12-year mark — those who have had exactly 12 years of education, high school graduates — one sees immediately that the data do not scatter around the middle of the income spread, at roughly \$40,000. In a bell curve, half the occurrences would be above and half below. But here most points scatter toward the bottom. A curve that truly describes how income scatters is, as one might expect, highly skewed toward the low side. Most of the people are making poor wages, and a small and decreasing number making high wages. A bell curve could not possibly describe what is happening in the chart.

As Sprey invited us to do, erase Herrnstein's and Murray's bogus correlation analysis as represented by the diagonal line. Look at the scatter plot from the point of ordinary common sense. Of the three individuals who dropped out before eight years of education, one made a lot of money and the other two not much, around \$15,000 per year. Now look at people who continued in school for an additional two or three years. They do worse.

Those continuing on to college for a few years actually appear to fare more poorly than those whose education ends with high school. At least at the high end they don't make as much, and the average income is perhaps only a little higher. Fifteen years of education is particularly bad at the low-income end, with a bunch of people making less than \$10,000. Then, at 16 years, graduation from college gives an upward push.

So the real curve is strikingly different from Herrnstein's and Murray's smooth and straight ascender of \$2,800 for each additional year of education. The real data suggest instead of a straight line, a curve starting around \$25,000, then dropping to \$5,000 for those with nine or ten years of education, then bending slightly up again for high school, with hardly any increase as you go from 12 to 13 years. College dropouts seem to do worse than those who opt out after high school. The in-

come spreads for high school graduates is at least as large at the upper end as for those with masters degrees.

Herrnstein and Murray make the same totally invalid assumptions throughout their book. "They do this hundreds of times," says Sprey. "Their whole book is based on arbitrary straight lines in the face of clearly curved data, piss-poor and invalid correlations, and bell curves that don't exist."

Alongside the statistical chaos, Herrnstein and Murray consistently and deliberately shade IQ into "intelligence," smartness or what they call

The Bell Curve's unsustainable conclusions flow inevitably from a hopelessly corrupt methodology.

"cognitive ability." But what IQ measures is the ability of people to take IQ tests. High IQ means the ability to do well on IQ tests.

So in pursuit of what they term the emergence of a "cognitive elite," Herrnstein and Murray conclude that colleges are admitting smarter people. It can be argued with far greater persuasiveness that college administrations are becoming stupider, taking the easy road of picking people with high IQ instead of pursuing the much harder task of picking people with substantive and creative intelligence — a task which unfortunately requires extraordinarily intelligent people to do the selecting. Certain professions have been entirely taken over by the IQ and SAT test standard, and these test measures are rife throughout the corporate world.

Statistically fraudulent, *The Bell Curve* is in fact a paean to the mighty pseudosciences of IQ and SAT testing, and the grossly misleading notion that a college education makes people more productive. It is also a paean to that other pseudoscience, stretching back to Galton, of eugenics, and the alarum

that the nation's productive gene pool is under constant threat of contamination from the *lumpen* sewage, most particularly black people.

CounterPunch hereby offers Murray a \$200 reward if he can prove, using statistically valid tests, that any set of IQ or socio-economic data in his book actually follows the bell curve. ■

Racism 1994, continued from p 2.

fitted from Pioneer largesse are cited approvingly by Herrnstein and Murray (see accompanying story).

These spasms of racist IQ theory and accelerated persecution of the poor and minorities frequently coincide with economic and social upheaval. The Supreme Court's 1954 decision in *Brown v. Board of Education* provoked a wave of race inferiority work designed to demonstrate that there was no point in trying to educate the negro. The IQ racists of later years have wanted to justify the accelerating splits in American income between an elite and the broad and undeserving mass.

There is no "respectable" sector, to be distinguished from disreputable cousins. When Teddy Roosevelt wrote to the Eugenics Section of the American Breeders Association in 1913 — "if in the future racial qualities are to be improved, the improving must be wrought mainly by favoring the fecundity of the worthy types and frowning on the fecundity of the unworthy types" — he was down in the gutter, along with the whole crew, from Galton through to Murray, by way of Laughlin, Goddard and indeed the notorious Konrad Lorenz, who spelled out the Nazi program in a German periodical, *Journal of Applied Psychology and Characterology*: "Just as in cancer, the best treatment is to eradicate the parasitic growth as quickly as possible. The eugenic defense against the dysgenic social effects of afflicted subpopulations is of necessity limited to equally drastic measures." ■

Bell Curve Politics

The Pioneer Fund and Proposition 187

The clamor over *The Bell Curve* receives political expression in California's Proposition 187, which would deny undocumented workers and their children from receiving public health care or education services, and compel state employees to report them to the INS. The Golden State has an especially poisonous nativist tradition. For much of this century, California barred Japanese from holding property. During the 1930s California and several neighboring states forcibly deported nearly half a million Mexican immigrants, some legal residents.

One organization with a keen interest in 187, though keeping a low profile for political reasons, is the rabidly anti-immigrant Federation for American Immigration Reform (FAIR). One of FAIR's top lobbyists, former INS commissioner Alan Nelson, helped draft the initiative in 1993. During that year Nelson was paid \$70,000 from FAIR, his sole client.

FAIR was founded in the late 1970s by the notorious John Tanton, also the founder of U.S. English, an English-only lobbying outfit. In 1984 Tanton, who still sits on FAIR's board, drafted a revealing memo to members of a coalition of anti-immigrant forces. He wrote: "Can homo contraceptivus compete with homo progenerativa if borders aren't controlled? Or is advice to limit ones family simply advice to move over and let someone else with greater reproductive powers occupy the space?...Perhaps this is the first instance in which those with their pants up are going to get caught by those with their pants down!"

Another FAIR board member is Garrett Hardin, a University of California at Santa Barbara professor. He argues that "spectacular results could be

obtained by preventing the breeding of numerous members of the subnormal classes."

CounterPunch reviewed IRS reports and found that FAIR has received substantial funding — \$1,080,000 between 1982 and 1992 — from the white supremacists at the New York-based Pioneer Fund. That makes FAIR the second largest of Pioneer's 22 grant recipients.

The original aim of Pioneer, established in 1937 by textile magnate and Nazi admirer Wickliffe Draper, was to promote the breeding of "white persons who settled in the original thirteen colonies prior to the adoption of the Constitution and/or from related stock."

Its first president was Harry Laughlin, who in the 1930s lobbied to prevent Jews fleeing Germany from entering the United States. Laughlin, who called Nazi sterilization laws "a most exciting experiment," was honored with an honorary degree from the University of Heidelberg in 1936.

Pioneer has funded a number of right-wing academics who promote black inferiority. Murray does not appear to be directly linked to the Fund but virtually all of Pioneer's leading grant recipients are cited reverentially in *The Bell Curve*. Among the most abhorrent beneficiaries of Pioneer largesse are:

- **J. Philippe Rushton** (\$656,672 between 1982 and 1992), University of Western Ontario. Rushton, whose work received a rave notice in the Sept. 12 *National Review*, once revealed his intellectual talents on "Geraldo."

He links cranium and gonad size with IQ, levels of aggression and altruism. Rushton also posits that Africa, with its warm but unpredictable climate, led its inhabitants to reproduce

in mighty proportions. The European cold, on the other hand, encouraged, less frenzied procreation but a more careful nurturing of children.

One of Rushton's obsessions is penile throw weight. According to a recent story in *Rolling Stone*, he used Pioneer money to conduct a survey at a shopping mall in which participants — one-third white, one-third Asian, one-third black — were asked about the size of their penis and their maximum distance of ejaculation. "There is a black-white difference in testosterone levels," he once remarked.

Murray and Herrnstein defend Rushton, saying his work is "not that of a crackpot or a bigot," and that "he paints with a broad brush." In justifying its ties to Pioneer, FAIR says the organization's funding recipients, including Rushton, are "reputable, distinguished scientists."

(On Oct. 16 Malcolm Browne of *The New York Times* reviewed a book by Rushton along with *The Bell Curve*. He wrote that the authors of these splendid works were "recognized by colleagues as serious scholars." A writer in *The Toronto Star* remarked that Browne must have been referring to "Professor Beavis and Professor Butthead.")

- **Richard Lynn** (\$388,187) of the University of Ulster. Lynn is an honorary associate editor of *Mankind Quarterly*, a magazine dedicated to "race science" and which has links to former Nazi geneticists. One past editorial advisor was Otmar, Baron Von Verschuer, a former teacher of Joseph Mengele and the man who recommended the "Angel of Death" for his post as Auschwitz camp doctor.

In an Oct. 24 article in *The Times* (of London), Lynn defended *The Bell Curve*. "The bottom line is that the underclass has an intelligence deficit," he charged, adding that "with an average IQ of 77, the chronic unemployed are not much above the level of mental retardation." The one thing the underclass is good at, according to Lynn, "is producing children." These mutant