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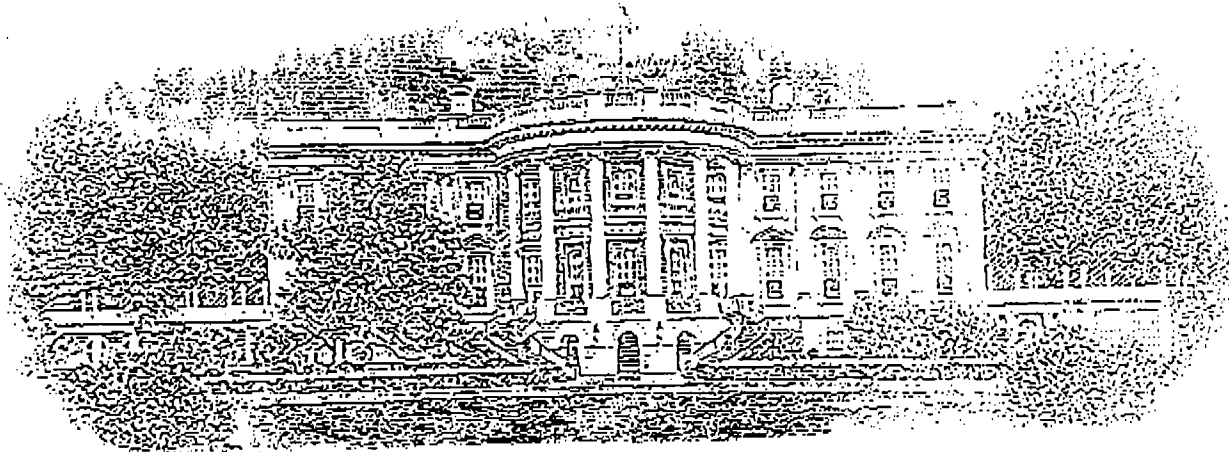
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THE WHITE HOUSE



FAX COVER SHEET
OFFICE OF DOMESTIC POLICY

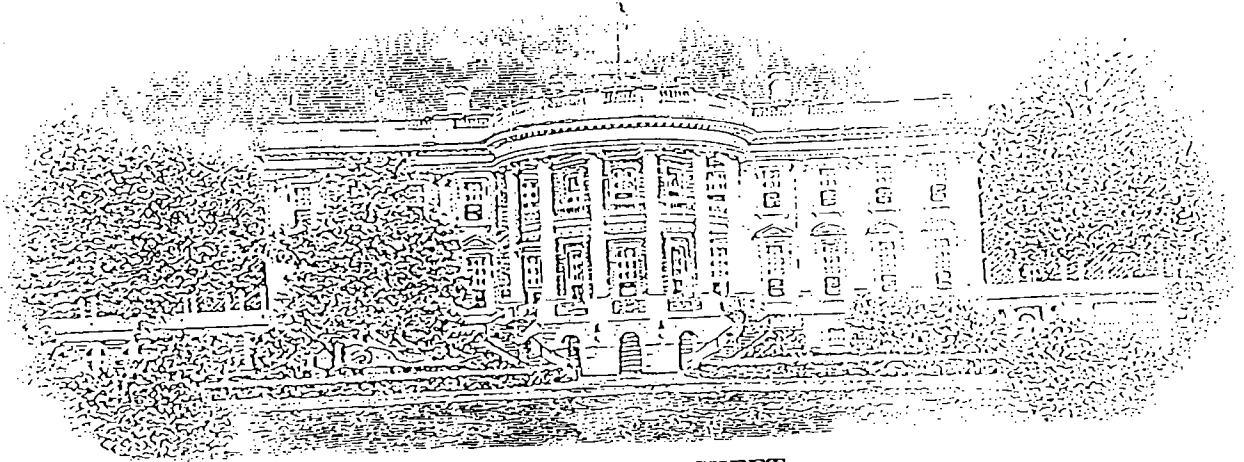
DATE: Aug. 4, 1995

TO: T. J. Conkey

PHONE: _____ FAX: 612-335-1637 Pages (including cover) _____

FROM: Gaynor McCown

THE WHITE HOUSE



FAX COVER SHEET OFFICE OF DOMESTIC POLICY

DATE: Aug. 4, 1995

TO: T. J. Conkey

PHONE: _____ FAX: 612-335-1637 Pages (including cover) _____

FROM: Jaynor McCown

PHONE: 456-5575(202) FAX: 456-7028 (202)

COMMENTS: T. J. -

I thought you may be interested in the
attached article co-authored by Tom Kane. Talk
to you soon.
Jaynor

Does *The Bell Curve*

William T. Dickens and Thomas J. Kane are visiting fellows, Charles L. Schultze a senior fellow, in the Brookings Economic Studies program. They are completing *Does The Bell Curve Ring True?* (Brookings, forthcoming, 1995), from which this article is adapted.

Measured by the media attention and controversy it has attracted, *The Bell Curve* by Richard Herrnstein and Charles Murray was the publishing event of the decade.

The book presents a disturbing and highly pessimistic view of trends in American society. The United States, according to the authors, is rapidly becoming a caste society stratified by IQ, with an underclass mired at the bottom, an elite firmly ensconced at the top, and only a limited scope for public policy to boost the disadvantaged. But the bulk of the attention and controversy that swirled around the book focused not on its sweeping vision of what is happening to U.S. society, but on the authors' application of their theories about IQ to the question of race.

Charles Murray complained in the *Wall Street Journal* last December that the critics' focus was too narrow. We sympathize with Murray's frustration over the content and tone of some of the criticism that the book received. But the book may have fared even worse had the discussion of race and genetics not distracted attention from some serious problems of analysis and logic in its main arguments. There are indeed some useful messages in the book. But there is also much wrong with it.

High IQ Does Not Guarantee Success

Herrnstein and Murray are not the first to ask what determines economic success. Many studies, using many different sources of data, have examined the extent to which factors such as education, family background, and IQ can explain differences in people's wages or family income. On two points these studies agree closely. First, measurable differences among individuals—including IQ test scores—can explain only about 30-40 percent of the differences in economic outcomes. The remaining differences arise from unmeasurable factors—personal-

ity, looks, networking, perseverance, concern for the future, and just plain luck, to mention only a few. Second, differences in IQ alone (as measured by test scores) explain some fraction of the variation in income, but realistic estimates place that fraction at 10 percent or less.

The authors of *The Bell Curve* neither discuss this latter finding nor contradict it with any independent work of their own. They do use the National Longitudinal Survey of Youth—a comprehensive set of data from a sample of thousands of people aged 27-34 in 1992—to analyze the effect of scores on the Armed Forces Qualification Test (which Herrnstein and Murray argue is a better measure of IQ than any IQ test) on a wide range of social outcomes, such as illegitimacy, crime, and marital status. These analyses are useful. But nowhere do the authors use the information in the data set about wages, annual earnings, and incomes to analyze the extent to which the AFQT test scores can explain variations in the key economic outcomes—earnings and income.

Because the authors of *The Bell Curve* did not use their data to examine how much of the variation in income could be explained by AFQT, we did. Our findings are consistent with past research. Considered alone, AFQT scores explain only about 15 percent of the differences among people's hourly earnings. Results for annual earnings and family income are similar. Even the authors of *The Bell Curve* do not claim that cognitive test scores can explain much more than 16 percent of the variation in people's job performance.

And even these results overstate the independent effect of AFQT scores on economic outcomes. Because of both heredity and environment, there is a positive—though far from one-to-one—relationship between a person's socioeconomic background and his or her IQ test scores. Failing to take differences in people's backgrounds into account when considering

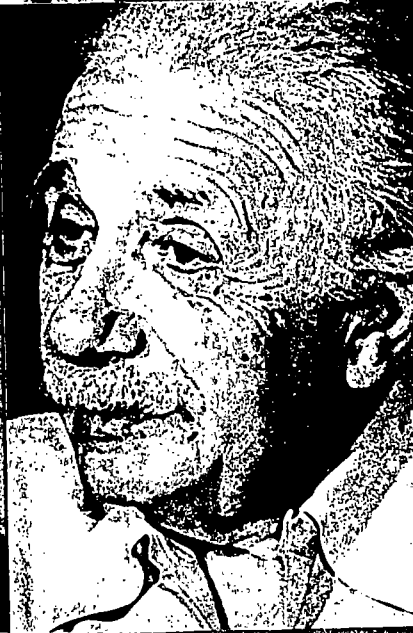
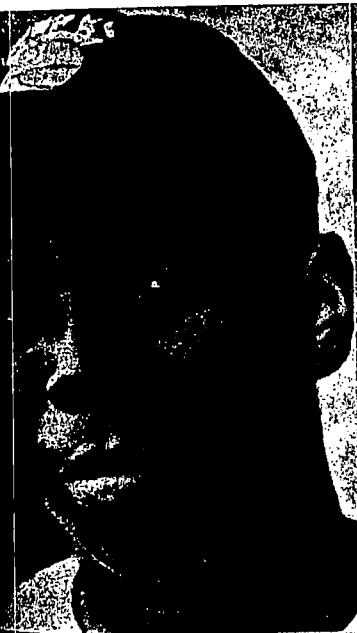
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Ring True?

WILLIAM T. DICKENS,
THOMAS J. KANE,
AND CHARLES L. SCHULTZE

A CLOSER LOOK
AT A GRIM
PORTRAIT
OF AMERICAN
SOCIETY



the correlation between AFQT scores and earnings credits AFQT scores with some of the differences in earnings due to such things as the influence of home environment on learning, or family connections that might help someone get into a better school or job. To deal with this problem, we used a statistical procedure that allows us to separate the effects of test scores on a person's income or earnings from a range of other influences on economic outcomes, such as parental education and occupation, number of siblings, place born and raised, and ethnicity. All these things affect a person's success but, obviously, are not themselves affected by his or her own test scores. Again, what we find accords with what past researchers have found: test scores explain about 10 percent of the differences in the hourly earnings, annual earnings, or family income of the young people in the NLSY in 1993.

The effect of IQ on economic differences among people reflects two aspects of the relation between test scores and success. First, people with higher IQs tend to earn more. Thus, *on average* the person with an IQ of 115 will earn about 30 percent more than the average person with an IQ of 100. That's a big premium. But the variation of individual experience around that general tendency is immense. For example, more than 40 percent of the people with the 15-point higher IQ will earn a premium greater than 50 percent, while 35 percent will earn less than the average for the population as a whole. Second, precisely because of that wide diversity, the proportion of the over-

all variations in income that can be explained by IQ is small. Thus, in the NLSY the average annual earnings of the 10 percent of people with the highest AFQT scores are 55 percent greater than the population average, while the earnings of the *richest* 10 percent are 200 percent higher.

Figure 1 shows the relation between AFQT scores and annual earnings in the NLSY. The black line shows how earnings were distributed among the young people

surveyed. Many people are clustered around the average; the numbers gradually fall off as earnings go up, with only a few people at the very top. The red line shows how annual earnings would be distributed if everyone had the average AFQT score but otherwise continued to differ as they now do in all other ways. (That is, we added to or subtracted from each person's actual earnings the *expected* amount by which someone with his or her AFQT score had earnings different from the population mean.) The gray line reverses this calculation. It shows what the distribution of earnings would be if only AFQT mattered (we gave everyone the earnings expected for people with their AFQT score). If all that mattered was AFQT scores, U.S. society would clearly be very egalitarian. Eliminating differences due to IQ would have little effect on the overall level of inequality.

IQ as Economic Stratifier

If they make no use of the *direct* evidence on the importance of IQ in determining wages, earnings, and income, how do the authors of *The Bell Curve* conclude

that IQ is becoming the decisive force in stratifying Americans economically? They construct a circumstantial case. First, they assemble data showing that test scores that reflect cognitive ability have become far more important in determining who gets into college, especially highly prestigious colleges, than was the case earlier in this century.

Second, they estimate (and partly speculate) that an extremely high proportion of the 10 percent of U.S. workers with the highest IQs is now employed either as members of "high-IQ" occupations or as business executives. Earlier this century, most high-scoring high school graduates did not go to college and, they speculate, were scattered more randomly throughout the workforce, many of them in relatively average or lower-paying jobs, where their superior IQs were rewarded with far less income and prestige than is now the case.

If people with high IQs were once much less well rewarded relative to the average than they are now, it must have been for some combination of two reasons: they were less likely to hold the better-paying jobs, or income was distributed much more equally, so that the earnings gap between good and poor jobs was less than it is now. Little evidence supports the first possibility. The second is demonstrably false.

In the first place, as various authors (for example, Claudia Golden and Robert Margo) have shown, over the past 50 years the income premium for a college education has not risen steadily, but has fluctuated around a more or less stable level in percentage terms. Moreover, while top colleges today do stress test scores more than they once did, the number of years of education people are likely to acquire has been predictable from test scores with an unchanged degree of accuracy (or inaccuracy) ever since the early part of the century. Next, although the past two decades have seen growing income inequality, the trend follows a large *decline* in inequality in the 1940s and has simply restored the inequality of the prewar era. Similarly, according to Golden and Margo, wages paid "professionals," relative to the average wage, actually declined from 1940 to 1960. They then rose again in recent years.

There is evidence from several studies that in the past several decades the role of IQ test scores in determining economic success has increased. But IQ is still far from a dominant force in shaping the distribution of income. The evidence in no way warrants the view that its growing importance has drastically altered the nature of U.S. society.

Changing IQ Is One Thing, Changing Lives Another

Herrnstein and Murray conclude that public policies can do little to raise IQ. Given the important role they assign IQ in determining social outcomes, this implies a deep skepticism about the potential for compensatory education, training, and related policies to improve the lot of the disadvantaged. Moreover, they offer little hope that further experimentation with Head Start or even better programs could help, since "The main lessons to be learned have already been learned: It is tough to alter the environment for the development of general intellectual ability by anything short of adoption at birth." Even school dropout prevention is of dubious value. Herrnstein and Murray ask, "If somehow the government can



cajole or entice youths to stay in school for a few extra years, will their economic disadvantage . . . go away?" and answer, "We doubt it."

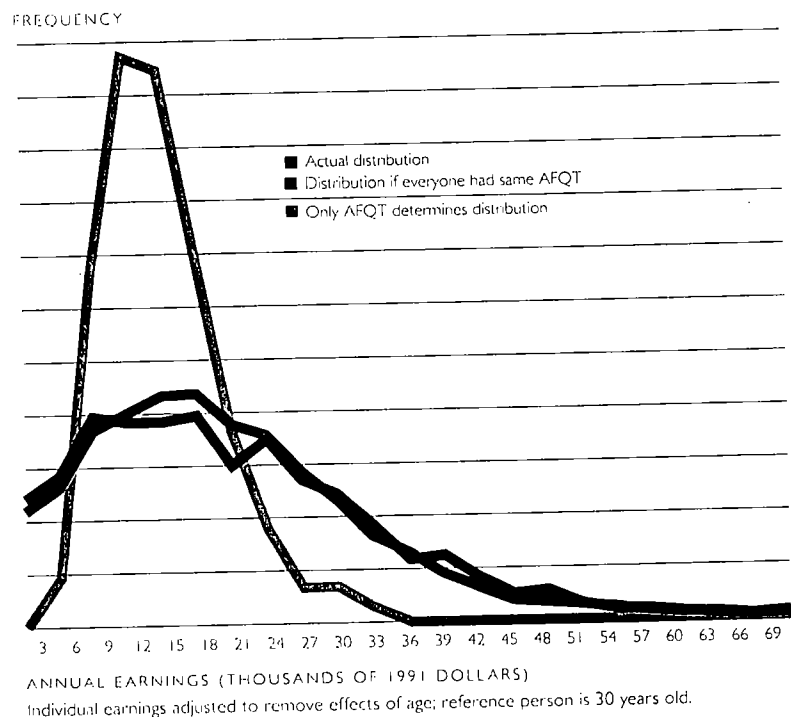
As that answer starkly reveals, the authors' deeply pessimistic conclusions are based on an excessively ambitious goal. To be worthwhile, social interventions need not make economic disadvantages "go away." No program we know about will do so, and new miracle cures are unlikely. While some enthusiasts in the early days of the Great Society may have cherished hopes to the contrary, knowledgeable observers long ago became more realistic. Social interventions should not be judged on whether they "cure" the problem, but on whether they are likely to raise the earnings of the disadvantaged or otherwise improve their prospects enough to make the investment of government funds worthwhile. And a large body of research and program evaluation gives us the answer: some can, some can't, and on some the jury is still out.

What about early childhood education, such as Head Start? Using Herrnstein and Murray's most conservative estimate of the payoff to IQ, a single point in IQ is worth some \$232 a year in earnings (1994 dollars). Herrnstein and Murray cite a 1982 analysis by Irving Lazar and Richard Darlington of six early childhood education programs. The median IQ gain by children completing these programs was 8 points at the end of the program, declining to 3 points by fourth grade. Herrnstein and Murray dismiss these results as small. But how much would such a gain be worth later in life? Based on their own results, 3 IQ points would lead to a yearly earnings gain of \$696. With Head Start costing \$5,400 for each student, a \$696 increase in earnings each year over a person's working life would represent a real rate of return on investment of more than 5 percent—greater than the average return to investing in bonds. Herrnstein and Murray correctly point out that the cognitive effects of early childhood education programs have not been large enough to erase the handicap of having been born to a disadvantaged family. But what appear to be small gains can, in fact, produce economically justifiable returns. And this is to say nothing of other reported gains, such as lower rates of teen pregnancy and higher rates of high school completion.

It also turns out that it is possible to do better than hazard guesses about the economic payoff to increasing the years of schooling for young people. Many states require students to attend school until a certain age. When combined with laws requiring children born later in the year to wait a year before starting school, these compulsory schooling laws generate differences in educational attainment for children born at different times of the year (students born late in the year reach the compulsory schooling age after having completed one fewer year in school). And these differences make it possible to identify the causal effect of education on earnings for those compelled to stay in school longer. In 1991 Joshua Angrist and Alan Krueger, using this "natural experiment," found that those required to spend another year in school earn 7–10 percent more than those who are not—a payoff quite similar to the payoff per year of schooling noted by simply comparing the average earnings of people with different amounts of education. Apparently, "cajoling" would-be dropouts to remain in school *can* raise their earnings.

Education and training programs are not the only

Figure 1. Distribution of Earning



way to improve earnings prospects. A program to desegregate Chicago public housing nearly randomly assigned people to live either in poor inner-city housing or in apartments in well-off suburbs. A study later showed that those who moved to the suburbs were 25 percent more likely to be employed than those who stayed in the city, were less likely to drop out of school, and were twice as likely to attend college. Further evaluation of the potential for large-scale gains will be possible from the Department of Housing and Urban Development's "Moving to Opportunities" program, which aims to open the door to improvements like this for many more people.

Herrnstein and Murray do not report on two decades of evaluations of government-sponsored employment and training programs that, while not showing dramatic turn-about in people's lives, often find benefits greater than the costs. Examples include school dropout prevention programs, Job Corps, JTPA for adults, and several employment and training programs for welfare recipients.

Of course, not all investments in training and education are worthwhile. And, unlike the case with business investment decisions, markets cannot weed out bad social investments. But experimental evaluations can, if administrators and legislators act on them.

Discrimination Still Exists

Just as Herrnstein and Murray dismiss public intervention to aid the disadvantaged, they favor abandoning antidiscrimination law. While critics of *The Bell Curve* have focused on its claims about race, intelligence, and genes (see box), two other issues in the book having to do with race

and intelligence have received little discussion: the conclusion that black-white earnings differences are due solely to IQ difference and the argument that reverse discrimination exists in America's colleges. Yet both arguments are more important to the book's case against antidiscrimination law than any arguments about race and genetics.

To understand the evidence about black vs. white earnings it is crucial to distinguish wage rates from annual earnings, to separate males from females, and to differentiate blacks with high IQ and socioeconomic status from other blacks.

Herrnstein and Murray lump together men and women and find that blacks with the same IQ as whites are paid the same hourly rates. We analyze the same data in more detail and with much greater attention to specifying status of people's family background and find the following. *First*, employed black men have hourly rates of pay that are about equal to those of whites with the same observable characteristics, including family background, education, marital status and test scores; black women have higher wage rates than comparable white women, although lower than white men. *Second*, however, black men are less likely to have a job or to work full-time. In the case of the average black male, annual earnings are nearly 20 percent below those of comparable white males. Black females, while having lower annual earnings than white men, earn more than comparable white women. *Third*, black males

who are significantly above the black average with respect to IQ test scores, education, and family background have annual earnings much closer to those of comparable white males, and black women at the upper end of the scale appear to do better than their white counterparts.

Studies such as these, however, provide only weak evidence for or against the existence of discrimination. In the first place their results depend critically on just what measures of family background and other characteristics are used to determine who are "comparable" workers and job applicants. For example, June O'Neill, Derek Neal, and William Johnson analyze the same data, but when they do not include the extensive information on family background that we do, they find substantial differences between the wage rates of comparable black and white males, on the order of 10 percent. Second, the NLSY covers young workers, and the importance of the various determinants of earnings changes with age. Further, the effect of background on wages may reflect not only differences in job qualifications, but also discrimination against those with lower-class backgrounds.

Even more important, employers can know much more about someone than what we can know from the NLSY survey. Our data, for example, show only the number of years of school completed while an employer can find out which school a jobseeker attended and how good it is. Much more convincing evidence of continuing discrimination comes from audit studies, where carefully matched pairs of blacks and whites, men and women, or Hispanics and Anglos, apply for the same job. No study has found that minorities and

women are advantaged in the job market; nearly all show that they continue to be discriminated against. One Urban Institute study found that whites or Anglos were offered jobs half again as often as the blacks or Hispanics with whom they were matched.

Herrnstein and Murray's claim that blacks score lower on tests than whites at the same college or in the same occupation also misses the point. They write as if they believed that test score differences of the size they find could only be the result of reverse discrimination. With some exceptions, however, those differences could be the result of race-blind processes that simply choose the best person for a given school or job.

Blacks, on average, score much lower than whites on standardized tests. If such tests were completely unrelated to performance, employers and colleges would ignore them, and the difference in test scores between blacks and whites at the same school or job would be the same as in the population as a whole. In fact test scores explain at most 10–25 percent of differences between people in job performance or success at school. Consequently, in groups of people chosen solely on the basis of ability, blacks and whites will have test scores more similar than blacks and whites in the population as a whole, but not much more. To reduce black-white differences in test scores to levels Herrnstein and Murray consider reasonable, colleges and employers would probably have to set *higher* standards for overall ability for blacks than for whites.

Although Herrnstein and Murray did not study college admissions decisions directly, we have. Our evidence suggests that there is indeed racial preference in admissions at elite colleges, but little or no evidence of such preferences at other institutions—where 86 percent of the college population is to be found. Further, we find little evidence that racial preferences in admissions lead to higher dropout rates for blacks as some have contended. A debate about the use of race in admission decisions would be healthy, but it must be based on a more careful reading of the evidence.

Unwarranted Pessimism

While most criticism of *The Bell Curve* has focused on the authors' claim that racial differences in IQ test scores are, in part, genetic, many of the book's most important claims have escaped scrutiny. They shouldn't. The book's basic premise—that IQ is becoming the decisive force in determining economic rewards and social position—is demonstrably false. Herrnstein and Murray's evidence on the difference between black and white test scores in various occupations does not show what they imply it does—massive reverse discrimination. In fact, their own evidence showing blacks and whites with the same test scores earn the same wages contradicts such a claim. Further, differences between blacks and whites in annual earnings, and the employment discrimination revealed in employment audits, suggest that blacks continue to be disadvantaged in the labor market. Because the authors sharply exaggerate the importance of IQ, the book is excessively pessimistic about the potential role of carefully selected government programs in improving the lives of the disadvantaged. In all the controversy over the authors' claims about race and intelligence, these points should not get lost.



Racial Differences Need Not Reflect Genetic Differences

Of all the controversial claims about race and intelligence in *The Bell Curve*, the one that has been at the center of the fire storm is the claim that "...both genes and the environment have something to do with racial differences." Herrnstein and Murray are "agnostic" on the relative importance of nature vs. nurture, but find it "implausible" that environmental differences can be large enough to explain all racial differences in IQ test scores. They conclude that "those who believe that ethnic differences are readily explained by environmental differences haven't been tough-minded enough about their own arguments."

To make this case, Herrnstein and Murray borrow an argument from educational psychologist Arthur Jensen of the University of California at Berkeley. Whites who have the same IQ test scores as the average black person are at about the 34th percentile of the white population. But ample evidence attests that, among whites, environmental differences such as family background and neighborhood influences can account for only part of the observed differences in IQ—Herrnstein and Murray cite 40 percent as a mid-range estimate. Thus, for environmental conditions to place a white person as low as the 34th percentile, that person's environment would have to be extremely poor. To the extent that black IQs are influenced by the same kind of environmental factors as whites—and those would include such intangibles as self-esteem that are affected by race discrimination—the environment in which the average black is raised would have to be as poor as that of the bottom 10 percent of whites. As Jensen points out, no observable differences between blacks' and whites' backgrounds are that large, so how could the entire difference be due to environment?

Compelling as this argument seems logically, evidence is accumulating that it is flawed. Herrnstein and Murray discuss a post-World War II survey showing that illegitimate children fathered by black and white U.S. servicemen in occupied Germany have the same IQs, even though, as James Flynn has shown through a variety of indirect evidence, the IQ scores of the black and white fathers differed as much as the scores of blacks and whites in the U.S. population.

As Herrnstein and Murray also note, Flynn has documented huge increases in measured IQ over periods of time far too short for them to be explained by changes in the gene pool. Changes as big as the 15-point black-white difference have occurred in many places

around the world, including the United States, in as little as 20–60 years. These differences—clearly environmental—seriously challenge Jensen's argument.

Similarly, whites living in different states in the United States have large differences in IQ. In fact, the difference in AFQT scores between whites in the highest and lowest state is a substantial fraction of the difference between blacks and whites. The mobility of the white population makes it hard to believe that these differences could be in any large part genetic.

It is clear from these three examples that something is wrong with Jensen's argument. Either the estimates of the importance of environment within the white population are understated, or something is wrong with the basic logic of the argument. Flynn argues convincingly that estimates of the role of environment near Herrnstein and Murray's "upper bound" (60 percent) are more plausible than lower estimates, but this still leaves a larger gap between black and white IQ scores than can be explained by any single identifiable environmental factor. The fallacy in this argument may be the search for a single factor. The probability of any single coin toss coming up heads is .5, but the probability of five coin tosses in a row coming up heads is about .03. While blacks on average may not seem terribly disadvantaged relative to whites in any one dimension, they are disadvantaged in nearly all dimensions that we think matter. Thus for any one of those things that determine the ability to score well on IQ tests, blacks may be no more disadvantaged than a white down at the 30th percentile of the white distribution or even higher. But taking all the determinants together, the average black may be down at the 10th percentile of the nationwide distribution of the overall effects of environment in the white population.

In fact, two studies, one by Jeanne Brooks-Gunn and another by Jonathan Crane, show that it is possible to explain statistically all black-white differences in test scores by combining the effects of differences on many dimensions of detailed evaluations of the quality of the home environment. Herrnstein and Murray are correct when they point out that environmental differences may be due to parents' IQ and that therefore these studies don't prove environmental differences cause the differences between the races. But the studies do show that when many environmental factors are considered together they may well be capable of explaining the differences.