

Claude S. Fischer, Michael Hout, Martin Sanchez Jankowski, Samuel R. Lucas, Ann Swidler, and Kim Voss. *Inequality by Design: Cracking the Bell Curve Myth*. Princeton, NJ: Princeton University Press, 1996, 318 pages, \$14.95 softcover.

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Journalists (e.g., Burdman, 1996; Marshall, 1996) have hailed *Inequality by Design* as definitively refuting *The Bell Curve* (Herrnstein & Murray, 1994). The book is, in fact, notable for being the first to answer *The Bell Curve* on scientific grounds.

The authors of *Inequality by Design*, all members of the sociology department at the University of California at Berkeley, argue that *The Bell Curve*'s claims concerning the partly genetic origins of social inequality represent a harmful, all-too pervasive ideology that has no scientific foundation. Their own competing thesis is that:

Research has shown that "nature" determines neither the level of inequality in America nor which Americans in particular will be privileged; social conditions and national policies do. Inequality is in that sense designed. . . . *The Bell Curve* . . . is wrong to claim that differences in native intelligence explain inequality.

Of the various life outcomes that Herrnstein and Murray studied (e.g., dropping out of high school, bearing illegitimate children, being incarcerated), *Inequality by Design* focuses on living in poverty as an adult. Chapter 1 begins by describing how income inequality in the United States has widened in recent decades. It poses two questions: (a) What determines who gets ahead on the ladder of success (rank in income)? and (b) What determines the degree of inequality (variance in income levels) in a society?

Chapters 2 through 4 set out to refute *The Bell Curve*'s answer to the first question. Chapter 2 attempts to discredit the book's conception of intelligence (as *g*) by discrediting psychometrics itself. Purporting to reveal the field's fundamental errors (e.g., its belief in a very general and fairly stable—"single, fixed"—intelligence), the authors dismiss that field as fatalistic and long outmoded. Chapter 3 criticizes *The Bell Curve*'s particular measure of adult intelligence, the Armed Forces Qualifying Test (AFQT), purporting to show "that the AFQT is a poor measure of innate intelligence and instead reflects the social environment that shapes people's academic performance, largely their schooling."

Chapter 4, the empirical heart of the book, reanalyzes Herrnstein and Murray's data from the National Longitudinal Survey of Youth (NLSY). Fischer et al. carry out a series of five "corrections" to Herrnstein and Murray's analyses, first disaggregating the latter's composite measure of social class background (composed of both parents' income and education), and then successively adding four more sets of social environment measures to compete with intelligence: parental home environment (e.g., number of siblings), adolescent community environment (e.g., school racial composition), respondent's educational history (e.g., curriculum track in high school), and adult community context (e.g., local unemployment rate). The first three modifications together eliminate the apparently greater effect of intelligence than of social background in explaining young adult poverty. The first four together succeed in reversing it.

Chapters 5 and 6 turn to the book's second major question, which *The Bell Curve* did not address. Fischer et al. therefore refute *The Bell Curve*'s "implied answer" to it—that "natural talent prevails in a natural market." Income inequality cannot have such a natural source, the authors note, because degree of inequality fluctuates over time and place seemingly without regard to genetic variation (Chapter 5). Moreover, a wide range of national policies (social security, food stamps, corporate subsidies, etc.) either widen or narrow income inequality in the United States relative to systems of inequality characterizing presumably genetically similar "economic competitors" such as Italy, Germany, and the Netherlands (Chapter 6).

Chapters 7 and 8 argue, respectively, that individual and group differences in intelligence are themselves socially constructed, not natural. Both result from social policies (such as tracking), contexts (segregation, poverty), and attitudes (stigma) that make learning more difficult or irrelevant for some people. What can be intentionally created can also be intentionally reversed, so the book's concluding chapter calls for "extensive public investment" to equalize opportunities for individuals to develop and profit from their skills. To bolster the moral commitment upon which equality thus rests, the authors close by invoking Biblical and New Deal injunctions to charity.

Although repetitive and poorly written (its preface refers to the book itself by the wrong name), *Inequality by Design* represents a serious attempt to confront empirically Herrnstein and Murray's more disturbing claims. Nonetheless, it fails to refute any of them persuasively. Indeed, its attempts are sophomoric. What the book may illustrate best is why sociology is in peril for the "biophobia" (Ellis, 1996) its egalitarianism has inspired.

Inequality by Design exaggerates and then caricatures *The Bell Curve's* scientific and moral claims about "natural" human differences to make the claims seem contemptible as well as obviously false. Where Herrnstein and Murray concluded that (a) phenotypic intelligence has a greater impact than (b) parental social status (education and income) on whether (c) adults are poor, Fischer et al. have them claiming that (a) "native intelligence" is more important than (b) the entire "social environment," and that "native intelligence" also explains (c) not only who ends up poor, but also the degree of income inequality in a society. Herrnstein and Murray made no such extravagant claims.

Similarly, where *The Bell Curve* expresses realistic concern that the partly genetic origins of individual (and perhaps group) differences in intelligence impose a biological constraint on social policy meant to reduce inequality, Fischer et al. have Herrnstein and Murray espousing a mean and unjustified fatalism—"a philosophy ages old: *Human misery is natural and beyond human redemption; inequality is fated; and people deserve, by virtue of their native talents, the positions they have in society*" (emphasis in original).

This vanquishing of straw men does not, of course, dispose of Herrnstein and Murray's modest and well grounded claim that genetic differences in intelligence contribute to enduring social inequality. Having been unable in Chapter 4 to eliminate intelligence as a cause of inequality, Fischer et al. attempt to expunge nature from intelligence. They do so only indirectly, however, avoiding all mention of the most pertinent literatures, foremost among them behavioral genetics.

The authors begin by arguing, in a seldom accurate description of psychometrics (Chapter 2), that all hints of nature in psychometric data (e.g., the normal distribution of IQ scores) have actually been created intentionally by psychometricians, whom they characterize as obsessed with drawing trivial distinctions in order to rank people for the sake of showing them unequal (see Brody, 1992, for an accurate, rigorous evaluation of intelligence research). The authors try to debunk the notion that there exists a general mental ability, *g*, partly by ignoring the most compelling (e.g., physiological) evidence for its existence, and then grossly misinterpreting what little they do review.

To illustrate: Arthur Jensen has done more than any other scholar to demonstrate the existence of *g*, but he does not believe that it results from a single physiological process (e.g., speed of neural processing; Jensen, 1993). Fischer et al. fail to mention his belief in *g* but, capitalizing on his reputation ("no less prominent a psychometrician than Arthur Jensen"), they present his conclusion that the physiological basis of *g* is *nonunitary* as if he believes, as they do, that *g* is *nonexistent*.

In another failure to make crucial distinctions, *Inequality by Design* conflates intelligence (which can be usefully conceptualized as individual differences in rate of learning; Carroll, 1997) with achievement (what and how much individuals have actually learned). This allows the authors, mistakenly, to claim that differences in "intelligence" merely signal differences in socially structured exposure to learning opportunities (Chapters 3 and 7). They do not mention, let alone explain, the fact that it consistently takes some people many more exposures of the same material to learn that material (see Rowe, 1997, on the failure of "passive learning theory").

Explicitly sidestepping discussion of the many failed experimental attempts to raise *intelligence* (see Spitz, 1986, for a review), the authors contend that intelligence is nonetheless highly malleable by reporting that environmental factors such as tracking can increase or reduce levels of *academic achievement*. The issue is not, however, whether environments can *improve amount learned* (achievement level). Psychometricians would not dispute that. The issue is whether environments can *equalize the rate at which people learn the same material under similar conditions* (intelligence level). Fischer et al. provide no data relevant to that issue. Intelligence and achievement are obviously related ("fast" students learn more), and their robust correlation has been shown to arise from a common genetic source (Plomin & Petrill, 1997). However, behavioral genetics also supports psychometrics in showing that intelligence and academic achievement are distinct phenomena: Discrepancies between the two are environmental in origin and they have somewhat different heritabilities.

Inequality by Design reveals astonishing ignorance about the human differences it so cavalierly dismisses. In a minor but telling example, Fischer et al. suggest that sons, fathers, and grandfathers "var[y] hardly at all in their genetic endowments." They thus appear to assume wrongly that genetic inheritance creates only similarities, not differences, among biological relatives. (Any student of elementary biology knows that, on average, sons and fathers share only half their genes or genetic variance, and that sons and grandfathers share only a quarter.)

This ignorance of even the simplest uncontested facts in genetics is typical of most social science today, which displays an extreme reluctance to believe that human behavior is anything but totally "socially constructed." In so doing it, it cuts itself off from increasing evidence that humans are not passive creatures of *either* their genes or their own environments. Rather, individuals appear to shape and remake their environments, often in ways that reinforce their genotypic predispositions and foil others' attempts to restructure their environments. This helps to explain why, for example, biological siblings (who share only

half their genes in common, on average) become more *different* with age and why intelligence becomes *increasingly* heritable with age (from 40% in early childhood to 80% in late adulthood). Shared environmental influences on intelligence thus do not cumulate with age, as Fischer et al. and most other social scientists routinely assume, but dissipate (e.g., Plomin & Petrill, 1997; Rowe, 1997).

Along with virtually all other social scientists, the authors also ignore a second, related counterintuitive phenomenon, which renders their research on environmental effects uninterpretable (Rowe, 1997): social environments themselves are to some extent a function of genetic inheritance, whether parents', peers', or one's own. For example, moderately heritable sibling differences in personality and capability evoke different behaviors from parents and other caregivers. Behavioral genetic research has shown that variations in carefully measured early childhood rearing environments among siblings in the same family are about 40% heritable (Plomin & Petrill, 1997). It is therefore just as mistaken to equate social environment with only nongenetic effects as it is to equate intelligence with exclusively genetic ones. It is also a mistake to assume that only one's own intelligence influences one's life chances, because very different social milieux are created by families and communities that differ in average intelligence level (Gordon, 1997).

The nature-nurture argument is irrelevant for personnel selection purposes because, regardless of origins, intelligence is quite stable by the time people enter the labor market. Rather, the problem that books like *Inequality by Design* create for selection psychologists is that, in attempting ever more desperately to explain away even the limited role of "nature" in social behavior, they rouse increasing hostility toward the notion that stable individual differences exist, have practical consequences, and can be measured fairly and accurately. The ideological war against nature thus necessitates a war against the measurement of human traits.

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