

gence and especially on Race and Slavery; that is, Chapters Six and Seven. To be sure, even here Sowell's fundamental themes still surface ultimately. Still, I cannot recall in his previous writings as much preoccupation with the aspects and dynamics of racial oppression.

Race and Culture deserves reading not so much for the new insights that it offers, as most of these arguments have appeared many times before. Rather, it is an interesting study in how the ideas of an individual who was once the vanguard of the emerging right are no longer in lockstep with mainstream conservatism.

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Clear and convincing evidence: Measurement of discrimination in America. Edited by MICHAEL FIX AND RAYMOND J. STRUYK. Washington, D.C.: Urban Institute Press; distributed by University Press of America, Lanham, Md., 1993. Pp. xviii, 420. \$71.50, cloth; \$33.00, paper. ISBN 0-87766-600-8.

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The subject of this book is both narrower and wider than its subtitle, "Measurement of Discrimination in America." Narrower, because it is almost entirely devoted to measuring discrimination by controlled experiments with testers (or auditors) in certain transactions involving employment, housing, and mortgage lending. Wider, because it also deals with discrimination more broadly, including strategies to combat discrimination and ethical and legal issues that arise in using the audit method to enforce antidiscrimination laws. The book consists of 16 articles by 19 authors, ten of whom have law degrees or are civil rights activists. It is a product of The Urban Institute, a research organization in Washington, D.C., which conducted several of the auditing research studies. I recommend the book for four reasons: it explains a unique research methodology for studying discrimination, it shows how the method can be used for policy actions—including enforcement, it presents some interesting em-

pirical findings, and it raises important conceptual questions about the definition and interpretation of discrimination.

The editors, Michael Fix and Raymond J. Struyk, and a contributor of the chapter on mortgage lending and insurance, George C. Galster, write an overview chapter that gives a definition of the auditing method and summary statements of the book's main conclusions.

Two individuals (auditors or testers) are matched for all relevant personal characteristics other than the one that is presumed to lead to discrimination, e.g., race, ethnicity, gender. They then apply for a job, a housing unit, or a mortgage, or begin to negotiate for a good or service. The results they achieve and the treatment they receive in the transaction are closely observed, documented, and analyzed to determine if the outcomes reveal patterns of differential treatment on the basis of the trait studied and/or protected by antidiscrimination laws (p. 1). . . . the audit-based data in this volume provide strong evidence that racial-ethnic discrimination, however defined, continues in many American metropolitan housing markets and at least some labor markets, and seriously limits minorities' access to these markets (p. 34). In sum, the audit studies . . . have established the feasibility and advisability of testing in a variety of contexts. (p. 45)

The auditing method has two separate purposes: a research purpose to measure discrimination and an enforcement purpose to identify discrimination and initiate legal action against the discriminating agent. This review concentrates on the research purpose.

The audit research studies of the book are seriously challenged by only three contributors, economists James J. Heckman and Peter Siegelman in a chapter on employment discrimination, and lawyer Robert D. Butters, whose comments pertain to two long chapters on housing discrimination, one by Margery Austin Turner and one by John Yinger. To evaluate the criticisms, it will be helpful to consider how discrimination is defined. I will refer to discrimination against blacks to illustrate my points.

A commonly used definition of economic discrimination is a market outcome in which, on average, blacks receive a lower wage than whites for equivalent labor services sold or

pay a higher price for an equivalent product (or service) bought. Thus, a finding of equal pay for blacks and whites of equal ability (productivity) would yield a finding of "no discrimination," by the criterion of market outcomes. Economists have long known, at least since Becker (1957), that by this criterion "no discrimination" is theoretically consistent with racial segregation in the market and with the presence of many agents—employers, customers, co-workers—who are unwilling to offer blacks the same wage as whites. However, the existence of heterogeneous prejudices among agents does require another assumption before "no discrimination" can be accepted; namely, zero costs in the search required by blacks to match up with nondiscriminatory buyers of their labor services. Audit studies can inform us of the search process, which, for those who face discrimination, include psychological costs in addition to the time and money costs.

A definition of discrimination in terms of the "equal pay" outcome reveals both a strength and a weakness of the audit method. A strength is that audits will measure discrimination in various market processes, such as hiring. A weakness is that discrimination in the process does not measure and may say little about discrimination in market outcomes (as defined above). Historically these outcomes have been considered very important. Nevertheless, the outcome measures have always been contested, and the process measures, which can usually be convincing in their own terms, are necessary, although not sufficient, evidence for discrimination in market outcomes. I view the two measures as complementary.

Antidiscrimination laws, however, are enforced on individual agents, not on markets, and an individual act of discriminatory treatment by, say, an employer can be a violation of law even if the act causes no loss in pay to the black worker. This fact makes the market outcome criterion irrelevant to the legal purpose and places the audit method of measuring discrimination in the center of the legal stage. The process becomes, in effect, the outcome of interest for enforcement purposes.

Even as a measure of discrimination in

market processes, auditing is ambiguous in another way. For research purposes the audit pairs of applicants for jobs (or housing) are sent to randomly selected employers (or real-estate agents) who have advertised job (or housing) openings. The research will measure the probability of discrimination by employers or real-estate agents if they were to be visited by members of the two racial groups. We may think of this probability as measuring the propensity (or potential) for law-violating discrimination by the stock of employers and real-estate agents in the market. Another question of interest, however, concerns the actual incidence of discrimination; that is, the probability that members of a racial group will experience discrimination in their actual or customary job or house seeking activities. If, and this is a "big if," blacks know of nondiscriminating employers or real-estate agents who will provide a job or housing that is as good or better than that provided by other agents—agents who may or may not discriminate—then the market may be free of "effective" discrimination in both processes and outcomes. This ambiguity arises in Butters' criticism of the Turner study of racial discrimination by real-estate agents. To be sure, auditing to obtain a measure of potential discrimination may be the preferred objective because (1) potential law violations are important to discover and measure, and (2) actual search methods may merely reflect a reality of segregated channels producing inferior outcomes.

The criticisms by Heckman and Siegelman are directed mainly at the audit studies of employment discrimination, which involved matched pairs of young male black and white applicants for "starting" jobs in Washington, D.C., Chicago, and Denver and matched pairs of young male Hispanic and Anglo applicants for starting jobs in Chicago, San Diego, and Denver. They point out that hiring transactions involve heterogeneous jobs, that the audit pairs can be matched only imperfectly, and that random errors and events in hiring decisions all combine to make some of the firms' decisions to hire one member of the pair a chance event. For this reason they object to the willingness, and sometimes the preference, of the Urban Institute analysts to

measure "gross discrimination," defined as the percent of cases in which a white (or Anglo) applicant was offered a job (or given other types of favorable treatment) that was not offered to the black (or Hispanic) applicant. They argue convincingly that some of the choices to hire whites (or Anglos) in preference to blacks (or Hispanics) will reflect these random or idiosyncratic factors rather than discrimination.

Heckman and Siegelman suggest using the percent of cases in which minority auditors were hired instead of majority auditors as a benchmark for "random" (nondiscriminatory) hirings, and they, therefore, advocate using a net measure of discrimination, defined as the difference in majority-only hires compared to minority-only hires. In addition they suggest that the percent of "no differences" in treatment should be calculated by including those in which neither or both members of the audit pair were offered jobs. Out of 1,025 trials (or tests), involving about 30 pairs of auditors, they point out that 77 percent received no difference in treatment (pp. 195-97). (In 16 percent of the tests both members of the pair received an offer, and in 61 percent neither received an offer.) In the 740 tests in the studies in Chicago, San Diego, and Washington, which were conducted by the Urban Institute and believed to be better studies than those in Denver, there were 86 more cases in which only the white (or Anglo) applicant was hired than in which only the black (or Hispanic) member was hired. Thus, net discrimination against black and Hispanic applicants occurred in 12 percent ($= 86/740$) of the cases. The statistics on gross discrimination, which are preferred by Fix, Galster, and Struyk, show "opportunity denials" to blacks in 20 percent of the audits and to Hispanics in 31 percent of the audits (p. 20). Opportunity denial is defined as

the minority auditor was denied the opportunity of advancing as far in the hiring process as his majority partner or the majority auditor received a job when his minority partner did not. (p. 22)

Clearly, the chances of minority workers obtaining nondiscriminatory market outcomes, defined as equal pay for equivalent workers, are much better if the incidence of discrimi-

nation in the hiring process occurs only 12 percent of the time rather than 20 to 30 percent of the time.

The Urban Institute analysts admit that audit tests of employment discrimination are currently limited to the hiring process for unskilled jobs. Measuring discrimination on the job or for many types of skilled jobs seems unfeasible by the audit method. Also, the jobs investigated have only been those that were advertised in city-wide papers—another limitation, although one that probably understates discrimination compared to that occurring in private channels for hiring. The housing and lending markets have their own limiting complications to auditing. Although there is some tendency for the book to overstate the power of auditing to measure market discrimination, the authors are informative about the method's strengths and weaknesses. I am persuaded that the method is valuable and will become increasingly so as the analysts accommodate the criticisms and learn from experience. Indeed, the research of this book was cited in 1995 by Supreme Court Justice Ruth Ginsburgh in her defense of affirmative action in *Adarand Constructors, Inc. v. Peña*. Each of the articles in the book was informative, and my focus on only a few reflects the limits of space for the review.

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This book owes its existence to a conference held to commemorate the centennial of

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