

program. Such an amount, then, should be available to all citizens (equally), whether they believe that education or something else would be the best use of the stake given the circumstances of their life.

The authors also propose other far-reaching and attractive reforms. While the stakeholder program would help make these possible, they are not necessary concomitants of the program. These include: (1) Replacing the present social security system, which is based on work history and the misleading notion that it is an "insurance" program, with a "citizen's pension" that promises a minimally decent standard of retirement available to all citizens regardless of wealth or work history. (This plan would actually be a 2nd phase of the stakeholding principle.) (2) Replacing the payroll tax, which is linked to the "insurance" concept of social security and is unjustly regressive, with a "privilege" tax as basis for the citizen's pension. (3) Providing a quality education for all, removed from dependence on local property taxes, to meet another social obligation implied by commitment to equal opportunity.

While the stakeholder proposal obviously entails numerous practical difficulties, and much of the book is devoted to the authors' explanation and justification of the details of the program, I believe the ethical aspects of their position are what it is important to focus on. The solutions to the practical difficulties will not be convincing to one who does not believe that the basic idea of the program is ethically appropriate. But if economic justice does in fact require a program such as this, then we as a society should pursue it, solve the practical problems as best we can, and live with the remaining difficulties—whether they be imperfections of administration or economic inefficiencies.

The basic ethical argument of the book is in terms of equality of opportunity. I see three strands to their argument:

- Stakeholding would give each citizen at least the minimal conditions for exercising freedom and responsibility in making fundamental decisions about how to structure their lives and realize their potentials. When young adults are thrown into adult life with nothing but their (possibly-quite-limited) earning power, with no financial capital to serve as a cushion and stake, they have not been given a fair opportunity to exercise freedom and responsibility in making a go of their lives. Rather they are forced into various combinations of short-term strategies to make ends meet, dependence, and constrained opportunities to realize their potential.
- Each individual born into society has an equal right to a share of the wealth of the society, regardless of what family she happens to be born into (what I would call a "birthright").
- Some significant but unmeasurable amount of the rapidly growing wealth inequality is due to lack of equal opportunity in our society. Thus there is compensatory justice in using some of that wealth to provide a starting

stake equally to each new adult member of society.

One major issue in justifying the stakeholder program is what to do with those who "waste" their stakes—either by just using them for consumption (with or without working), or by using them for "unwise" investments, or by being duped. Ackerman and Alstott make several points: (1) The program is based on the importance of respecting individual freedom and responsibility. This principle requires that we allow people to make bad decisions. (2) That same respect for individual responsibility also counts against a paternalistic imposition of "society's" judgment as to what it is appropriate to do with the stake. (3) Social pressure and individual prudence will ensure that most people make reasonable decisions about how to use their stakes—where what is "reasonable" will depend to a large extent on specific factors in the individual's life situation.

In commending this book to the consideration of Christian economists, I would suggest that each of these argument strands resonates well with the elements of a Christian approach to economic justice. Dignity, respect, and equality are all ideas that owe much of their vitality to the impact of Christianity. In addition, the specific value of being able to exercise meaningful stewardship over resources can be seen as the principle underlying much of Old Testament norms for economic organization in Israel.

One comment about the physical layout of the book—footnotes and bibliography materials are all at the back of the book, causing major inconvenience for the reader. Fancy wordprocessing today makes it easy as can be to incorporate footnotes right on the page. It is thus paradoxical that books are more and more going in the opposite direction.

*The Stakeholder Society* is, then, a challenging book for Christians attempting to understand economic justice. It presents a proposal based on premises that fit well with Christian perspectives on stewardship, property, and human dignity, and it fleshes the proposal out with a mass of detailed practical considerations and arguments (that I have not attempted to summarize in this review). ■

### **The Uses and Misuses of Human Data: The Mathematization of The Human Sciences**

W. James Bradley and Kurt C. Schaefer, Thousand Oaks, CA: Sage Publications, 1998. ISBN 0-7619-0922-2, \$24.95 (paper); 0-7619-0921-4, \$54.00 (cloth).

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“Roughly three-quarters of the contributors to the *American Economic Review* misuse the test of significance.” A sensationalist blurb on the back cover to grab attention and increase sales? No, but the quote by McCloskey (1985, p. 201)—buried on page 152 in the book—is indica-

tive of the purpose of *The Uses and Misuses of Data and Models*, written by Bradley and Schaefer (a mathematician and an econometrician, respectively). McCloskey warned social scientists about the misuse of significance tests, warnings ignored by many social scientist; Bradley and Schaefer are concerned with much more than significance tests, however. The exposition of their concerns make this book valuable reading for all social scientists, particularly those who do empirical and mathematical research.

John von Neumann and Oskar Morgenstern, in their seminal book *The Theory of Games and Economic Behavior* (1937, 1946, 1953), envisioned the discipline of economics as being characterized by "careful empirical observation, precisely formulated questions, and the fruitful use of appropriate mathematics." This vision of a "mature" economics discipline shaped much of the work in the social sciences, but Bradley and Schaefer have growing concerns about the continued use of this approach. They believe that the "Enlightenment effort to exclude values, norms, and purposes from the search for truth has led to a society in which careful thought about values, norms, and purposes is being neglected."

Bradley and Schaefer do not believe that analyses can be distinguished as "positive" (objective) or "normative" (subjective). Although both positivism and antirealism have formed social science research, positivism has been more influential. While many social scientists may believe that objectivity is not possible if normative considerations are imposed on empirical and mathematical methodology, Bradley and Schaefer do not believe that social science research, by nature of the discipline, can ever be value-free, presupposition-free, and totally objective. Our personal belief systems themselves are an "*a priori*" influence on what we perceive and the questions we ask." Observations are made by people "who have purposes, prior understanding, and beliefs that affect what they perceive." Scientists use methodology that themselves include "assumptions and values that affect perception." Indeed, Bradley and Schaefer speculate whether many researchers are actually "advocacy researchers" (researchers who specifically seek data and analysis to advance a particular agenda).

Bradley and Schaefer want to challenge social scientists who use mathematical and/or empirical methods to rethink their use as well as to challenge those who do not use these methods to reconsider. They believe the social science disciplines can "develop norms without becoming radically subjective" and hope that their book will be an example of how this kind of analysis can be done. They are concerned that statistics graduate programs at major universities, while teaching proficiency in technical data analysis, do not address policy implications of statistical analyses. While they advocate technical expertise, they believe social scientists also need training and exposure to understanding the assumptions underlying the use of data and models. Indeed,

because social scientists face pressure to obtain statistically significant results not yet reported in the literature, they may "often jump too quickly to quantification and statistical analyses." Bradley and Schaefer encourage social scientists to be like detectives, gathering information and understanding all aspects of the situation being modeled, rather than mechanically analyzing relationships between variables, which they assert is the methodology advocated by statistics textbooks, with emphasis on technique and not on acquiring knowledge of the situation being studied.

Bradley and Schaefer are primarily concerned with the growing amount of "human information"—information about human beings and human institutions—and the use of this information. As an example, they cite a research study in which the suicide rate was found to be related to marital status. While the methodology was technically sound, Bradley and Schaefer note that the study "misrepresented suicide, in that focus on its frequency obscures its tragedy." Bradley and Schaefer are concerned that researchers can get too mechanistic in analyzing data and can forget that there are *people* behind the numbers. While they do not diminish the importance of using mathematical modeling to help understand reality and to help make decisions, they do not believe that mathematical and empirical methodology can exclude consideration of normative issues. Even though "the process of using fancy mathematical techniques tends to give a scientific authority to claims that are, ultimately, unchallengeable precommitments," they still believe that social scientists should strive for objectivity, which they call a "regulative ideal," but should always be aware of the possibility that the entire framework of analysis may be misdirected.

Because of their concerns with human information, Bradley and Schaefer wrote this book to develop a set of "norms that should inform the use of data and models in the social and human sciences." The book is divided into two parts. Part I addresses the question, "What principles ought to guide the use of data (particularly human information) and models in the social and decision sciences?"; Part II develops the set of norms as guiding principles to address their concerns about human information:

1. The amount of "human information"—that is, data and summaries of data derived directly from or about individual human beings, communities, and institutions—has increased rapidly in recent years.
2. The increased volume of human information has made the question "Ought data about human beings to be regarded in the same fashion as data that arise in the natural sciences?" more critical.
3. Several critiques of science have recently been advanced, which has resulted in some polarization between "positivists" who focus on what can be observed and "interpretivists" who often avoid the use of numbers and speculate on individuals' and com-

munities' motivations.

4. The discussion of norms, values, and purpose often is omitted from much social research, especially by those who work in the positivist framework.
5. Training in the collection and use of human information often is too narrow.

Because the source of human information is often a measurement, Bradley and Schaefer have an extensive chapter on measurement and measurement theory. They discuss the social benefits of measurement, the types of measurement scales, and the potential of "considerable social harm" from using incorrect or misleading measurement. For example, using standardized tests to predict potential college success can limit a person's ability to pursue higher education if the test is inaccurate or if the person was awake the entire night before taking the test. Another problem associated with human information is the inconsistency of the meaning of data. For example, an announcement that 70 percent of the children in a high school are minority students, while seemingly neutral, is received in a context with multiple assumptions about the high school, varying judgments about an "appropriate" minority level, and various interpretations of the word "minority."

Bradley and Schaefer note the social scientist's temptation to "cut corners" with human information. For example, since intelligence level may be useful information for employers, colleges, etc., IQ tests results are often used as a proxy for intelligence. Bradley and Schaefer question, however, whether the IQ test truly measures "intelligence," since the "principal methodological problem is that IQ tests measure intelligence on a numerical scale, but at present there exists no theoretical justification for a correspondence between intelligence and numbers." Bradley and Schaefer urge social scientists to continually remind themselves that

"measurements, no matter how precise they may seem, are only as good as the selection of a proxy"; and use of different proxies for a characteristic can yield different results. Developing precise measurement techniques and theories is difficult when dealing with human information, which implies that for most social science research, definitions are not unambiguously clear, which results in measurement that may not be fully accurate or objective.

A particularly valuable chapter for social science graduate research classes is "What *are* Social Science Data?" in which Bradley and Schaefer discuss the pitfalls of model specification, random error, inference claims, and significance tests. They note that most social scientists ignore the random error term, which in most social science research reflects errors and ignorance in "our knowledge of events and our model and measurement of them." They believe that rather than adhere to arbitrary levels of statistical significance, social scientists should evaluate the overall reasonableness of the model and data, their knowledge of the situation, their use of measurement scale, and the data quality.

"Empirical work therefore needs to discuss the substantive significance of the things it measures, the power of the tests it uses, and the many twists and turns through which the final results were achieved"—a challenge it would behoove all us social scientists to accept.

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