

Axioms of cooperative decision making. By HERVÉ MOULIN. Econometric Society Monographs, no. 15. Cambridge; New York and Melbourne: Cambridge University Press, 1988. Pp. xiv, 332. \$49.50. ISBN 0-521-36055-2. JEL 89-0703

In the last two dozen years or so, welfare economics has fallen out of fashion. Although graduate courses in microeconomics continue to discuss both positive and normative matters, far more attention is now typically paid to the former. And the latter is often reduced simply to the issue of Pareto efficiency. Only rarely are distributive issues considered in any detail.

The decline in normative economics parallels a shift within game theory from the cooperative to the noncooperative. Whereas twenty years ago coalitional concepts such as the core, the nucleolus, and the value were central preoccupations, these days the spotlight falls more on such issues as the refinement of noncooperative (Nash) equilibrium.

At first, these two trends may seem unconnected. After all, there is nothing in principle particularly "normative" about cooperative game theory—the study of games in which coalitions can make binding agreements. However, welfare economics and cooperative games in practice have shared a common reliance on the axiomatic method; some of the central contributions to each subject—Arrow's impossibility theorem, Nash's analysis of bargaining, and Shapley's derivation of the value—start with a list of properties and proceed by deducing the implications of imposing those properties simultaneously. I suspect that the twin fates of these two subjects may be closely tied to the profession's mistrust of axiomatic analysis.

Hervé Moulin's monograph is an impressive demonstration that such suspicion is ill-founded. In applications as diverse as the measurement of inequality, bargaining theory, cost-sharing in the production of public goods, and voting theory, Moulin illustrates repeatedly that the great power of the axiomatic approach is its ability to abstract from the details of any particular situation to say something general. In voting theory, for example, axiomatic argument frees one from the confines of a specific

procedure such as majority rule to draw conclusions about the set of all procedures.

Moulin begins, in Part I, with the problem of constructing social welfare functions, inequality indices, and bargaining solutions from data on individual utilities. Much of the discussion turns on which axioms lead to "egalitarianism" (e.g., the "maximin" social welfare function, in which the welfare of the worst-off individual is maximized) and which give rise to utilitarianism (where the sum of utilities is maximized). This contrast between egalitarianism and utilitarianism is, in fact, a recurrent theme through the book.

Attention turns in Part II to cooperative games, with particular emphasis on the core and on axiomatic developments of the Shapley value and nucleolus. I have a small quarrel with the philosophy here. Moulin views the axioms underlying cooperative game theory's solution concepts as *equity* principles (cf. p. 103). I feel that this is too narrow a perspective, and perhaps a harmful one. As I indicated above, cooperative game theory is not inherently an exclusively normative enterprise. Unfortunately, it is often misinterpreted as being such. For example, much of the discussion of the axioms underlying Nash's bargaining solution turns on whether they—in particular, the "independence of irrelevant alternatives"—are ethically sound. But as Binmore's (1980) discussion of the relationship between Nash's and Rubinstein's bargaining models makes clear, straightforward *positive* interpretations of these axioms are available as well.

Whereas Parts I and II are rather abstract (except for some of the examples and exercises), Part III focuses much more on concrete allocative problems such as dividing the cost of a public good among its consumers. Here Moulin really comes into his own. Although the models are themselves extremely simple, his study of optimal allocation mechanisms in these models is highly sophisticated. Indeed, it bears the hallmark of his work in general: probing, subtle analyses of structurally simple problems. For example, one elegant result is the observation that the only scheme for allocating a public good's cost in a way that gives no coalition the incentive to secede (the core property) and that makes any individual's share of the cost dependent only on his own benefit and the aggregate

benefit from the public good (the decentralization property) is a proportional tax.

Finally, Part IV deals with strategic voting. The presumption here is that individuals' utilities are expressed through the way they behave in a voting procedure. Although many fascinating theorems are reported, I find this part slightly at odds with the rest of the book, where issues of strategy and manipulation are for the most part to one side. The contrast is particularly marked with the early sections on interpersonal comparisons, where far more data about utilities is assumed to be available (e.g., about whether one individual is better off than another) than can possibly be elicited through a voting procedure.

Indeed, the sheer breadth of topics in the book makes its cohesiveness potentially problematic. In the end, unity is attained through the axioms themselves. Although they are put to widely varying uses, the same principles of egalitarianism, monotonicity, and invariance crop up over and over again.

There is an impressive number of results presented in this book. Those that are not stated and established rigorously are developed in the numerous examples and exercises, which prove extremely useful. Most propositions are drawn from previous papers or books (including many of Moulin's own). Thus, the volume will be most useful as an introduction and guide to the axiomatic literature.

Exposition throughout the book is uniformly clear and beautifully concise. I must note, however, that Moulin's use of English is decidedly idiosyncratic. Much of the time, the resulting style is rather charming, e.g., "the rival lowers slightly its price." But occasionally, the reader may be confused, as where instead of referring to the *scale* in which welfare is measured, Moulin uses the term *pace*. This, however, is a very minor complaint about a wonderfully rich exemplar of the axiomatic method.

ERIC MASKIN

Harvard University

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The dynamics of company profits: An international comparison. Edited by DENNIS C. MUELLER. Cambridge, New York and Melbourne: Cambridge University Press, 1990. Pp. viii, 216. \$49.50. ISBN 0-521-38372-2.

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Are high profits a sign of good firm and industry performance or bad? If only we knew the answer, practical antitrust and intellectual property policy making would be much easier. Structure, Conduct, Performance (SCP) studies typically assumed "bad": profit signals monopoly power. The Brozen-Demsetz (BD) counter interpretation is simple. Profits signal superior capability in product or process, and provide the economic reward to invention. The inability to tell these stories apart has led to some disarray in cross-section profit studies and to wild swings in economists' policy advice.

Dennis Mueller has organized a large international team to attack the issues by time-series analysis of profits at the firm level. The book itself has the structure of an onion:

- Chapter 1: Why are profit dynamics the answer?
- Chapter 2: What regression shall we all do?
- Chapters 3-9: Analysis in six countries
(The U.S. rates two chapters)
- Chapter 10: What did we all find?
- Chapter 11: Good, bad, or can't tell?

(Actual chapter titles are somewhat longer and more formal.)

The empirical chapters are all closely linked to Paul Geroski's Chapter 2. The basic idea is to regress firm profits on a constant and a lag. The lag coefficient measures profit persistence; the coefficient and the constant together measure "permanent" profits. While the empirical work uses some more complex specifications, it relies on Geroski's interpretation. The lag coefficient confounds (only) two rates: how fast does profit draw entry, and how fast does entry destroy profit? The goal of each country analysis is to determine what kinds of companies and industries and countries have high permanent profits and high persistence.

There is something pretty impressive about getting 12 authors to do much the same analysis