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Who's Afraid of Irrationality? A Review of Herbert A. Simon's '*An Empirically Based Microeconomics*' (Cambridge: Cambridge University Press, 1997).

We all know what it takes to be rational, don't we? Rationality is everything which conforms to the purposefulness of human rationality, as Ludwig von Mises demonstrates in

Human Action (Mises 1949). Rationality is reason. It is self-interest. It is strategic action and transitive preferences. And yet, rationality is also a sort of simple and comfortable reason that seems so natural that it is almost ordinary in its orderliness. Rationality has spread from the natural to the social sciences and has in the last decade penetrated economics, sociology and psychology. The spokesman of rationality is the ‘pure’ scientist, the symbol of all that is trustworthy and ordered in the social life. At the turn of the 18th century, this role was performed by Adam Smith who was convinced that the invisible hand was helping the world towards a rational order.

Beginning in 1776, rationality has been the simple science of human action. Yet, its absence in the real world creates difficulties. Rationality denies the existence of the irrational and the random, and biases, mistakes and regrets are all violations of the very concept of rationality although that’s precisely what observations tell us about human action (see, for instance, the extensive experimental work from Daniel Kahneman and Amos Tversky). And while the language of rationality, mathematics, has grown in scope and application since its inception (and grown in usage among economists), the mere fact that one of the central defenders of rationality makes repeated and subtle references to many of the violations of rationality illustrates the central place that the less than rational and perhaps even the random occupies in modern times.¹

Perhaps the problem in persuading everybody about the merits of rationality is a failure of pedagogy on the part of the advocates of the doctrine of rationality themselves. Rationalists take it for granted that young economists (or political scientists or sociologists) must already be comfortable with the language of rationality, mathematics, and are ready to proceed to construct the foundations of econometrics, game theory, utility functions, macroeconomics, and so on. At one point, the overwhelming concern with techniques had driven out almost all discussions of the real world, to the extent that Simon in the 1950s found himself very lonely in his interest for how economic agents made decisions and acted in the economic system that economists were supposed to think about.

No one has been a more steady critique of global rationality than Simon. Already initiated in his pre-thesis work, Simon’s ideas on bounded rationality were first consistently expressed in his thesis, later published as ‘*Administrative Behavior*’. Decision making, as it is portrayed in *Administrative Behavior*, is purposeful, but not rational. Rational decision making would involve a comprehensive specification of all possible outcomes conditional on possible actions in order to choose the single alternative action that was best, but such comprehensive calculation is not possible. This important insight is the view of a man whose key ideas would remain intact for the next fifty-plus years and whose intellectual project was driven by the need to address this question, no matter what the disciplinary boundaries were. Just so, in *Administrative Behavior*, he argued that administrative theory must be concerned with the limits of rationality, and the manner in which organization affects those limits, forcing us to rethink the boundaries of the field of administrative theory.

Speaking in his early work largely to political scientists and public administrators, Simon later proceeded to translate some of his ideas into economics, in particularly in the 1950s. Key articles here include ‘A Formal Theory of the Employment Relation’ and ‘A Behavioral Model of Rational Choice’. Simon discussed the merits and the constraints of economics, all the time arguing that internal and external limits of rationality ought to be taken into account.

Facing bounded rationality, decision makers simplify the structure of the decisions; they develop routines and heuristics and they only search for a solution until they find one which is 'good enough'. Economics, Simon found, was not in itself broad enough to accommodate these ideas. Thus he set out to develop a broad behavioral view of economics that also borrowed significantly from other disciplines such as organization theory and psychology.

The process from political science to economics (and later to organization theory) was relatively easy, for Simon had always had an interest in mathematics and in formal model building. Simon also made lasting contributions to psychology, artificial intelligence and computer science, by extending and developing his early ideas on decision making. It was all, as he said, 'more of the same', for he used psychology to study more detailed processes of decision making as well as for providing evidence for his key insights on bounded rationality.

When Herbert Simon died, on February 9, 2001, his vita counted close to one thousand items. This leaves us with plenty of food for thought for further developing his ideas on bounded rationality. A good overview of his views on economics is given in his latest book, *An Empirically Based Microeconomics*. It is based on three lectures that Simon gave in the Raffaele Mattiolo lecture series at the University Commerciale Luigi Bocconi, Milano. He opens the book by offering a reflection upon the evolution of the idea of rationality, beginning with Adam Smith. As Simon notes, Smith does not use the term rationality in his writings. Rather, rationality in Smith means 'having reasons for what you do' (p. 6). Proceeding to subsequent developments in rationality, Simon continues onto Marshall, who doesn't share Smith's bounded/procedural rational visions, nor his insistence on self-interest. Instead, Simon argues, Marshall opens the door for technical economics and for the maximization framework. Smith had applied his idea of self-interest, but did not mean maximization. And whereas Smith had seen the economy as a complex and dynamic entity, things get now more and more simplistic, reaching its goals with Lionel Robbins elimination of psychological elements from the study of decisions. Thus, Simon concludes, "[t]he trends that took us from Adam Smith to Alfred Marshall have perserved in the same direction through a second century. The abstraction of the utility function is now complete, and the task now is not merely to allocate resources but to allocate them efficiently" (p. 13).

Simon is not entirely happy with how modern economics has pictured rationality (perhaps he would have found more comfort had he read Mises' *Human Action*). But the theme of bounded rationality continues into Simon's discussion of organizations, and shows how his interest in human organizations follows naturally from his interest in bounded rational decisions makers: because rationality is *limited*, people develop simplifications of the world through routines and heuristics. And because we are *intendedly* rational, people organize their actions through building organization and by processing and organizing information. As a result, organizations, such as business firms, are necessary products of bounded rationality.

Simon tends to be critical of the New Institutional Economics. Whereas the New Institutional Economics sees employment relations as being shaped to secure coincide of self-interest with interest of the organization, Simon's ideas on employment contracts, forcefully stated in his 1951-paper, describes the acceptance of authority through 'acceptance zones', where employers accept organizational authority, rather than seeking organizational slack, as in the new institutional version. To Simon, this difference represents an important difference

in motivational assumptions between the two approaches (p. 35). Simon's approach emphasizes the benefits of coordination, where people decide if they want to join a firm and the employers decide which people to hire. This position is different from the emphasis on strong self-interest, often labeled 'opportunism', but it seems to be similar to the austrian view of organizations as it is presented in particularly Richard Langlois' work (1992).

The theme of the centrality of organizations has been with Simon since the beginning of his career. And in Simon's views it is the study of organizations, of bounded rationality and of the psychological aspects of decision making which ultimately will bring our theories in closer touch with the real world. Simon's visions for understanding the real world is reflected in the title of the book; he wants to make modern microeconomics 'empirically valid'. He describes his ideas for how economics can become an empirical science. Since economics can be scientific, it should be scientific. Scientific and empirical rather than just empirical, and rather than just scientific. We want theories that approximate the facts to describe and understand the world and to achieve our goals (p. 55). We want empirical evidence because they help us building a better theory. In discussing the prospects of a better empirical grounding of economics and of methods for gathering evidence, Simon warns against 'as-if' theories and against too much abstracting could led to the wrong conclusions. He discusses methods for testing our theories, including econometrics, experimental economics and laboratory studies a la Vernon Smith, testing ideas on rationality, case studies and economic history. Each of these can according to Simon contribute to a more empirically grounded microeconomics; one that respects bounded rationality and respects the need for economics to form links with other social sciences.

Note

1. I am thinking here of Kenneth Arrow, defender of general equilibrium and individual rationality, who repeatedly had mentioned uncertainty, irrationality, learning, mistakes and other signs of non-rationality. In his own words, he also changed over time towards the irrational: "It is my view that most individuals underestimate the uncertainty of the world. . . . My general sense of beauty has shifted with time . . . I am more interested in the struggle for knowledge than in elegant systematization. Simple symmetries are not as satisfying as they were, and I look much more for a sense of openness, of incompleteness and stretching out toward an unknown, than for closed form" (Arrow 1992:46, 50).

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