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Rational choice and irrational individuals or simply an irrational theory: A critical review of the hypothesis of perfect rationality

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Abstract

We first describe the foundations of the theory of rational choice and then show the experimental evidence of invariable failure of the most basic rules of the theory. Our conclusion from these findings is that the normative and positive analyses cannot be reconciled, and which one will be pursued is clearly dependent on how the role or the mission of economic analysis is defined. Moreover, we assert that the normative analysis has the appealing features of generality and uniformity. Modeling what is called imperfect or bounded rationality and what much more realistically describes the decision maker's actions is still far from reaching the same level of generality. Nevertheless, we suggest that construction of new theories of choice based on scientific, casual, or experimental observations that indicate systematic deviation from the rational man paradigm is necessary.

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1. Introduction

One of the formidable tasks that economists face every day is to convince the rest of the world how the use of normative analysis to predict and explain actual economic behavior of

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individuals and organizations is a reasonable thing to do. Most economists believe that normative analysis of decision making is a meaningful, or better than that, the best way to go, for several reasons. First, it is generally believed that people are effective in pursuing their goals. This is especially true if they have incentives or opportunities to learn from experience. Thus, it is reasonable to describe the choice as an optimization process. Secondly, economists believe that competition favors rational individuals and organizations. Therefore, optimal decisions increase the chances of survival and success in a competitive environment. Moreover, a minority of rational individuals can sometimes impose rationality on the whole market. Finally, the intuitive appeal of the axioms of rational choice makes it plausible that the theory derived from these axioms should provide an acceptable account of choice behavior.

Some economists and behavioral scientists suggest that the deviations of actual behavior from the normative model are too systematic to be dismissed as random error, too widespread to be ignored, and too fundamental to be accommodated by relaxing the normative system (e.g., Akerlof and Yellen, 1985; Kahneman and Tversky, 1979; Ratner et al., 1999; Russell and Thaler, 1985; Shafir et al., 1997; Slovic et al., 1988; Thaler et al., 1997; Tversky and Kahneman, 1992). We will review their arguments in this paper along with their conclusion that the normative and the descriptive (positive) analysis cannot be reconciled. Moreover, this literature suggests that the content and format of information which a decision maker receives can be manipulated such that the decision maker's perceptions are then manipulated as well. Moreover, people may inadvertently be manipulating their own perceptions by causal decisions they make about how to organize their knowledge. This reasoning is in line with what Tversky and Kahneman (1981) call the framing effect. We believe that a very important purpose of economic analysis is to help people or organizations to make better choices. A question then can be phrased as follows: "How can real people – as opposed to imaginary, idealized, super-rational people without psyches – make better choices in a way that does not do violence to their deep cognitive concerns?" (Bell et al., 1988, p. 9). We thus question the use of normative economics models and their foundation, the rational choice theory, as the primary tool in individual or organizational decision making. After all we can see every day that decision makers are not equally capable of analyzing a situation even when the information available to all of them is the same. The differences in their economic success can be attributed to their capabilities to analyze differences (Rubinstein, 1998).

We state here our belief that the perfect rationality may be the best justification for and the underlying philosophy of the political and economic institutions that we have today in western civilizations: capitalism and markets. Yet it is not the best description of either individual or organizational behavior within these institutions although their behavior is heavily influenced by the institutional values and philosophy. Most of us, market economists, are trained to perceive these institutions to be superior to alternative institutions (or social settings), and thus are likely to be bound to consider the actual behavior of individuals and organizations as a deviation from the ideal (optimum). Sometimes we also have an additional advisory role of how this observed suboptimal behavior should be corrected in order to achieve the ideal.

Behavioral scientists do not carry the same difficult burden as the economists, i.e., the preconceived notion of what individual or organizational actions must be in order to be socially optimal. Yet their task is equally formidable: to describe and predict the actual behavior of individuals (and organizations). This difference is exactly why we see many