

RATIONAL CHOICE THEORY

Critical Concepts in the Social Sciences

Edited by
Michael Allingham

Volume I

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RATIONAL CHOICE THEORY

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PREFACE

Choice is deliberate desire.
Aristotle

At its theoretical core rational choice theory is an abstract analysis of the nature of choosing rationally. The analysis proposes axioms which are intended to define what it means to be rational and then provides a characterization of choice procedures which satisfy these. An example of such an axiom might be that that if you choose some item from a menu and this item remains available in a more restricted menu then you also choose it from the restricted menu; an example of a characterization might be that you choose in a way which maximizes your utility.

Around this theoretical core the applied periphery of rational choice theory explores the implications of choosing rationally in a diverse variety of fields throughout the social sciences and allied subjects. The precise content of this analysis clearly depends on the particular field, but all such analysis has two properties in common: that all action is intentional; and that all social phenomena are explicable only in terms of the actions of individuals (the doctrine of methodological individualism).

The first known treatment of rational choice theory is to be found in the work of Aristotle. For Aristotle, rationality is seen as an instrument for achieving ends which are not themselves determined by reason. This position is supported, in the *Nichomachean Ethics* (trans. Ross, Ackrill and Urmson), as follows. First, choice is the result of deliberation: 'the same thing is deliberated upon and chosen'. Second, this deliberation concerns means rather than ends: 'we deliberate not about ends but about means'. And third, these ends are determined by wishes: 'wish relates rather to the end, choice to the means'. These three observations together imply that 'choice is desire and reasoning with a view to the end' or, more concisely, that 'choice is deliberate desire'.

This instrumental conception of rational choice theory is shared by modern philosophers. To give but one example, Hume, in his *Treatise of Human Nature*, makes a clear separation between means and ends, or reason and passion, in his assertion that 'reason is and ought only to be the slave of the passions'. Passions themselves are neither reasonable nor unreasonable. Reason enters the picture only when passions are translated

by choice into action: 'a passion can never, in any sense, be called unreasonable'. Thus 'it is not contrary to reason to prefer the destruction of the whole world to the scratching of my finger; it is not contrary to reason for me to chuse my total ruin to prevent the least uneasiness of an Indian'.

We may interpret rational choice theory either as an exploration of what it means to be rational or as a description of how people act in practice. If we adopt the latter interpretation we should not confuse 'a description' with 'an explanation'. The claim would be not that people deliberately carry out the various calculations which the theory might suggest, just that, on the whole, they act as if they do. A good description of the way in which a tree grows is obtained by assuming that it develops leaves in a way which maximizes the area exposed to the sun. But few people would seriously suggest that the tree does this deliberately. If we interpret rational choice theory as an exploration of what it means to be rational then the theory may also serve as a guide to making sensible decisions. But it will not, for example, suggest that you should gamble or that you should insure, for individual choices, as opposed to patterns of choices, cannot be reasonable or unreasonable. (It might, however, suggest that you would be unwise to do both.)

It is useful to consider rational choice theory, both its theoretical core and its applied periphery, in the following five distinct settings:

- Pure choice: that in which choice must be made from definite items with no uncertainty.
- Choice under uncertainty: that where choice must be made under uncertainty, either where probabilities are given or where they are not.
- Strategic choice: that where one person has to choose an action knowing that another is also choosing an action and that the outcome will depend on what each chooses.
- Social choice: that where a number of people have to choose collectively.
- Bounded rationality: that where choice must be made with limited access to information or computational capacity.

The five volumes of this collection correspond to these five settings, each combining work from the theoretical core and the applied periphery of that setting. Because a number of articles combine both theory and application there is no separation between the two. Instead, articles are arranged chronologically within each volume.

The articles in this collection were all published after (or in one case comprise) what may be considered to be the seminal contributions in their respective settings: Samuelson's *Foundations of Economic Analysis* of 1947 for pure choice; von Neumann and Morgenstern's *Theory of Games and Economic Behavior* of 1944 for choice under uncertainty; Nash's article of 1951 on 'Non-cooperative games' for strategic choice; Arrow's *Social Choice and Individual Values* of 1951 for social choice; and Simon's article of 1955

PREFACE

on 'A behavioral model of rational choice' (included in Volume V of this collection) for bounded rationality.

Rational choice theory covers an immense area: the contents of this collection are necessarily selective. In addition to the requirement that they appeared after (or during) the years mentioned above, the articles appearing in this collection have been chosen on the following principles. First, they should be in English, and should have first appeared in journals rather than other collections. Second, they should preferably be of an expository or synoptic nature, and, if possible, although this cannot always be the case, not too mathematical. And finally, applied articles should cover a wide range of disciplines: philosophy, mathematics, economics, politics, sociology, law, business, geography, psychology and biology are all represented in this collection.

As has been noted, the theoretical core of rational choice theory can necessarily become quite mathematical. Also, results are developed in a variety of similar, but not identical frameworks. To assist the reader in finding a way through such material the collection commences with an Introduction that presents the central results of the theoretical core of rational choice theory in a simple, unified, and entirely non-technical framework.

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