

# Rationality, Bounded Rationality and Microfoundations

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# **Rationality, Bounded Rationality and Microfoundations**

**Foundations of Theoretical Economics**

Reza Salehnejad



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# Preface

In *Principles of Political Economy*, Mill wrote ‘happily, there is nothing in the laws of Value [economics] which remains for the present writer or any future writer to clear up; the theory of the subject is complete’. In his view, intuition, introspection, and pure thought were enough to tackle all the challenges of economics. Max Plank, though, dropped his involvement with economics as he thought it was too difficult. To him, physics appeared more tractable.

Whether one views economics as simple or difficult depends on how the general problem of economics is defined. An emerging literature views the economy as a society of heterogeneous, and interactive, individuals, who compete with each other over scarce resources. They learn from their past experiences, continuously modify their rules of behaviour, and thereby change the structure of the environment they face. As soon as economics is defined in this way, the incredible complexity of the issues involved in modelling the economy begins to emerge. And it immediately becomes apparent that the subject sits at the crossroads of many interesting and challenging topics including cognitive science, behavioural psychology, politics, mathematics, probability theory, statistics, and even biology.

There is currently no grand theory of the economy as an evolving system, and there may never be. Yet, any step towards establishing such a theory demands a theory of adaptive behaviour and a careful analysis of the connection between the individual and the system. This work studies some aspects of these problems. It views the economy as a society of intuitive statisticians, who follow the prescriptions of rational choice theory to make decisions. It uses this framework to study the possible contribution of rational choice theories to economic theory, and examines whether the hypothesis that ‘homo economicus’ behaves like an intuitive statistician helps explain the dynamics of the economy. The book then turns to the complexities that behavioural heterogeneity and interaction create for the connection between the micro- and macro-levels in the economy. The upshot is a critical understanding of the current state of theoretical macroeconomics as well as numerous insights and suggestions essential for constructing a dynamic theory of the economy.

This work has been in the making for many years, and during these years I have regularly benefited from the magnanimous help of many. I would, most notably, like to thank Colin Howson and Nancy Cartwright from whom I learnt enormously during my years at the London School of Economics. Also, my special thanks go to Cliburn Chan. Though by profession a biologist, interested in nonlinear dynamics, he was generous enough to read various parts of this work to teach me how to write and even how to restructure

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REZA SALEHNEJAD