

Rationality in Economics

Constructivist and Ecological Forms

VERNON L. SMITH

George Mason University



CAMBRIDGE
UNIVERSITY PRESS

Contents

<i>Preface</i>	<i>page</i> xiii
<i>Acknowledgments</i>	xix
Introduction	1
PART I RATIONALITY, MARKETS, AND INSTITUTIONS	13
1 Rediscovering the Scottish Philosophers	15
Exchange in Social and Economic Order	15
Lessons from Scotland	18
2 On Two Forms of Rationality	24
Introduction	24
Constructivist Rationality	26
Limitations and Distractions of Constructivist Rationality	32
Ecological Rationality	36
Implications	41
PART II IMPERSONAL EXCHANGE: THE EXTENDED ORDER OF THE MARKET	43
3 Relating the Two Concepts of a Rational Order	45
Introduction	45
Airline Route Deregulation	47
The California Energy Crisis	50
Economic Systems Design	53
Constructivism as Rational Reconstruction of Emergent Order	57
4 Market Institutions and Performance	61
Knowledge, Institutions, and Markets	61
The Iowa Electronic Market	68

Strategy Proof-ness: Theory and Behavior	70
Did Gresham Have a Law?	74
Market Power and the Efficacy of Markets	75
Equilibrium with a Dominant Firm?	75
The Ethyl Case and Antitrust Policy	77
Gasoline Market Behavior and Competition Policy	81
Predatory Pricing	83
Entry Cost and Competition: Contestable Markets Theory	86
5 Asymmetric Information and Equilibrium without Process	94
Rationality in Asymmetric Information Markets	94
The Neoclassical Synthesis	101
Hayek and the Hurwicz Program	104
Experimental Markets with Asymmetric Information	108
Markets for Quality	109
Labor Markets and Efficiency Wages	111
6 FCC Spectrum Auctions and Combinatorial Designs:	
Theory and Experiment	115
Introduction	115
Auctions: Modeling Institutions	116
Economics of English Auctions	117
Independent Private Values	118
Common Values	121
Review of Relevant Experimental Results	125
Single Object Auctions	126
Common Value Auctions	126
A “Winner’s Curse” in Private Value English Auctions for Gambles?	127
Jump Bidding and the Class of Badly Performing Multiple-Unit English Auctions	127
The English Clock Corrects Bad Performance	130
Combinatorial Auctions	131
Tests of SMR and a Proposed Alternative	133
The FCC Auction Design Process	137
Auction Design for Complex Environments	140
The Combo Clock: Simple Solutions for Complex Auctions	141
Implications for the Design of Spectrum Auctions	144
7 Psychology and Markets	149
Psychology’s Challenge to Constructivist Rationality	149
Psychology, Economics, and the Two Forms of Rationality	156

	What Is Fairness?	161
	Examples of Fairness	163
	Fairness: An Experimental Market Test	166
8	What Is Rationality?	168
	Economic Survival versus Maximizing Utility	169
	Maximizing the Probability of Survival	169
	Maximizing Expected "Profit," or Discounted Withdrawals	172
	Is It Rational to Be "Rational"?	173
	Literature Background	176
	Modeling Net Subjective Value	177
	Examples from Experiments	179
	Monetary Incentives: Further Discussion	180
	Rationality in Collectives and the Sense of Number	182
	Market Rationality: Capital versus Commodity and Service Flow Markets	186
PART III PERSONAL EXCHANGE: THE EXTERNAL ORDER OF SOCIAL EXCHANGE		
		189
9	Emergent Order without the Law	192
	Rules and Order	192
	Ellickson Out-Coases Coase	196
10	The Effects of Context on Behavior	199
	Introduction and Elementary Theoretical Background	199
	Perspectives on Interpreting Results	200
	How Does Context Matter?	202
	Anonymity as a Treatment Procedure	204
	Perception, Context, and the Internal Order of the Mind	206
	The Significance of Experimental Procedures	209
	Overview of Experimental Procedures	211
	The Ultimatum Game Example	212
	Dictator Games	220
	Appendix. Behavioral Deviation from Prediction: Error, Confusion, or Evidence of Brain Function?	227
11	Investment Trust Games: Effects of Gains from Exchange in Dictator Giving	234
	A Celebrated Two-Stage Dictator Game	234
	Reciprocity or Other-Regarding Preferences?	237
12	Reciprocity in Trust Games	245
	Introduction	245

Trust Games without a Punishment Option	250
Why So Much Cooperation?	253
Is It the Subjects? Undergraduates versus Graduates	253
Machiavelli, Trust, and Cooperation: Mandeville's Knaves?	254
Is It Utility for Other Payoff?	257
Reciprocity versus Preferences: Does Own Opportunity Cost	
Influence Other Choice?	260
Extensive versus Normal (Strategic) Form Games	264
Trust Games with Punishment Options	267
Self-Regarding Cooperation in Repeat Play? Protocols with and	
without Direct Punishment	272
Effect of Matching Protocol on Frequency of Cooperation in	
Trust Games with and without Punishment	274
Comparison of Behavior in the Repeated Play of Extensive and	
Normal Form Games	274
A Matching Protocol Based on Sorting for Cooperative Behavior	275
PART IV ORDER AND RATIONALITY IN METHOD AND MIND	281
13 Rationality in Science	283
Introduction	283
Rational Constructivism in Method	285
Can We Derive Theory Directly from Observation?	285
Economics: Is It an Experimental Science?	290
What Is the Scientists' qua Experimentalists' Image of What	
They Do?	296
Auxiliaries and the Ambiguity of Rejecting the "Test" Hypothesis	297
A D-Q Example from Physics	298
A Proposition and Some Economics Examples	300
The Methodology of Positive Economics	304
In View of Proposition 2, What Are Experimentalists and	
Theorists to Do?	304
Experimental Knowledge Drives Experimental Method	305
The Machine Builders	308
Technology and Science	308
Technology and Experimental Economics	309
In Conclusion	311
14 Neuroeconomics: The Internal Order of the Mind	312
Introduction	312
Individual Decision Making	314

Rewards and the Brain	316
Strategic Interaction: Moves, Intentions, and Mind Reading	316
What Are the Neuroeconomic Questions?	317
15 A Summary	322
<i>References</i>	329
<i>Index</i>	353