CONTENTS OF VOLUME 1

Introduction to the Series	vii
Preface	ix
Introduction	ix
The Book Organization	xi
References	xii
PART 1: MARKETS	
Markets	3
1.1. Institutional Environments	3
1.2. Imperfect Competition	8
1.3. Dynamics of Market Adjustments	11
References	13
PART 1.1: INSTITUTIONAL ENVIRONMENTS	
PART 1.1.1: PROPERTIES OF THE DOUBLE AUCTION	
Chapter 1	
Properties of Disequilibrium Adjustment in Double Auction Markets	
CHARLES R. PLOTT	16
References	20
Chapter 2	
From Market Jaws to the Newton Method: The Geometry of How a Market	
Can Solve Systems of Equations	
PETER BOSSAERTS AND CHARLES R. PLOTT	22
References	24
Chapter 3	
Exogenous Uncertainty Increases the Bid-Ask Spread in the Continuous	
Double Auction	
VERNON L. SMITH AND MARK VAN BOENING	25
1. Experimental Design	25

	Exogenous Uncertainty and the Bid/Ask Spread	27
	Conclusion	30
Re	eferences	30
Cl	napter 4	
	ro-Intelligence Robots and the Double Auction Market: A Graphical Tour	
	AUL J. BREWER	31
1.	Environment	32
	1.1. Values and Costs	32
	1.2. Profits	32
	1.3. Limitations on Trading	32
	1.4. Market Rules	32
	1.5. Budget Constraints	33
	1.6. Trades Involve Arbitrage; No Speculative Trades	33
2.	Robot Agents	34
	2.1. Zero Intelligence Robots – Trading Algorithm	34
	2.2. UNIT Robots – Trading Algorithm	34
	2.3. Kaplan's Parasitic Robots ¹ – Trading Algorithm	35
3.	Literature – Robots and the Double Auction	35
	3.1. Types of Questions	35
	3.2. Major Results from the Literature – A Chronology	37
Re	eferences	44
C	napter 5	
	fect of Non-binding Price Controls in Double Auction Trading	
	ERNON L. SMITH AND ARLINGTON W. WILLIAMS	46
	Introduction	46
	Experimental Design	46
	Experimental Results	48
	Why Do Non-binding Price Controls Interfere with the DA Market Process?	53
	Conclusions	53
	eferences	53
1	references	33
PA	ART 1.1.2: PROPERTIES OF POSTED OFFER PROCESSES	
Cl	napter 6	
	irness and Short Run Price Adjustment in Posted Offer Markets	
ΡF	RAVEEN KUJAL AND VERNON L. SMITH	55
1.	Introduction	55
2.	Market Experiments	55
	2.1. Extension: Posted Bid vs Posted Offer	56
	2.2. Our Experiments	57
3.	Hypothesis and Experimental Results	57

Contents of Volume 1	XV
4. Discussion	58
4.1. What is Fairness?	60
References	61
Chapter 7	
Mixed Strategy Nash Equilibrium Predictions as a Means of Organizing Be-	
havior in Posted-Offer Market Experiments	
DOUGLAS D. DAVIS AND BART J. WILSON	62
1. Introduction	62
2. Equilibrium Mixed Strategy Pricing Distributions	63
3. Pricing Performance with Market Power	64
4. Pricing Densities Relative to Static Nash Equilibrium Predictions	67
5. Performance of Alternative Theories	68
6. Summary	69
References	69
Chapter 8	
Simulated and Real Buyers in Posted Offer Markets	
JAMIE BROWN KRUSE	71
1. Introduction	71
2. Summary of the Experimental Design	71

References	76
Chapter 9	
The Performance of Double-Auction and Posted-Offer Markets with Advance	
Production	
STUART MESTELMAN	77
References	82
PART 1.1.3: CALL MARKETS AND SEALED BIDS	
Chapter 10	
Strategy-Proof Equilibrium Behavior in Two-Sided Auctions	
VERNON L. SMITH	84
1. Strategy-Proof Equilibria in the Sealed Bid-Offer Auction	85
2. Strategy-Proof Equilibria in the Uniform Price Double Auction (UPDA)	88

72

76

89

91

3. Results

3. Summary

References

Acknowledgements

Chapter 11	
First Price Independent Private Values Auctions	
JAMES C. COX	92

xvi Contents of Volume 1

1. Tests of the RNM with Market Prices	92
2. Tests of the RNM with Subject Payoff Data	94
3. Tests of the CRRAM and the RNM with Individual Bid Data	95
4. Tests of the LCM with Individual Bid Data	96
5. Summary of the Test Results	98
Acknowledgement	98
References	98
PART 1.1.4: ALTERNATIVE MARKET INSTITUTIONS	
Chapter 12	
The Walrasian Auction	
CORINNE BRONFMAN, KEVIN MCCABE, DAVID PORTER, STEPHEN	
RASSENTI AND VERNON SMITH	100
1. Introduction	100
2. Experimental Environments	100
2.1. Baseline	100
	100
2.2. Multi-unit Non-stationary Supply and Demand Environment Welragian Austica Design and Computational Implementation	101
3. Walrasian Auction Design and Computerized Implementation	
4. Experimental Results	104
4.1. The E1 Environment Replication	104
4.2. Baseline and Treatment Effects	104
4.3. Individual Behavior	105
References	108
Chapter 13	
The Matching Market Institution	
DANIEL FRIEDMAN AND CHANGHUA RICH	109
Experimental Procedures	109
2. Results	111
3. Discussion	114
References	114
References	114
Chapter 14	
Tatonnement	
CHARLES R. PLOTT	115
Reference	117
PART 1.2: IMPERFECT COMPETITION	
PART 1.2.1: MARKET POWER	
Chapter 15	
Wage Differentials in Experimental Efficiency Wage Markets	

Contents of Volume 1	xvii
ERNST FEHR AND SIMON GÄCHTER	120
1. Wage Differentials: Experiments Help to Test Explanations	120
2. The Fair Wage-Effort Version of Efficiency Wage Theory	121
2.1. Experimental Design	121
2.2. Results	121
3. The Shirking Version of Efficiency Wage Theory	123
3.1. Design	123
3.2. Results	124
4. Summary	125
References	126
Chapter 16	
The Paradox of Power	
YVONNE DURHAM, JACK HIRSHLEIFER AND VERNON L. SMITH	127
1. The Model	128
2. Implementing the Model	132
3. Experimental Procedures and Design	132
4. Results	133
4.1. Nash vs Cooperative Comparisons	133
4.2. Predictions of the Model	135
4.3. Charting the Observations	136
References	136
Chapter 17	
The Exercise of Market Power in Laboratory Experiments	
DOUGLAS D. DAVIS AND CHARLES A. HOLT	138
1. Introduction	138
2. Market Power	139
3. Applications of Market Power	143
References	145
Chapter 18	
The Classical Experiments on Cournot Oligopoly	4.46
ANTONI BOSCH-DOMÈNECH AND NICOLAAS J. VRIEND	146
1. Sauermann and Selten's Results	146
2. Hoggatt's Results	148
3. Fouraker and Siegel's Results References	149
References	152
Chapter 19	
Experiments in Decentralized Monopoly Restraint	150
JAMES C. COX AND R. MARK ISAAC	153
1. Market Institutions for Monopoly Restraint	153

xviii	Contents of Volume 1
-------	----------------------

2. Contestable Markets	155
3. The Loeb–Magat Mechanism	156
4. The Finsinger–Vogelsang Mechanism	157
5. The Cox–Isaac Mechanism	159
Acknowledgement	161
References	161
PART 1.2.2: COLLUSION	
Chapter 20	
Price Signaling and "Cheap Talk" in Laboratory Posted Offer Markets	
TIMOTHY N. CASON	164
1. Multi-Market versus Single-Market Competition	165
2. The Importance of the Signaling Language	167
3. Summary	168
References	168
Chapter 21	
The Effects of Collusion in Laboratory Experiments	
DOUGLAS D. DAVIS AND CHARLES A. HOLT	170
1. Introduction	170
2. Collusion with and without Secret Discounts	171
3. Recent Work	175
References	176
Chapter 22	
Predatory Pricing: Rare Like a Unicorn?	
ROSARIO GOMEZ, JACOB K. GOEREE AND CHARLES A. HOLT	178
1. Introduction	178
2. Single Market Designs	178
3. Multiple Market Designs	180
4. Summary	183
References	184
Chapter 23	
Some Results on Anti-Competitive Behavior in Multi-Unit Ascending Price	
Auctions	
KATERINA SHERSTYUK	185
1. Experiments on Demand Reduction	186
2. Experiments on Bidder Collusion	192
Acknowledgement	197
References	197

Contents of Volume 1 xix

ъ	ADT	1 0 0	NICAL	CONT	TEXTELLO
Ρ.	ART	1.2.3:	NON-	-CONN	/EXITIES

Chapter 24 Non-Convexities, Economies of Scale, Natural Monopoly and Monopolistic	
Competition	
CHARLES R. PLOTT	200
References	205
Chapter 25	
Avoidable Cost Structures and Competitive Market Institutions	
MARK V. BOENING AND NATHANIEL T. WILCOX	206
1. A Simple Avoidable Cost Structure	206
2. Three Market Institutions	208
3. The Results	209
4. A Next Step: Cooperative Arrangements?	211
References	211
PART 1.3: DYNAMICS OF MARKET ADJUSTMENTS	
Chapter 26	
Principles of Market Adjustment and Stability	
CHARLES R. PLOTT	214
1. Theory	214
1.1. Cobweb Dynamics	215
1.2. The Walrasian (Hicks, Samuelson) Dynamics	216
1.3. Marshallian Dynamics	216
2. Experiments	217
2.1. Instability does not Occur under Conditions Predicted by the Cobweb Model	217
2.2. Walrasian Dynamics and not Marshallian Dynamics Capture the Backward-Bending Case	219
2.3. The Marshallian Model and not the Walrasian Model Best Describes Market Behavior	
in the Case of a Marshallian Externality or a "Fad"	223
3. Summary	226
References	227
Chapter 27	
Off-floor Trading, Market Disintegration and Price Volatility in Bid/Ask Markets	
VERNON L. SMITH AND MARK VAN BOENING	228
1. The Problem	228
2. The Environment	228
3. Results	229
4. Discussion: Implications for, and Barriers to, Institutional Redesign	232
References	232

xx Contents of Volume 1

Chapter 28	
Quantitative Restrictions in Experimental Posted-offer Markets	
PRAVEEN KUJAL	234
1. Introduction	234
1.1. Quotas	234
2. Quota Experiments	235
3. Experimental Design	236
3.1. Market equilibrium	237
4. Experimental Results	238
5. Conclusion	240
References	241
Chapter 29	
Price Bubbles in Large Financial Asset Markets	
ARLINGTON W. WILLIAMS	242
References	246
Chapter 30	
Price Bubbles	
DAVID PORTER AND VERNON L. SMITH	247
1. Introduction	247
2. Empirical Results from Laboratory Asset Markets	247
References	255
Chapter 31	
Experiments with Arbitrage Across Assets	
ERIC O'N. FISHER	256
References	259
Chapter 32	
Bubbles and Crashes in Experimental Asset Markets: Common Knowledge Failure?	
CHARLES NOUSSAIR AND CHARLES PLOTT	260
References	263
Chapter 33	
A Comparison of Market Institutions	
TIMOTHY N. CASON AND DANIEL FRIEDMAN	264
1. Market Institutions	264
2. Market Environment	266
3. Related Work	266
4. Results	267
4.1 Market Efficiency	267

Contents of Volume 1	XX1
Contents of volume 1	AAI

4.2. Transaction Prices	269
4.3. Transaction Volume	271
5. Discussion	271
References	271
References	2/1
Chapter 34	
Coordination Success in Non-cooperative Large Group Market Entry Games	
AMNON RAPOPORT AND DARRYL A. SEALE	273
1. The Market Entry Game	273
2. Results	274
2.1. Sundali, Rapoport, and Seale (1995)	274
2.2. Rapoport et al. (1998)	281
2.3. Rapoport, Seale, and Winter (1997)	282
3. Adaptive Learning	293
Acknowledgement	294
References	294
PART 2: MARKET ECONOMICS OF UNCERTAINTY AND INFORMATION	
Market Economics of Uncertainty and Information	299
Chapter 35	
Learning to Forecast Rationally	
HUGH KELLEY AND DANIEL FRIEDMAN	303
1. Introduction	303
2. The Tasks	303
2.1. Orange Juice Forecasting (OJ)	303
2.2. The Medical Diagnosis Task (MD)	305
3. Results	305
3.1. Rolling Regressions	305
3.2. OJ Learning Curves	306
3.3. MD Learning Curves	308
4. Discussion	308
References	310
Chapter 36	
Laboratory Tests of Job Search Models LAMES C. COY AND BONAL D.L. CAYACA	211
JAMES C. COX AND RONALD L. OAXACA	311
Basic Search Experiments Precommitment/No Precommitment Experiments	311
2. Precommitment/No Precommitment Experiments 3. Pagell Experiments	313
3. Recall Experiments 4. Extensions of the Standard Search Model	316
4. Extensions of the Standard Search Model	318
Acknowledgements	318

Chapter 37 Reciprocity and Contract Enforcement SIMON GÄCHTER AND ERNST FEHR 1. The Contract Enforcement Problem 2. Experimental Design and Results of Fehr and Gächter (1998a) 2.1. Design 2.2. Results 320 3. Contract Enforcement with an Imperfect Verification Technology 4. Summary 324 References 325 Chapter 38 Reciprocity in Experimental Markets ERNST FEHR AND ARMIN FALK 325 1. Introduction 325 2. Experimental Design 326 2.1. Common Features of All Treatments 327 2.3. The One-sided Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 327 2.5. Standard Predictions 328 3. Results 4. Reciprocity Under Conditions of High Stakes 5. Related Experiments
SIMON GÄCHTER AND ERNST FEHR 1. The Contract Enforcement Problem 2. Experimental Design and Results of Fehr and Gächter (1998a) 2.1. Design 2.2. Results 320 3. Contract Enforcement with an Imperfect Verification Technology 323 4. Summary 324 References 325 Chapter 38 Reciprocity in Experimental Markets ERNST FEHR AND ARMIN FALK 325 1. Introduction 325 2. Experimental Design 326 2.1. Common Features of All Treatments 326 2.2. The One-sided Auction-treatment 327 2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes
SIMON GÄCHTER AND ERNST FEHR 1. The Contract Enforcement Problem 2. Experimental Design and Results of Fehr and Gächter (1998a) 2.1. Design 2.2. Results 320 3. Contract Enforcement with an Imperfect Verification Technology 323 4. Summary 324 References 325 Chapter 38 Reciprocity in Experimental Markets ERNST FEHR AND ARMIN FALK 325 1. Introduction 325 2. Experimental Design 326 2.1. Common Features of All Treatments 326 2.2. The One-sided Auction-treatment 327 2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes
2. Experimental Design and Results of Fehr and Gächter (1998a) 2.1. Design 2.2. Results 320 3. Contract Enforcement with an Imperfect Verification Technology 4. Summary 324 References 324 Chapter 38 Reciprocity in Experimental Markets ERNST FEHR AND ARMIN FALK 3. Introduction 3. Experimental Design 3. Experimental Design 3. Common Features of All Treatments 3. The One-sided Auction-treatment 3. The Double Auction-treatment 3. The Bilateral Bargaining-treatment 3. Results 3. Results 4. Reciprocity Under Conditions of High Stakes
2.1. Design 320 2.2. Results 320 3. Contract Enforcement with an Imperfect Verification Technology 323 4. Summary 324 References 324 Chapter 38 Reciprocity in Experimental Markets ERNST FEHR AND ARMIN FALK 325 1. Introduction 325 2. Experimental Design 326 2.1. Common Features of All Treatments 326 2.2. The One-sided Auction-treatment 327 2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 2.5. Standard Predictions 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes 329
2.1. Design 320 2.2. Results 320 3. Contract Enforcement with an Imperfect Verification Technology 323 4. Summary 324 References 324 Chapter 38 Reciprocity in Experimental Markets ERNST FEHR AND ARMIN FALK 325 1. Introduction 325 2. Experimental Design 326 2.1. Common Features of All Treatments 326 2.2. The One-sided Auction-treatment 327 2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 2.5. Standard Predictions 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes 329
2.2. Results 3 Contract Enforcement with an Imperfect Verification Technology 4. Summary 324 References 324 Chapter 38 Reciprocity in Experimental Markets ERNST FEHR AND ARMIN FALK 3 Introduction 3 Experimental Design 3
4. Summary 324 References 324 Chapter 38 Reciprocity in Experimental Markets ERNST FEHR AND ARMIN FALK 325 1. Introduction 325 2. Experimental Design 326 2.1. Common Features of All Treatments 326 2.2. The One-sided Auction-treatment 327 2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 2.5. Standard Predictions 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes 329
4. Summary 324 References 324 Chapter 38 Reciprocity in Experimental Markets ERNST FEHR AND ARMIN FALK 325 1. Introduction 325 2. Experimental Design 326 2.1. Common Features of All Treatments 326 2.2. The One-sided Auction-treatment 327 2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 2.5. Standard Predictions 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes 329
References 324 Chapter 38 Reciprocity in Experimental Markets ERNST FEHR AND ARMIN FALK 325 1. Introduction 325 2. Experimental Design 326 2.1. Common Features of All Treatments 326 2.2. The One-sided Auction-treatment 327 2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes 329
Reciprocity in Experimental Markets ERNST FEHR AND ARMIN FALK 325 1. Introduction 325 2. Experimental Design 326 2.1. Common Features of All Treatments 326 2.2. The One-sided Auction-treatment 327 2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 2.5. Standard Predictions 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes 329
Reciprocity in Experimental Markets ERNST FEHR AND ARMIN FALK 325 1. Introduction 325 2. Experimental Design 326 2.1. Common Features of All Treatments 326 2.2. The One-sided Auction-treatment 327 2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 2.5. Standard Predictions 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes 329
1. Introduction 325 2. Experimental Design 326 2.1. Common Features of All Treatments 326 2.2. The One-sided Auction-treatment 327 2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 2.5. Standard Predictions 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes 329
2. Experimental Design 326 2.1. Common Features of All Treatments 326 2.2. The One-sided Auction-treatment 327 2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 2.5. Standard Predictions 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes 329
2.1. Common Features of All Treatments 326 2.2. The One-sided Auction-treatment 327 2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 2.5. Standard Predictions 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes 329
2.2. The One-sided Auction-treatment3272.3. The Double Auction-treatment3272.4. The Bilateral Bargaining-treatment3282.5. Standard Predictions3283. Results3284. Reciprocity Under Conditions of High Stakes329
2.3. The Double Auction-treatment 327 2.4. The Bilateral Bargaining-treatment 328 2.5. Standard Predictions 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes 329
2.4. The Bilateral Bargaining-treatment3282.5. Standard Predictions3283. Results3284. Reciprocity Under Conditions of High Stakes329
2.5. Standard Predictions 328 3. Results 328 4. Reciprocity Under Conditions of High Stakes 329
3. Results4. Reciprocity Under Conditions of High Stakes328329
4. Reciprocity Under Conditions of High Stakes 329
J. Related Experiments
Acknowledgement 333
References 334
Chapter 39
Information Cascade Experiments
LISA R. ANDERSON AND CHARLES A. HOLT 335
1. Cascades 335
2. Market Applications and Alternative Institutions 340
References 342
Further reading 343
Chapter 40
Markets and Information Aggregation Mechanisms
KAY-YUT CHEN AND CHARLES R. PLOTT 344
1. Are The Lessons From The Simple Cases Useful? 348
References 352

Contents of Volume 1	XXIII
Contents of volume 1	AAIII

Contents of Volume 1	xxiii
PART 3: GENERAL EQUILIBRIUM AND THE ECONOMICS OF MULTIPLE MARKET SYSTEMS	
General Equilibrium and Multiple Market Systems	355
Chapter 41	
Comparative Advantage and International Trade	
CHARLES R. PLOTT	358
Reference	363
Chapter 42	
Asset Pricing	264
PETER BOSSAERTS	364
1. What the Theory Predicts 2. The Empirical Overtion	364 365
2. The Empirical Question3. What the Field Data Teach Us	365
4. What the Experiments Teach Us	366
References	369
Chapter 43	
Price Discovery and Allocation in Chains and Networks of Markets	
CHARLES R. PLOTT AND JACKIE YEUNG	370
Reference	375
Chapter 44	
Multiple Market Systems and the Classical Principles of Price Dynamics in	
General Equilibrium	
CHARLES R. PLOTT	376
References	382
Further reading	383
PART 4: GAMES	
Games	387
4.1. Accuracy of the Nash Model	387
4.2. Learning in Games	389
PART 4.1: ACCURACY OF THE NASH MODEL	
Chapter 45	
Experimental Beauty Contest Games: Levels of Reasoning and Convergence	
to Equilibrium	
ROSEMARIE NAGEL	391
1. Introduction	391

xxiv Contents of Volume 1

2.	Variations on the Beauty Contest Game	392
	Bounded Rational Behavior	401
	3.1. Iterated Best Reply Model	401
	3.2. Learning	404
Αţ	opendix A: Instructions (from Duffy and Nagel, 1997)	407
	A.1. General	407
	A.2. The Rules	407
	A.3. What is the Median	408
	A.4. Payoffs	408
	A.5. Explanation Sheet	408
Αţ	ppendix B:	408
Re	ferences	409
Cł	aapter 46	
	ciprocity in Ultimatum and Dictator Games: An Introduction	
ΕI	JIZABETH HOFFMAN, KEVIN MCCABE AND VERNON SMITH	411
	Motivation	411
2.	Ultimatum and Dictator Games Described	412
	Experimental Designs and Summary Results	412
4.	Interpretations and Discussion	414
Re	ferences	415
	apter 47	
	eferences and Property Rights in Ultimatum and Dictator Games	
	JIZABETH HOFFMAN, KEVIN MCCABE AND VERNON SMITH	417
	Property Rights Defined	417
	Experimental Design	417
3.	Ultimatum Results	419
4.	Dictator Games and Results	420
5.	Discussion	421
Re	ferences	422
	aapter 48	
	ompting Strategic Reasoning Increases Other-regarding Behavior	
ΕI	JIZABETH HOFFMAN, KEVIN MCCABE AND VERNON SMITH	423
1.	Introduction	423
	1.1. Previous Results	423
	1.2. The Current Experiment	425
	Experimental Design and Subject Recruitment	425
3.	Experimental Results	426
4.	Discussion	426
Re	ferences	428

Contents of Volume 1 xxv

Chapter 49	
Social Distance and Reciprocity in Dictator Games	
ELIZABETH HOFFMAN, KEVIN MCCABE AND VERNON SMITH	429
1. Defining Variations on Perceived Social Distance in Dictator Games	429
2. Experimental Design	429
2.1. Replicating Forsythe et al. (1994)	430
2.2. FHSS-V	431
2.3. Double Blind 2 (DB2)	433
2.4. Single Blind 1 (SB1)	433
2.5. Single Blind 2 (SB2)	433
3. Experimental Design and Research Hypothesis	434
4. Results	435
References	435
Chapter 50	
Fairness in Ultimatum Bargaining	
J. KEITH MURNIGHAN	436
1. Defining and Investigating the Impact of Fairness Concerns	437
2. "My Offer is Fair"	440
3. Fairness, Anger, and Spite	445
4. Ultimatum Bargaining by Children	449
5. Ultimatums Dividing Money and M&Ms	449
6. Conclusions	451
Acknowledgements	452
References	452
Further reading	453
Chapter 51	
Coordination Failure in Market Statistic Games	
JOHN VAN HUYCK AND RAYMOND BATTALIO	454
1. Introduction	454
2. Strategic Uncertainty and Coordination Failure	455
3. The Influence of Out-of-Equilibrium Payoffs	457
4. The Influence of Group Size, Grid Size, and Order Statistic	458
5. The Separatrix	459
Acknowledgements	461
References	461
Chapter 52	
The Problem of Common Choice in Symmetric <i>N</i> -person Coordination Games	
CARL M. RHODES AND RICK K. WILSON	463
1. The Problem	463
2. Experimental Design	464

xxvi Contents of Volume 1

 3. Single Stage Results 4. Repeated Play Results 5. Conclusion Acknowledgements References 	466 467 470 471 471
Chapter 53 Equilibrium Convergence in Normal Form Games NICOLE BOUCHEZ AND DANIEL FRIEDMAN 1. Laboratory Procedures and Treatments 2. Results 3. Discussion References	472 472 475 479 479
Chapter 54 Analyzing Choice with Revealed Preference: Is Altruism Rational? JAMES ANDREONI AND JOHN H. MILLER 1. Introduction 2. The Choice Task 3. Checking GARP 4. Conclusion References	481 483 483 486 487
Chapter 55 Testing Theories of Other-regarding Behavior: A Sequence of Four Laboratory Studies GARY E. BOLTON, JORDI BRANDTS, ELENA KATOK, AXEL OCKEN-FELS AND RAMI ZWICK 1. Introduction 2. Bolton and Zwick (1995): Reputation Building versus Self-centered Fairness in an Ultimatum Game 3. Bolton, Katok and Zwick (1998): The Nature of Giving Behavior in Dictator Games 4. Selten and Ockenfels (1998) and Ockenfels and Weimann (1999): The Fixed Total Sacrifice Effect in the Solidarity Game 5. Bolton, Brandts, and Ockenfels (1998): Distribution versus Intentions in a	488 488 489 492 494
2-person Dilemma Game 6. Summary: Regularities for Theory Building References Further reading	495 498 498 499

Chapter 56

Focal Points and Bargaining

Contents of Volume 1	xxvii
KEN BINMORE AND JOSEPH SWIERZBINSKI References	500 507
PART 4.2: ALTERNATIVES TO NASH	
Chapter 57	
Differences in the Economic Decisions of Men and Women: Experimental Evidence	
CATHERINE C. ECKEL AND PHILIP J. GROSSMAN	509
Abstract	509
1. Public Goods Experiments	510
2. Ultimatum Experiments	513
3. Dictator Experiments	515
4. Conclusions	518
References	518
Chapter 58	
Emergent Conventions in Evolutionary Games	
JOHN VAN HUYCK	520
1. Introduction	520
2. Inefficient Conventions	521
3. Coordination Conventions: Labels and Populations	522
4. Unequal Division Bargaining Conventions Acknowledgements	527 529
References	529
Further reading	530
•	
Chapter 59 Salf contared Foirmess in Comes with More Than Two Players	
Self-centered Fairness in Games with More Than Two Players GARY E. BOLTON AND AXEL OCKENFELS	531
1. Introduction	531
2. Sketch of ERC Preferences	532
3. Evidence in Games with More Than Two Players	534
3.1. The Güth–van Damme Bargaining Game	534
3.2. Market Game	537
3.3. The Fixed Total Sacrifice Effect	538
4. Summary	539
References	540
Chapter 60	
Quantal Response Equilibria: A Brief Synopsis	
RICHARD D. MCKELVEY AND THOMAS R. PALFREY	541
1. Introduction	541
2. The Model	541

XXV111	Contents of V	Valume I
AA VIII	Contents of	ounic 1

 3. Properties of the QRE 4. Fit to Experimental Data 4.1. Learning to Play Nash Over Time 4.2. Systematic Bias Away from the Nash Equilibrium 4.3. Nash Equilibrium Selection Acknowledgement References 	542 543 543 543 544 547 548
Chapter 61 Logit Equilibrium Models of Anomalous Behavior: What to do when the Nash Equilibrium Says One Thing and the Data Say Something Else SIMON P. ANDERSON, JACOB K. GOEREE AND CHARLES A. HOLT 1. Background: The Logit Approach 2. How to Find a Logit Equilibrium 3. Comparative Static Properties Acknowledgement References	549 551 552 554 557
PART 4.3: LEARNING IN GAMES Chapter 62 Asymmetric Two-person Bargaining Under Incomplete Information: Strategic Play and Adaptive Learning AMNON RAPOPORT, TERRY E. DANIEL AND DARRYL A. SEALE 1. Most Participants Behave Strategically in General Accordance with the Linear Equilibrium Strategy 2. There is an Information Advantage Exceeding the Predictions of the LES 3. Repeated Play with a Fixed Partner Enhances Strategic Advantages 4. Explanation of the Findings in Terms of Adaptive Learning References	560 561 563 565 565 571
Chapter 63 The Effect of Message Space Size on Learning and Outcomes in Sender–Receiver Games ANDREAS BLUME, DOUGLAS V. DEJONG AND GEOFFREY B. SPRIN-KLE 1. Introduction 2. The Games 3. Results 3.1. Game 1 3.2. Game 2 4. Summary References	572 572 572 574 574 575 584 584

Contents of Volume 1	xxix
Chapter 64	
Learning in Entry Limit Pricing Games	
DAVID J. COOPER	585
1. Introduction	585
2. The Limit-pricing Game	585
3. Experimental Procedures	588
4. Adaptive Learning	588
5. Experimental Results	592
6. Conclusions	592
References	597
Chapter 65	
Payoff Uncertainty and Cooperation in Finitely-repeated Prisoner's Dilemma	
Games	
LAWRENCE M. KAHN AND J. KEITH MURNIGHAN	598
1. Methods	599
2. The Experimental Design	599
3. Results	602
4. Discussion and Conclusions	604
Acknowledgements	605
References	605
Chapter 66	
Learning and Equilibrium in Games	
COLIN F. CAMERER, TECK H. HO AND JUIN-KUAN CHONG	607
1. Introduction	607
2. Adaptive EWA and Other Learning Models	607
3. Sophisticated EWA and Equilibrium Models	611
References	615
PART 5: MECHANISM DESIGN AND POLICY APPLICATIONS	
Mechanism Design and Policy Applications	619
5.1. Abstract, Theory Driven	619
5.2. Applied, Problem Driven	620
5.3. From the Lab to the Field	622
References	623

PART 5.1: ABSTRACT, THEORY DRIVEN

Chapter 67

Incentive-compatible Mechanisms for Pure Public Goods: A Survey of Experimental Research

xxx Contents of Volume 1

YAN CHEN 1. Introduction 1.1. Theoretical Results and Unresolved Issues 1.2. Economic Environments in Experiments 2. Dominant Strategy Mechanisms 3. Nash-efficient Mechanisms 4. Mechanisms Using Refinements of Nash as Implementation Concepts	625 625 627 628 630 635
 4.1. Perfect Nash Mechanisms 4.2. Subgame Perfect Mechanisms 5. Other Mechanisms 6. Concluding Remarks Acknowledgements References 	635 637 638 639 640
Chapter 68 The Combinatorial Auction STEPHEN J. RASSENTI AND VERNON L. SMITH 1. The Environment 1.1. Two Market Mechanisms: The Independent Auction and the Combinatorial Auction 2. The After Market 3. Results References	644 645 649 649 653
PART 5.2: APPLIED, PROBLEM DRIVEN Chapter 69 Share Trading and Coupon Banking Interact to Improve Performance in Emission Trading Markets	
STUART MESTELMAN AND R. ANDREW MULLER References Chapter 70	655 659
 Trading Institutions and Emission Allowances TIMOTHY N. CASON 1. The Federal Sulfur Dioxide Allowance Program and the EPA Emissions Trading Auction 2. Other Emission Allowance Trading Assessments: China, Ontario and Los Angeles 3. Summary References 	661 661 665 667
Chapter 71 Procurement Contracting	

Contents of Volume 1	xxxi
JAMES C. COX AND R. MARK ISAAC	669
1. A Model of Cost Information Asymmetry	669
2. Linear Contracts	670
3. Testable Hypotheses	670
4. Experimental Results	671
Acknowledgements	674
References	675
Chapter 72	
Electric Power Market Design Issues and Laboratory Experiments	
STEPHEN RASSENTI AND VERNON SMITH	676
1. Nodal Price Theory for Lossy Lines	677
Acknowledgements	679
References	679
Chapter 73	
Energy, Reserve and Adjustment Market Behavior With Industry Network,	
Demand and Generator Parameters	
MARK A. OLSON, STEPHEN RASSENTI AND VERNON L. SMITH	681
1. Modeling Generators	681
2. Modeling Demand	685
3. Market Design	687
4. Sealed Bid Day-Ahead Energy Market	687
5. Reserve Market	688
6. Load Adjustment Market	689
7. Continuous Double Auction Energy Market	690
8. The Network	690
9. Optimization	691
10.Subjects	691
11.Data Analysis: Questions and Answers	692
11.1.What is the Competitive Efficiency of the Two Markets Based on Marginal Energy Costs?	692
11.2.Do SBO Prices and CDA Weighted Average Prices Converge to Comparable Levels?	694
11.3.What are the Profitability Levels for the Various Agents in the System?	694
11.4.Do Nodal Prices Reflect Distance Sensitivity and Line Constraints?	694
Reference	699
Chapter 74	
Transmission Constraints, Incentive Auction Rules and Trader Experience in	
an Electric Power Market	700
STEVEN BACKERMAN, STEPHEN RASSENTI AND VERNON L. SMITH	700
1. Experimental Network Environment	700
2. Experimental Design	703
3. The Mechanism: A Continuously Updated Nodal Uniform Price Auction	703

XXXII	Contents of Volum	no I

4. Hypotheses and Tests	
5. Regression Results	
6. Further Results	
7. Conclusions	
References	
Chapter 75	
A Smart Market for the Spot Pricing and Pricing	g of Transmission Through a
Power Grid	
HUNG-PO CHAO AND CHARLES R. PLOTT	
1. Kirchoff's Law and Resource Constraints	
2. The Mechanism	
2.1. Notation	
2.2. Notation	
2.3. Dual Linear Program for Continuous-time Double A	Auction
3. Parameter and the Testbed	
4. Performance	
Reference	
Further reading	
PART 5.3: FROM THE LAB TO THE FIELD	
Chapter 76	
Chapter 76 Asset Market Manipulation: A Field Experiment	with Racetrack Betting
<i>Chapter 76</i> Asset Market Manipulation: A Field Experiment COLIN F. CAMERER	with Racetrack Betting
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design	with Racetrack Betting
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results	with Racetrack Betting
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion	with Racetrack Betting
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion	with Racetrack Betting
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion References Chapter 77	
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion References Chapter 77	
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion References Chapter 77 Pre-testing International Climate Change Policies	
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion References Chapter 77 Pre-testing International Climate Change Policies PETER BOHM	s: Methods and Results
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion References Chapter 77 Pre-testing International Climate Change Policies PETER BOHM 1. Testing Gains from Emissions Quota Trad	s: Methods and Results
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion References Chapter 77 Pre-testing International Climate Change Policies PETER BOHM 1. Testing Gains from Emissions Quota Trad (Bohm, 1997)	s: Methods and Results
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion References Chapter 77 Pre-testing International Climate Change Policies PETER BOHM 1. Testing Gains from Emissions Quota Trad (Bohm, 1997) 1.1. Test Design 1.2. Test Results	s: Methods and Results e among a Few Countries
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion References Chapter 77 Pre-testing International Climate Change Policies PETER BOHM 1. Testing Gains from Emissions Quota Trad (Bohm, 1997) 1.1. Test Design 1.2. Test Results 2. Testing International Acceptability of a 'Glo	s: Methods and Results e among a Few Countries
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion References Chapter 77 Pre-testing International Climate Change Policies PETER BOHM 1. Testing Gains from Emissions Quota Trad (Bohm, 1997) 1.1. Test Design 1.2. Test Results 2. Testing International Acceptability of a 'Glowith Diplomats as Subjects (Bohm, 1997b) References	s: Methods and Results e among a Few Countries
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion References Chapter 77 Pre-testing International Climate Change Policies PETER BOHM 1. Testing Gains from Emissions Quota Trad (Bohm, 1997) 1.1. Test Design 1.2. Test Results 2. Testing International Acceptability of a 'Glowith Diplomats as Subjects (Bohm, 1997b) References Chapter 78	s: Methods and Results e among a Few Countries obal' Tradable-quota Treaty
Chapter 76 Asset Market Manipulation: A Field Experiment COLIN F. CAMERER 1. Experimental Design 2. Experimental Results 3. Conclusion References Chapter 77 Pre-testing International Climate Change Policies PETER BOHM 1. Testing Gains from Emissions Quota Trad (Bohm, 1997) 1.1. Test Design 1.2. Test Results 2. Testing International Acceptability of a 'Glowith Diplomats as Subjects (Bohm, 1997b)	s: Methods and Results e among a Few Countries obal' Tradable-quota Treaty

Contents of Volume 1	xxxiii
PETER BOHM	733
1. Experimental Design	733
2. Results	734
Further reading	735
Chapter 79	
Field-test Elicitations of Demand for Public Goods	
PETER BOHM	736
References	740
Chapter 80	
Results from a Dozen Years of Election Futures Markets Research	
JOYCE BERG, ROBERT FORSYTHE, FORREST NELSON AND THOMAS	
RIETZ	742
1. Introduction and Description of Election Futures Markets	742
2. Market Mechanism	743
3. Results from Share Markets	744
3.1. Absolute Market Accuracy	744
3.2. Accuracy Relative to Polls	746
4. How and why do Election Futures Markets "Work?"	748
5. Other Issues Studied and Future Research Potential	749
Acknowledgements	750
References	751
Chapter 81	
Experimental Evidence on the Existence of Hypothetical Bias in Value Elici-	
tation Methods	
GLENN W. HARRISON AND E. ELISABET RUTSTRÖM	752
1. The CVM Literature and Tests with Private Goods	753
2. The CVM Literature and Tests with Public Goods	755
3. Open-ended Elicitation in the Lab	758
4. Dichotomous Choice Elicitation in the Lab	760
5. Social Elicitation in the Lab	761
6. Constructive Solutions	762
6.1. Instrument Calibration	762
6.2. Statistical Calibration	763
7. Conclusions	765
References	766
PART 6: NON-MARKET AND ORGANIZATIONAL RESEARCH	
Non-market and Organizational Research	771
Introduction	771

xxxiv	Contents of Volume	2 I

6.1. Public Goods and Externalities	771
6.2. Committees and Voting Groups	773
Reference	774
PART 6.1: PUBLIC GOODS, EXTERNALITIES AND COMMON POOLS	
Chapter 82	
Partners versus Strangers: Random Rematching in Public Goods Experiments JAMES ANDREONI AND RACHEL CROSON	776
1. Introduction	776
2. Partners versus Strangers	777
3. A Closer Look	777
4. Partners, Strangers, Warm-glow and Confusion	781
5. What is Next?	781
References	782
Chapter 92	
Chapter 83 Differentiating Altruism and Reciprocity	
RACHEL T.A. CROSON	784
1. Introduction	784
2. Hypotheses	785
3. The Experiments and Results	785
4. Types of Reciprocity	788
5. Discussion and Conclusion	789
References	791
Chapter 84	
Voluntary Provision of Public Goods: Experimental Results with Interior	
Nash Equilibria	
SUSAN K. LAURY AND CHARLES A. HOLT	792
1. Introduction	792
2. Dominant Strategy Designs	793
3. Non-dominant Strategy Designs	795
4. Treatment Effects	799
5. Final Observations	800
Acknowledgements	800
References	800
Chapter 85	
Spiteful Behavior in Voluntary Contribution Mechanism Experiments	
TATSUYOSHI SAIJO	802
1. Saijo–Nakamura Experiments	803
2. Non-excludable Public Good Experiments	810

Contents of Volume 1	xxxv
Acknowledgement	816
References	816
Chapter 86 Explaining the Comparative Statics in Stan Level Public Good Genes	
Explaining the Comparative Statics in Step-Level Public Good Games ARTHUR SCHRAM, THEO OFFERMAN AND JOEP SONNEMANS	817
1. Introduction	817
Basic Experimental Tools	818
3. Treatments	818
4. Interpreting the Results	821
References	824
Chapter 87 Cooperation in VCM Experiments: Results Using the Contribution Function	
Approach	
JORDI BRANDTS AND ARTHUR SCHRAM	825
1. Introduction	825
2. Description of the Design	825
3. Results	826
4. Some Insights	829
References	829
Chapter 88	
Voluntary Provision of Public Goods	
KENNETH S. CHAN, STUART MESTELMAN AND R. ANDREW MULLER	831
References	835
Chapter 89	
Intrinsic Motivation in a Public Good Environment	
FRANS VAN WINDEN, FRANS VAN DIJK AND JOEP SONNEMANS	836
1. Introduction	836
2. Experimental Design	837
3. Main Observations	841
3.1. Different Intrinsic Motivation for Contributing	841
3.2. Intrinsic Motivation Changes with Social Interaction	841
3.3. Effect of Success of Social Interaction (Social Ties)	841
3.4. Group Formation	844
4. Conclusions	844
References	844
Chapter 90	
Theoretical Explanations of Treatment Effects in Voluntary Contributions Ex-	

periments

xxxvi Con	tents of \	Volume 1
XVI CON	ienis oj	voiume 1

CHARLES A. HOLT AND SUSAN K. LAURY	846
1. Introduction	846
2. Generalized Preferences	848
3. Noisy Decision Making	850
4. Evolution and Adaptation	851
4.1. Cooperation and Signaling	852
5. Final Observations	854
Acknowledgement	854
References	854
PART 6.2: COMMITTEES AND VOTING GROUPS	
Chapter 91	
Institutional Modifications of Majority Rule	
WILLIAM P. BOTTOM, RONALD A. KING, LARRY HANDLIN AND	
GARY J. MILLER	857
1. General Introduction	857
2. Agenda Control	858
2.1. One-dimensional Agenda Control	858
2.2. Decentralized Agenda Control	861
3. Extraordinary Majorities and the Veto	864
4. Bicameralism	867
Acknowledgements	870
References	870
Chapter 92	
Endogenous Properties of Equilibrium and Disequilibrium in Spatial Committee Games	
RICK K. WILSON	872
1. Theoretical Background	872
2. Experimental Design	873
3. Endogenous Preferences	874
3.1. The Core	874
3.2. Star Preferences	875
3.3. Skew Star Preferences	877
4. Discussion	878
Acknowledgements	878
References	879
Chapter 93	
Structure Induced Equilibrium in Spatial Committee Games	
RICK K. WILSON	880
1. Theoretical Basics	880

Contents of Volume 1	xxxvii
2. Experimental Design	881
3. Monopoly Agenda Setting	882
4. Backward Voting Agenda	884
5. Conclusion	887
Acknowledgements	888
References	888
Chapter 94	
Three-way Experimental Election Results: Strategic Voting, Coordinated	
Outcomes and Duverger's Law	
THOMAS RIETZ	889
1. Introduction	889
2. The Experiments	891
2.1. Common Procedures	891
2.2. Equilibria	891
2.3. Specific Treatments	892
3. Results	893
3.1. Candidate Winning Frequencies	893
3.2. Other Results	895
4. Conclusions and Other Issues Studied with Similar Experiments	895
Acknowledgements	896
References	896
Chapter 95	
Participation Game Experiments: Explaining Voter Turnout	
JOEP SONNEMANS AND ARTHUR SCHRAM	898
References	901
PART 6.3: BEHAVIOR AND ORGANIZATIONS	
Chapter 96	
Growing Organizational Culture in the Laboratory	
COLIN F. CAMERER AND ROBERTO WEBER	903
References	907
PART 7: INDIVIDUAL CHOICE, BELIEFS AND BEHAVIOR	
Individual Choice, Beliefs and Behavior	911
Risk: Effect of Stakes and Sex	911
Endowment effects	912
References	913

xxxviii Contents of Volume 1

Chapter 97	
Motivation Theory and Experimental Behavior under the Decision Cost Hy-	
pothesis	
VERNON L. SMITH AND JAMES M. WALKER	914
1. Payoffs and Behavior	914
1.1. Decision Making and Decision Cost Under Uncertainty	915
1.2. Two-person Interactive Model of Decision Cost	917
References	920
Chapter 98	
Intertemporal Choice under Habit Formation	
ERNST FEHR AND PETER K. ZYCH	923
1. Introduction	923
2. Experimental Design	923
3. Results	924
4. Conclusions	927
References	928
Chapter 99	
Preference Reversal: Now You See it, Now You Do Not!	
PETER BOHM	929
Concluding remarks	937
References	938
Chapter 100	
The Endowment Effect: Evidence of Losses Valued More than Gains	
DANIEL KAHNEMAN, JACK L. KNETSCH AND RICHARD H. THALER	939
1. Experimental Verification	940
2. Exchanges	941
3. Repeated Trials	943
4. Buy, Sell, and Choose	943
5. Market Transactions	946
6. Summary	946
References	947
Chapter 101	
The Endowment Effect	
PRAVEEN KUJAL AND VERNON L. SMITH	949
1. The Background	949
2. The Experiments	950
2.1. Kahneman-Knetsch-Thaler Choice Experiments	950
2.2. Franciosi et al. Choice Experiments	950
2.3. Kahneman, Knetsch and Thaler (1991) Exchange Experiments	952

Contents of Volume 1	xxxix
2.4. Mug Exchange Experiments using Uniform Price Double Auction	953
References	955
Chapter 102	
The Becker-DeGroot-Marschak Mechanism is not Generally Incentive-	
Compatible in Practice	
PETER BOHM	956
1. Experimental design	956
2. Conclusions	957
References	957
Chapter 103	
Utility Maximization	
JAMES C. COX	958
1. The Utility Hypothesis	958
2. A Complete, Disaggregated Data Set	960
3. Test Results and Power	961
4. Are the Inconsistencies with Utility Maximization Significant?	963
Acknowledgement	965
References	965
Chapter 104	
Preference Reversals	
JAMES C. COX	967
1. Seminal Experiments	968
2. Independence Axiom Treatments	969
3. Incentive Treatment	971
4. Transitivity Treatments	972
5. Risk Neutrality Treatment	973
6. Market Treatment	974
Acknowledgement	975
References	975
Chapter 105	
Rationality the Fast and Frugal Way: Introduction	
GERD GIGERENZER AND PETER M. TODD	976
1. Heuristics	977
2. A Fast and Frugal Heuristic	977
3. The Adaptive Toolbox	979
3.1. Heuristic Principles for Guiding Search	979
3.2. Heuristic Principles for Stopping Search	980
3.3. Heuristic Principles for Decision Making	980
4. Emergency Room Decisions	981

xl Contents of Volume 1

5. Ecological Rationality6. What is to ComeReferences	983 984 985
Chapter 106	
The Recognition Heuristic and the Less-Is-More Effect	
DANIEL G. GOLDSTEIN AND GERD GIGERENZER	987
1. Accuracy of the Recognition Heuristic	988
2. The Less-is-More Effect	988
3. Do People Use the Recognition Heuristic?	990
4. Does the Less-is-More Effect Occur in Human Reasoning?	991
5. The Underpinnings of the Recognition Heuristic	992
References	992
Chapter 107	
The Recognition Heuristic: A Fast and Frugal Way to Investment Choice?	
ANDREAS ORTMANN, GERD GIGERENZER, BERNHARD BORGES	
AND DANIEL G. GOLDSTEIN	993
1. Investment Theory and Practice	993
2. Recognition-based Investment Decisions	994
2.1. When Choosing a Subset from a Larger Set, Choose Those Objects in the Larger Set	
That are Highly Recognized	994
3. Study 1	994
3.1. Study Design	994
3.2. How Did High Recognition Portfolios Perform Relative to Low Recognition Portfolios?	997
3.3. How Did High Recognition Portfolios Perform Relative to Market Indices?	997
3.4. How Did High Recognition Perform Relative to Managed Funds?	998
3.5. How Did High Recognition Portfolios Perform Relative to Random Stock Picks?	999
	1000
	1000
	1000
, ,	1001
	1001
	1002
	1002
	1002
	1003
References	1003
Chapter 108	
One-Reason Decision Making	
GERD GIGERENZER, LAURA MARTIGNON, ULRICH HOFFRAGE, JÖRG RIESKAMP, JEAN CZERLINSKI AND DANIEL G. GOLDSTEIN	1004

Contents of Volume 1 xli

1. "Take The Best" and Minimalist	1004
2. Simple Rules for Search	1006
3. Predicting Homelessness	1008
4. Fast and Frugal Heuristics Versus Linear Models: A Competition	1008
5. Fast and Frugal Heuristics Versus Bayesian Methods	1009
6. Why is Take The Best so Robust?	1010
7. Ecological Rationality: Which Environmental Structures Can Take The	
Best Exploit	1011
8. Non-compensatory Information	1011
9. Scarce Information	1012
10. Abundant Information	1013
11.Do People Intuitively Adapt Heuristics to Environmental Structures?	1013
12.Does the Use of Lexicographic Strategies Depend on Time Pressure?	1014
13.An Intelligent System Must Ignore Information	1015
References	1016
Chapter 109	
Cognitive Illusions Reconsidered	
GERD GIGERENZER, RALPH HERTWIG, ULRICH HOFFRAGE AND	
PETER SEDLMEIER	1018
1. Base Rate Fallacy Reconsidered	1018
2. The Ecological Argument	1019
3. Helping John Q. Public	1020
4. Helping Physicians	1021
5. Helping AIDS Counselors	1023
6. Helping Lawyers and Judges	1023
7. How to Teach Bayesian Reasoning	1024
8. Overconfidence Bias Reconsidered	1025
9. Conjunction Fallacy Reconsidered	1027
10.Availability Reconsidered	1030
11.Conclusion	1033
References	1033
Chapter 110	
Social Heuristics	
PETER M. TODD, JÖRG RIESKAMP AND GERD GIGERENZER	1035
1. Social Heuristics for Cooperation	1035
2. Detecting Cheaters	1037
3. Cheater Detection Versus Social Contracts	1040
4. Cheater Detection Versus Logical Reasoning	1041
5. Searching for Mates	1042
6. Conclusion	1045
References	1045

xlii Contents of Volume 1

Chapter 111	
Payoff Scale Effects and Risk Preference Under Real and Hypothetical Conditions	,
SUSAN K. LAURY AND CHARLES A. HOLT	1047
1. Introduction	1047
2. Incentive Effects for Choices Involving Gains	1048
3. Choices in the Loss Domain, and the Reflection Effect	1050
4. Conclusion	1052
References	1053
Chapter 112	
Rewards and Behavior in First Price Auctions	
VERNON L. SMITH AND JAMES M. WALKER	1054
1. The First Price Auction	1054
2. The Experimental Environment	1055
3. Behavior	1056
References	1060
Chapter 113	
Men, Women and Risk Aversion: Experimental Evidence	
CATHERINE C. ECKEL AND PHILIP J. GROSSMAN	1061
1. Abstract Gamble Experiments	1062
2. Contextual Environment Experiments	1066
3. Evidence From Field Studies	1069
4. Discussion	1071
References	1072
PART 8: METHODS	
8. Methods	1077
Chapter 114	
Experimetrics: The Use of Market Experiments to Evaluate the Performance	
of Econometric Estimators	
JAMES C. COX AND RONALD L. OAXACA	1078
1. Designing Experiments to Study the Properties of Estimators	1079
2. Performance of the Estimators	1080
3. Explanation of the Posted Offer Results	1083
Acknowledgement	1085
References	1086
Chapter 115	
On the Performance of the Lottery Procedure for Controlling Risk Preferences	
IOVCE E RERG THOMAS A RIETZ AND IOHN W DICKHALIT	1087

Contents of Volume 1	
Contents of Volume 1	

. Introduction	1087
. Inducing Risk Preferences in Theory	1087
. Evidence	1090
3.1. Inducing Risk Neutrality: Evidence from Sealed Bid Auctions	1090
3.2. Inducing Risk Aversion and Risk Seeking: Evidence from Paired Choice Tasks	1092
3.3. Inducing Risk Aversion and Risk Seeking: Evidence from the Becker-DeGroo	t–
Marshak Procedure	1093
. Summary	1094
acknowledgements	1096
References	1096
author Index of Volume 1	I-1
ubject Index of Volume 1	I-19