

# Contents

Preface

*ix*

## I. Foundations

### 1 Historical Background

3

- 1.1 Suzumura Consistency 3
- 1.2 Rational Choice as Purposive Behavior 6
- 1.3 Samuelson's Weak Axiom 7
- 1.4 Houthakker's Axiom 12
- 1.5 General Choice Functions 15
- 1.6 Rational Choice: An Outlook 20
- 1.7 Reference-Dependent Choice 21
- 1.8 External Norms 23
- 1.9 Welfare Economics and Social Choice Theory 26
- 1.10 Beyond Finite-Population Social Choice 29

### 2 Mathematical Background

32

- 2.1 Binary Relations 32
- 2.2 Greatest and Maximal Elements 41
- 2.3 Extensions of Relations 42
- 2.4 Filters and Ultrafilters 52

## II. Rationalizability on General Domains

### 3 Definitions of Rationalizability

57

- 3.1 Preliminaries 57
- 3.2 Greatest-Element Rationalizability 61

3.3	Maximal-Element Rationalizability	72
3.4	A Synthesis	75
4	Characterizations	77
4.1	A Preliminary Result	77
4.2	Three Special Cases	78
4.3	A Unified Approach	81
4.4	Summary	109

### III. Rationalizability on Specific Domains

5	Domain Closedness Properties	115
5.1	Additional Choice Coherence Axioms	115
5.2	Logical Relationships	119
5.3	Closedness under Intersection	121
5.4	Closedness under Union	122
6	Cardinality-Complete Domains	128
6.1	Base Domains	128
6.2	Logical Relationships on Base Domains	128
6.3	Characterizations on Base Domains	130
6.4	Base Domains and Closedness under Union	134

### IV. Alternative Notions of Rationalizability

7	Non-deteriorating Choice	139
7.1	Individual Non-deteriorating Choice	139
7.2	Characterizations of ND-Rationalizability	144
7.3	The Multi-agent Case	146
7.4	Characterizing Efficient and Non-deteriorating Choice	153
8	External Norms and Rational Choice	162
8.1	Internal Coherence of Choice	162
8.2	Norm-Conditional Choice	163
8.3	Norm-Conditional Rationalizability	164
8.4	Characterization Results	165

## V. Topics in Social Choice Theory

<b>9</b>	<b>Collective Choice Rules</b>	<b>173</b>
9.1	Weakening Social Coherence Properties	173
9.2	Earlier Results	177
9.3	Generalizations of the Pareto Rule	178
9.4	A Characterization	180
<b>10</b>	<b>Decisiveness and Infinite Populations</b>	<b>185</b>
10.1	Decisive Coalitions, Filters, and Ultrafilters	185
10.2	Decisiveness without Social Richness Assumptions	187
10.3	Intergenerational Social Choice	193
10.4	Multi-profile Stationarity	198
	<b>References</b>	<b>205</b>
	<b>Index</b>	<b>215</b>