

# Contents

List of Tables	xiii
List of Figures	xv
Preface	xvii
Chapter 1: Constructing a Theory of Complex Society	1
The Direct Strategy	3
Relation to other Formulations	7
The Relation of SET to Middle-Range and Micro Theory	7
The Relation of SET to General or Macro Formulations	8
Plan of the Chapters	9
Chapter 2: The Isomorphic Concrete Systems Model	13
Beyond Functionalism	13
Functionalism	13
General Systems Theory	15
The Challenges	17
Meeting the Challenges	18
The Isomorphic Concrete Systems Model	19
Epistemology	19
Isomorphism	20
The Two-Level Model	21

Anomalies in the Two-Level Model	23
The Three-Level Model	25
Extensions of the Three-Level Model	33
Abstracted Versus Concrete Sociological Theory	38
The Complex Isomorphic Systems Model (X <sup>''</sup> )	41
Holistic Model Adequacy	44
Chapter 3: Social Entropy	49
The History of Social Equilibrium	51
Thermodynamic Equilibrium and Entropy	52
Nonthermodynamic Physical Equilibrium and Entropy	53
The Spencerian Dilemma	55
First Principles	58
Pareto	59
Equilibrium between Pareto and Parsons	61
Parsons	63
Moving Equilibrium	66
Equilibrium as an Analytical Device	67
Homeostasis	68
Summarizing the Breadth of Parsons' Equilibrium Concept	69
The History of Social Entropy	71
Prigogine	71
Use of Entropy	72
Statistical Formulations	74
Entropy in General Systems Theory	79
Verbal Formulations of Social Entropy	81
Evaluating the Literature on Social Entropy	84
Chapter 4: Macrosociology	89

Key Societal Variables	90
Global Properties	91
Spatial Area (Expansion of Boundaries)	91
Population Size	92
Level of Living	92
Technology	94
Organization	94
Information	96
Distributional (Analytical) Measurement	97
Interrelationships among Variables	98
Global Measurement	98
Distributions	100
Exhaustiveness	104
Control	106
Internal Versus External Relationships	107
Internal Relationships	107
Open Boundaries	109
Summary	110
Chapter 5: The Individual in Complex Society	113
Sorokin's Ten-Dimensional Structure	114
The Mutable Distributions	116
The Immutable Variables	119
Allocation Theory	122
Global Constraints	122
Change in the Mutable Distribution Structure	124
Relevant Theories	128
Overview	129
Organization	130

Technology	136
Space	137
Information	137
Level of Living	138
Expectations and Goals	141
Summary	147
Chapter 6: Organizations	149
Organizational Formation	150
Divisive Grouping Processes	153
Agglomerative Grouping Processes	154
Boundaries	157
Boundary Formation	158
Membership Boundaries	160
Outreach	162
Summary	162
Entropy and Information in Organizations	163
Multiple Membership	166
Concluding Remarks	169
Chapter 7: The Central Problem of Social Order	171
Introduction	171
Social Order	171
Two Types of Order	175
Q- and R-Relationships	175
The Holistic Model of Social Order	177
Category Theory	183
Effect of Symbolic Structure on Action	185
Why Actions Are Replicated	188

Summary	190
Order and the Three Level Model	191
The Synchronic Nature of Markers	196
Markers and Mutables	199
Power and Conflict	200
Expectations and Power	201
Mutables and Conflict	203
Immutables and Conflict	205
Entropy and Inequality	207
Concluding Remarks	208
 Chapter 8: Statistical Entropy	 211
Probabilistic Entropy	219
Number of Categories	227
Type B Mapping	228
Type C Mapping	229
The Marker ( $X''$ ) Level	230
Sample Size	231
Sampling Distribution	231
Relationship of Categorical Entropy to Continuous Variables	232
Categorical and Continuous Entropy	234
Continuous Entropy	235
Measuring Inequality	236
Continuous	237
Decomposition	239
Categorical Income Data	242
Measures of Population Diversity	247
Proportional Reduction in Error	250

Summary	251
Chapter 9: Reflections and Hypotheses	255
Reflections	256
Chapter 1	256
Chapter 2	257
Chapter 3	263
Chapter 4	265
Chapter 5	268
Chapter 6	270
Chapter 7	272
Chapter 8	275
Hypotheses	276
Chapter 1	276
Chapter 2	276
Chapter 3	277
Chapter 4	278
Chapter 5	279
Chapter 6	280
Chapter 7	281
Chapter 8	283
Concluding Remarks	283
References	285
Author Index	303
Subject Index	307

# List of Tables

Table 7.1	The Score (S) Matrix of Objects and Variables	176
Table 8.1	Percent Distribution of Aggregate Income, by Fifths of the Population for Families and Individuals, United States, 1978	217

## List of Figures

Figure 2.1	The Three-Level Measurement Model	26
Figure 6.1	Divisive and Agglomerative Groups	156
Figure 7.1	Example of Perfectly Replicated Social Action ( $H = 0$ ), Frequency of Lunch for Five Alternative Times	180
Figure 7.2	Effect of Replicated Social Interaction on the Correlation between Educational Level and Job Level (hypothetical frequencies).	182
Figure 7.3	Example of Perfect Replication Using Gender as a Basis for Allocation into the Occupational Distribution (hypothetical frequencies).	184
Figure 7.4	Relationship between the Diachronic Process of Human Interaction (Q-relationships) and the Synchronic Symbol System (R-relationships)	187
Figure 7.5	Illustration of Order and the Three-Level Model: The Basic $X-X''-X'$ Sequence	193
Figure 8.1	R-Mapping, with Variables as Dimensions and Persons as Points in Space	218
Figure 8.2	Q-Mapping, with Objects (Persons) as Dimensions and Variables as Points in Space	218