

Preface	ix
Acknowledgments	xiii
Mirror-Image Illustrations	xv

1 OBJECTIVES AND THEORETICAL BASES OF HUMAN ETHOLOGY 2

1.1. Inquiry Formulation and Definition	3
<i>Summary 1.1</i>	6
1.2. Phylogenetic and Cultural Adaptation	7
<i>Summary 1.2</i>	16

2 BASIC CONCEPTS OF ETHOLOGY 18

2.1. The Concept of the "Innate"	19
<i>Summary 2.1</i>	23
2.2. Phylogenetic Adaptations in Behavior	23
<i>Summary 2.2</i>	84
2.3. Decoupling of Actions from Drives and Conscious Self-Control: The Neuroethology of Human Freedom	86
<i>Summary 2.3</i>	90
2.4. The Units of Selection—A Critical Evaluation of Sociobiology	90
<i>Summary 2.4</i>	102

3 METHODOLOGY 104

3.1. Gestalt Perception and Cognition	105
<i>Summary 3.1</i>	107
3.2. Methods of Data Gathering, Observation, and Description	107
<i>Summary 3.2</i>	112
3.3. Film and Sound Documentation	112
<i>Summary 3.3</i>	132
3.4. The Comparative Approach	132
<i>Summary 3.4</i>	147

3.5.	Quantifying Ethology	148
	<i>Summary 3.5</i>	161
3.6.	Models	161
	<i>Summary 3.6</i>	165

4 SOCIAL BEHAVIOR 166

4.1.	Origins of Sociability	167
	<i>Summary 4.1</i>	169
4.2.	The Ambivalence of Approach and Withdrawal in Human Interactions	170
	<i>Summary 4.2</i>	184
4.3.	The Human Family as the Nucleus of Society	184
	<i>Summary 4.3</i>	234
4.4.	Family and Marriage	235
	<i>Summary 4.4</i>	238
4.5.	Pair Formation, Courtship, Sexual Love	238
	<i>Summary 4.5</i>	260
4.6.	Incest Taboos and Incest Avoidance	261
	<i>Summary 4.6</i>	264
4.7.	Sex Roles and Their Differentiation	265
	<i>Summary 4.7</i>	288
4.8.	The Individualized Group: Family, Kin, and Alliances	289
	<i>Summary 4.8</i>	296
4.9.	Rank Order, Dominance	297
	<i>Summary 4.9</i>	314
4.10.	Group Identity Maintenance	314
	<i>Summary 4.10</i>	320
4.11.	Territoriality	321
	<i>Summary 4.11</i>	339
4.12.	Origin and Social Function of Possession	339
	<i>Summary 4.12</i>	358

5 INTRASPECIFIC AGGRESSION: CONFLICT AND WAR 360

5.1.	Concepts	361
	<i>Summary 5.1</i>	364
5.2.	Aggression Theories	365
	<i>Summary 5.2</i>	386

5.3.	Functional Aspects of Aggressive Behavior	391
	<i>Summary 5.3</i>	396
5.4.	Socialization of Aggressive Behavior	396
	<i>Summary 5.4</i>	399
5.5.	Duels	399
	<i>Summary 5.5</i>	402
5.6.	Intergroup Aggression—War	402
	<i>Summary 5.6</i>	421

6 COMMUNICATION 424

6.1.	Olfactory Communication	426
	<i>Summary 6.1</i>	429
6.2.	Tactile Communication	430
6.3.	Visual Communication	437
	<i>Summary 6.3</i>	492
6.4.	Interaction Strategies—The Universal Grammar of Human Social Behavior	493
	<i>Summary 6.4</i>	522
6.5.	On the Ethology of Verbal Communication	523
	<i>Summary 6.5</i>	546

7 BEHAVIOR DEVELOPMENT (ONTOGENY) 548

7.1.	Developmental Theories	549
	<i>Summary 7.1</i>	580
7.2.	Curiosity and Play	580
	<i>Summary 7.2</i>	593
7.3.	The Development of Interpersonal Relationships	594
7.4.	Child Groups—Child Culture	600
	<i>Summary 7.4</i>	605

8 MAN AND HIS HABITAT: ECOLOGICAL CONSIDERATIONS 606

8.1.	Ecotype <i>Homo sapiens</i> : Hominization and Behavior	607
	<i>Summary 8.1</i>	616
8.2.	From the Individualized Society to Industrial Society	616
	<i>Summary 8.2</i>	628
8.3.	On the Ethology of Settlement and Residence	629
	<i>Summary 8.3</i>	648

8.4.	Social Order and Human Behavior	649
	<i>Summary 8.4</i>	662
8.5.	Concluding Thoughts	663

9 **THE BEAUTIFUL AND TRUE: THE ETHOLOGICAL CONTRIBUTION TO AESTHETICS** 664

9.1.	Aesthetics and Fine Arts	665
	<i>Summary 9.1</i>	673
9.2.	Species-Specific Biases of Perception of Aesthetic Relevance	673
	<i>Summary 9.2</i>	677
9.3.	Art as Communication	677
	<i>Summary 9.3</i>	685
9.4.	Cultural Manifestations: An Observation on Style and Stylization	685
	<i>Summary 9.4</i>	690
9.5.	On the Ethology of Music, Dance, and Poetry	690
	<i>Summary 9.5</i>	702

10 **BIOLOGY'S CONTRIBUTION TO ETHICS** 704

	<i>Summary 10</i>	717
	<i>Conclusion</i>	718

Bibliography 720

Film Publications 789

Author Index 805

Subject Index 824