

Contents

<i>Winfried Nöth</i> Introduction	1
Part I: Evolution and biosemiosis.....	13
<i>Myrdene Anderson</i> Breathing life into signs: Ways and means of semiotic transition and transformation	15
<i>Udo L. Figge</i> Semiotic principles and systems: Biological foundations of semiotics	25
<i>Winfried Nöth</i> Opposition at the roots of semiosis	37
<i>Signe and Holger Preuschoft</i> Primate nonverbal communication: Our communicative heritage.....	61
Part II: Anthroposemiotic sociogenesis and cultural semiogenesis...	101
<i>Peter Meyer</i> The problem of certainty in human communication: An evolutionary view.....	103
<i>Peter Grzybek</i> The culture of nature: The semiotic dimension of microcosm, mesocosm, and macrocosm	121
<i>Gordon W. Hewes</i> Evolution of human semiosis and the reading of animal tracks.....	139
<i>Paul Leyhausen and Jörg Pfeleiderer</i> Analysis of a human releasing mechanism.....	151

Susan Vogel

Early social games reconsidered: Culture at play 205

Colwyn Trevarthen

Infant semiosis 219

Part III: Glottogenesis: Phylongeny, ontogeny, and actogeny 253

Robin Allott

Language and the origin of semiosis 255

Bernhard B. Bichakjian

Language evolution: A Darwinian process 269

Vitaly Shevoroshkin

Deep reconstruction of languages and semantics 293

Roland Harweg

Material time and formal time: Genetically and metagenetically 309

Yoshihiko Ikegami

The agent and the sentient: A dissymmetry in linguistic and cultural encoding 325

Helmut Schnelle

Language and brain 339

Interchapter 365

Roland Posner

Structure as idyll: The genesis of meaning in nature 367

Part IV: Eikonogenesis and graphogenesis 383

Emmanuel Anati

Constants in 40,000 years of art 385

Paul Bouissac

Deixis vs. modeling in the phylogeny of artistic behavior 405

Martin Krampen
 Children's drawings: Ontogenetic aspects and phylogenetic roots 419

Richard W. Janney and Horst Arndt
 Can a picture tell a thousand words? Interpreting sequential
 vs. holistic graphic messages..... 439

Götz Wienold
 Writing, inscription, and text..... 455

Part V: Appendix 479

List of contributors..... 481

Index of names..... 487

Index of subjects 497