

Contents

<i>List of Contributors</i>	xiii
<i>Foreword</i>	xv
<i>Preface</i>	xvii
<i>Contents of Volume 2</i>	xix

I. Preliminaries 1

1. Language 3

Macdonald Critchley

Communication in Animals and in Man	4
Hypotheses as to the Origins of Language	5
The History of Ideas Underlying Thinking and Speech	7
Language as a Function of the Brain	7
Linguistics and Semiology	11
The Inadequacy of Verbal Symbols as Tools of Thought	11
The Future of Language	13
References	16

2. The Concept of Language Differentiation 17

Eric H. Lenneberg

The Nature of Language	17
Relations and Computations	18
Continuities as Proper Psychological and Physiological Correlates	20

Linguistic Categories Are Relationships; They Are Definable Only Contextually	24
Semantic and Syntactic Properties Have a Common Origin in Ontogeny	25
Differentiation in the Growth of Vocabulary	29
Conclusion	32
References	32

3. Some Problems in Linguistic Theory 35

Giulio C. Lepschy

4. The Heuristic Principle in the Perception, Emergence, and Assimilation of Speech 43

A. A. Leontiev

Psycholinguistic Rules and Plans	43
Alternative Approaches	45
References	55

II. Natural History 59

5. A Zoologist's View of Some Language Phenomena with Particular Emphasis on Vocal Learning 61

Fernando Nottebohm

Introduction	61
The Comparative Analysis of Vocal Communication	62
The Role of Learning in Vocal Ontogeny	66
Predispositions Brought to the Task of Vocal Learning	73
The Origins of Vocal Learning	76
Why Did Not Other Primates Learn to Speak?	82
The Neural Substrate of Vocal Behavior	86
Summary	95
References	97

6. Brain Development in Relation to Language 105

Marcus Jacobson

Shortcomings of Linguistic Analysis	105
From Neurogenotype to Neurophenotype	107
Functional Regulation in the Developing Cerebral Cortex	110
Synaptic Stability and Lability	112
Synaptic Disconnection, Reconnection, and Malconnection	114
Conclusion	117
References	118

7. Myelogenetic Correlates of the Development of Speech and Language	121
<i>André Roch Lecours</i>	
Introduction	121
Myelogenesis of the Visual and Acoustic Pathways	122
Myelogenetic Correlates of the Development of Speech and Language	128
Acknowledgements	134
References	134
8. The Ontogeny of Cerebral Dominance in Man	137
<i>O. L. Zangwill</i>	
Introduction	137
The Development of Handedness	138
The Lateralization of Speech	140
Specific Educational Backwardness	144
Conclusions	145
References	145
III. Ontogeny	149
9. Theories of Phonological Development	153
<i>Charles A. Ferguson</i>	
<i>Olga K. Garnica</i>	
Introduction	154
Requirements for a Theory of Phonological Development	155
Behaviorist Theories	159
Structuralist Theories	162
Natural Phonology Theory	169
Prosodic Theory	172
Conclusions	174
Bibliography	176
10. Phonemicization and Symbolization in Language Development	181
<i>Sei Nakazima</i>	
Introduction	181
Crying	182
Development of Phonatory–Articulatory–Auditory Mechanisms During the Period of Babbling as One Kind of Circular Reaction	182
Reorganization of Babbling Phonatory–Articulatory–Auditory Mechanisms and Their Application to Language	184
Development of Phonemicization and Symbolization	186
References	187

11. Early Semantic Development in Child Language	189
<i>Francesco Artinucci</i> <i>Domenico Parisi</i>	
Introduction	189
Context and Meaning of Early Utterances	190
Performative Structures	193
Optional Semantic Mechanisms	196
Conclusion	200
References	201
12. Grammatical Development—The First Steps	203
<i>I. M. Schlesinger</i>	
The Nature of the Child's Early Utterances	203
The Nature of Word Order Rules	209
Word Classes	215
Learning Mechanisms	216
References	220
13. The Role of Cognitive Structures in Language Acquisition	223
<i>H. J. Sinclair</i>	
Introduction: Cognitive and Linguistic Development	223
Cognitive Structures	226
Representation	227
Meaning	229
Grammar	230
Language Acquisition	232
An Experimental Approach	233
References	237
14. Learning How to Mean	239
<i>M. A. K. Halliday</i>	
Introduction	240
Phase I: Functional Origins	244
Phase II: The Transition	249
Phase III: Into Language	257
Summary of Functional Development	259
Conclusion	263
References	264
15. Cross-Linguistic Similarities at Two Stages of Syntactic Development	267
<i>Melissa F. Bowerman</i>	
Introduction	267
Plan of Analysis	268
Early Stage I	271
Late Stage I	277

Summary	280
References	281
16. On the Nature of Talk to Children	283
<i>Dan I. Slobin</i>	
Structural Characteristics of Input	284
Feedback Characteristics of Input	290
Input from Adults versus Input from Children	292
References	295
17. The Early Development of the Mother Tongue	299
<i>Courtney B. Cazden</i> <i>Roger Brown</i>	
Evidence for Universal Sequences	299
Determinants of Order of Acquisition	303
What Impels Development?	304
Environmental Assistance	306
References	308
18. Cognitive Processes and Language Ability in the Severely Retarded	311
<i>Neil O'Connor</i>	
Introduction	311
Learning and Language in the Retarded	315
Concluding Observations	319
References	321
19. Some Aspects of Language in Various Forms of Senile Dementia (Comparisons with Language in Childhood)	323
<i>J. de Ajuriaguerra</i> <i>R. Tissot</i>	
Introduction	323
Language Disturbances Due to Memory Failure	325
Disturbances in the Use and Function of Language	326
Semantic and Syntactic Language Disturbances Closely Correlated with the Subject's Operational Level	329
Language Disturbances Clinically Resembling Those of Aphasia Due to Circumscribed Lesions	333
Verbal Stereotypy and Iteration Appearing in Cases of Neurological Disorganization	336
Summary and Conclusions	338
References	339
<i>Subject Index</i>	341