Contents

Character 1	
Chapter 1	
Entering a New Era in the Search for Developmental Continuities	1
Robert N. Emde and Robert J. Harmon	
New Views of Discontinuities and Continuities Changing Biological Models New Strategies for Longitudinal Study Plan of the Volume	2 4 6 9
References	10
PART I CURRENT RESEARCH PERSPECTIVES RELATED TO THE CONTINUITY OF EARLY EXPERIENCE	
Chapter 2	
Continuity and Change in the Opening Years of Life	15
Jerome Kagan	
Development as a Connected Sequence of Stages The Challenge to Connectivity Ontogenetic Adaptation	16 18 19
The Attractiveness of Connectivity	20
The Argument for Discontinuity	22

The Preservation of Individual Differences: The Evidence	24
The Preservation of Inhibition	26
The Maturation of Cognitive Competences	28
The Growth of Memory	28
The Growth of Self-Awareness	33
A Sense of Right and Wrong	33
The Role of Inference	34
Empathy	34
The Adaptiveness of Standards	34
Anxiety to Mastery Failure	36
Motivation on Problem Tasks	36
Self-descriptive Utterances	37
Recognition of Self	37
Summary	38
References	38

Continuities and Discontinuities in Socioemotional	
Development: Empirical and Conceptual Perspectives	41

Michael Rutter

T . 1	41
Introduction	
Meanings of Continuity	42
Methodological Issues	44
Strength of Continuities in Behavior	46
Reasons for Expecting Discontinuity	47
Situationism.	49
Situational Effects	50
Individual Differences	50
Person-Situation Interactions	51
Persistence of Environmental Effects	51
Developmental Considerations	52
Luck, or the Roulette Wheel View of Life's Chances	53
Possible Mechanisms Underlying Continuities	54
Continuities in the Environment	54
Selection of Environments	54
Opportunities	55
Effects on the Environment	56
Vulnerability, Resilience, and Coping Skills	57
Habits, Attitudes, and Self-Concepts.	58

The Effects of Experience on Neural and Neuroendocrine	
Systems	59
Imprinting and Other Similar Phenomena	
Effects on Personality Structure	
Overview on Continuities and Discontinuities	62
References	63

Age-related Aspects of	Experience Effects	upon Brain Structure	69
------------------------	---------------------------	----------------------	----

William T. Greenough and Harris D. Schwark

Plasticity in Brain Development	70
Adult Brain Plasticity.	75
A Mechanism of Plasticity: Selective Preservation of Synapses	78
The Primate Geniculostriate Visual System	79
Development of the Geniculostriate System	80
Effects of Experience Manipulation during Development	81
Developmental Patterns in Other Neuronal Systems	83
Selective Preservation as a Continuing Process in Brain Function	85
References	86

Part II	STUDIES OF DISCONTINUITIES AND DEVELOPMENTAL
	TRANSITIONS

Chapter 5

Detecting Developmental Discontinuities: Methods and		
Measurement	95	
Kurt W. Fischer, Sandra L. Pipp, and Daniel Bullock		

Two Methods for Detecting Discontinuities	97
Scalogram Analysis	97
Method of Multiple Tasks	104
Second-Order Discontinuities	110
Correlation Method: Relations among Domains	111
Concordance Method: Relations among Conditions	113
Summary and Conclusions	118
References	119

Developmental Continuities and Discontinuities in a Form of Familial Dyslexia	123
Bruce F. Pennington, Shelley D. Smith, Linda L. McCabe, William J. Kimberling, and Herbert A. Lubs	
Two Kinds of Continuity in Genetic Family Studies	124
Genetic Methods and Results (Level I): The Use of Linkage	
Analysis	128
Cognitive Methods and Results (Level III)	131
	133
	134
	134
Methods and Results Pertaining to the Surface Phenotype (Level	
	135
•	141
	142
The Neurological Basis of Developmental Dyslexia (Level II)	142
	146
	148
	149

The Study of Transitions: Conceptual and Methodological Issues	153
J. P. Connell and Wyndol Furman	
The Concept of Transitions	154
Transitional Event	155
Transitional Period	155
Transitional Mechanism	156
The Concept of Change	157
Level Change	158
Structural Change	159
Centrality Change	160
Types of Transitions	161
Developmental Transitions	161
Endogenous and Exogenous Transitional Events	162
Typologies of Life Events	162

CONTENTS

Methodological Considerations	164
Design Strategies	164
Data Analytic Strategies	165
Methodology and Theory	
Two Examples of the Study of Transitions	166
Conclusion	
References	171

Chapter 8

Self-produced Locomotion: An Organizer of Emotional, Cognitive, and Social Development in Infancy	75
Bennett I. Bertenthal, Joseph J. Campos, and Karen Caplovitz Barrett	
Introduction	75
Self-produced Locomotion in Theoretical Perspective	77
Development of Spatial Sensorimotor Performance: Fear of	
Heights 17	78
Visual Cliff Research 18	
Spatial Orientation Research 18	88
	90
	93
	95
	99
	01
0 1	01
1 1	02
	05
References	06

Chapter 9

Effects	of	Hospitalization	on	Early	Child	Development	211
Danid	• >	August					

David A. Mrazek

The Literature on Childhood Hospitalization	212
Psychological Effects of Hospitalization on Young, Seriously III,	
Asthmatic Children	214
Variables Affecting Response to Hospitalization	216
Variables Illustrated with Empirical Results from the Study of	
Asthmatic Children	216

Additional Variables Reported in the Literature	219
Discussion	221
Conclusions	223
References	223

PART III STUDIES OF CONTINUITIES

Chapter 10

The Development of Representation from 10 to 28 Months:	
Differential Stability of Language and Symbolic Play	229

Inge Bretherton and Elizabeth Bates

Introduction	229
Types of Stability	230
The Concurrent Development of Language and Symbolic Play	235
Method	235
Longitudinal Stabilities in Language Development	236
Longitudinal Stabilities in the Development of Symbolic Play	245
Conjoint Stability of Language and Symbolic Play:	
Intercorrelations between Two Homotypic Progressions	250
General Implications	256
References	259

Chapter 11

Developmental Transformations in Mastery Motivation:	
Measurement and Validation	263

George A. Morgan and Robert J. Harmon

Introduction	263
Measuring Mastery Motivation	267
Methodological Issues	267
Development of the Mastery Tasks	272
Reliability of the Measures of Mastery Motivation	276
Validity of the Measures of Mastery Motivation	276
Continuity and Change in Mastery Motivation	
A Transformation in the Second Half of the First Year of Life	280

Continuity and Change during Early Childhood	282
The Interrelationship of Mastery Motivation and Cognitive	
Development: Problems and Possible Solutions	285
Summary	287
References	

David W. Shucard, Janet L. Shucard, and David G. Thomas

Cerebral Specialization in Adults	294
Clinical, Anatomical, and Behavioral Studies	294
Electrophysiological Studies	295
Cerebral Specialization and Development	298
Dichotic Listening Studies	300
Hand Preference Studies	301
Infant Electrophysiological Studies: EEG and AEP Discrete	
Stimulus Paradigms	303
Infant Electrophysiological Studies: AEP Probe Paradigm	304
Conclusion	311
References	312

Chapter 13

Continuity	and	Chan	ige ir	ı So	cioen	notiona	al De	velopn	nent (during	
the Second	Year		•••••	• • •			• • • • •				315

Ross A. Thompson and Michael E. Lamb

The Organization of This Research	318
Method and Measures	
Results and Discussion	324
Stability and Change in the Security of Attachment	325
Stability of Attachment and Socioemotional Continuity	
during the Second Year	329
Summary and Conclusion	333
References	336

CONTENTS

xviii

Chapter 14

Continuities and Change in Early Emotional Life: Maternal Perceptions of Surprise, Fear, and Anger	339
Mary D. Klinnert, James F. Sorce, Robert N. Emde, Craig Stenberg, and Theodore Gaensbauer	
Introduction	339
Data from Our Laboratory	341
Replicability of Early Onset and Age Course for Discrete	
Emotions	343
The Basis for Maternal Reports	344
Surprise	
	346
	348
Other Emotions with Early Onset: Interest, Enjoyment, and	
	350
	350
	353

Chapter 15

Early	Experience	Effects:	Evidence	for Continuity?	 355
Linda	S. Crnic				

Continuity and Discontinuity: Issues in Developmental	
Psychobiology	355
	356
	356
Reasons for Slow Progress	357
Contribution to Continuity-Discontinuity Issues	
An Example of Early Experience Research: Malnutrition Effects on	
	360
Prior Findings	360
	362
	363
Conclusions	365
References	

PART IV CROSS-DISCIPLINARY STRATEGIES IN SEARCHING FOR CONTINUITIES

CONTENTS

Chapter 16	
Mathematical-Statistical Model Building in Analysis of	
Developmental Data	371

Robert Short, John Horn, and Jack McArdle

Introduction	371
Steps for Doing a MASMOB Study	373
	373
Summary of Rationale	379
	380
A Substantive Example	381
Simplex Examples	384
Multivariable Simplex Models	388
Structural Models Seen through Development	391
Reliability as a Latent Structure Model	391
Overlapping Process Models	392
Changing Functions and Changing Subjects	393
Simultaneous Analysis of Means and Structure	395
A Summarizing Example	397
Summary and Conclusions	398
References	399

Chapter 17

Continuity of Personality: A Genetic Perspective	403
H. H. Goldsmith	
The Quantitative Genetic Approach The Developmental Genetic Approach References	409
Index	415