

The background of the cover is a photograph of a pair of bright yellow rubber boots. The boots are positioned on a dark, wet surface, possibly a forest floor, with some fallen leaves visible. The lighting is dramatic, highlighting the texture of the boots and the wet ground. The text is overlaid on the right side of the image.

Seifert

Hoffnung

Child **AND**

Adolescent

Development

3 RD EDITION

THIRD EDITION

Child and Adolescent Development

Kelvin L. Seifert *The University of Manitoba*

Robert J. Hoffnung *University of New Haven*

HOUGHTON MIFFLIN COMPANY BOSTON TORONTO
Geneva, Illinois Palo Alto Princeton, New Jersey

For my students, whether currently children or formerly children K.L.S.

For my parents, Penny and Abie R.J.H.

Senior sponsoring editor Michael DeRocco
Senior development editor Susan Granoff
Senior project editor Rosemary Winfield
Production/design coordinator Jill Haber
Senior manufacturing coordinator Priscilla Bailey
Marketing manager Rebecca Dudley

Cover design: Ron Kosciak, Dragonfly Design; *cover image:* Renée M. Fraser, I.T.B.I.C.

Anatomical and biological illustrations by Nancy Kaplan: Figures 3.1, 3.2, 3.3, 3.4, 4.1, 4.2, 4.3, 4.4, 5.2, 5.4, 8.2, 12.1

Illustrations by Patrice Rossi: Figures 2.1, 5.3, 9.1, 9.2, 12.2, 13.1

Illustrations by Elizabeth Seifert: Figure 8.3

All other credits appear on page A-1, which constitutes an extension of the copyright page.

Copyright © 1994 by Houghton Mifflin Company. All rights reserved. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system without the prior written permission of Houghton Mifflin Company unless such copying is expressly permitted by federal copyright law. Address inquiries to College Permissions, Houghton Mifflin Company, 222 Berkeley Street, Boston, MA 02116-3764.

Printed in the U.S.A.

Library of Congress Catalog Card Number: 93-78698

ISBN: 0-395-67652-5

23456789-VH-96 95 94

Child and Adolescent Development





Preface

We are delighted that again we have had the opportunity to refine, enhance, and update *Child and Adolescent Development*. The book remains, of course, a comprehensive introduction appropriate for all undergraduates taking a first course in development, regardless of the department in which the course is taught. However, we believe the Third Edition more fully realizes our goals for the book than either preceding edition.

Our primary goals have been:

- To communicate to students the freshness and vitality of real, fully dimensional children and the idea that development, above all, is a human process.
- To convey that the developmental psychologist's understanding of children and adolescents is based on information derived scientifically and, further, that good science involves a synthesis of classic and recent findings.
- To keep our writing clear, low-key, and nontechnical, and to weave abundant concrete details about children into our discussions.
- To explore the ways that ethnicity affects the development of children, both in North America and around the world, and to better explain the role that sociocultural context plays in development.
- To help students appreciate the connections among the key developmental domains: physical, cognitive, and psychosocial.
- To explore, for both scientific and practical reasons, the roles of the adults who nurture, care for, and educate children.

These goals were foremost in our thoughts as we developed the content, and revised and expanded the special features, of the Third Edition.

Content Revisions in the Third Edition

We have carefully updated every chapter in this edition, adding hundreds of new citations in the process. Specific changes include the following:

- The theories chapter (Chapter 2) has been extensively reworked with new sections on important contemporary theories (including neo-Piagetian, cognitive-behavioral, ethological, ecological, sociohistorical, and transactional) that are reshaping how psychologists view development. New coverage in Chapter 2 includes the following theorists: Bronfenbrenner, Vygotsky, Sameroff, Bijou, Meichenbaum, Case, Fischer, Mahler, and Stern.

- All the chapters on cognitive development have been significantly revised to reflect the most current research in this rapidly changing area of study. Among the new topics covered are:
 - gestures as communication during infancy (Chapter 6)
 - children's theory of mind (Chapter 9)
 - appearance-reality distinction (Chapter 9)
 - neo-Piagetian theories of cognitive development (Chapter 9)
 - children's understanding of metaphor (Chapter 12)
 - Sternberg's triarchic theory of intelligence (Chapter 12)
 - neo-Piagetian views of adolescent cognition (Chapter 15)
 - gender differences in adolescents' thinking (Chapter 15)
- Other noteworthy changes include new and expanded coverage of the following topics:
 - Are children truly valued in American society? (Chapter 1)
 - behavior genetics (Chapter 3)
 - teratogens (Chapter 4)
 - influencing the sleep patterns of infants (Chapter 5)
 - revised view of SIDS (Chapter 5)
 - effects of maternal employment and daycare on attachment formation (Chapter 7)
 - family-leave policies in the United States and Europe (Chapter 7)
 - the importance of crying (Chapter 7)
 - influences on gender development and gender schema theory (Chapter 10)
 - the cultural context of child abuse (Chapter 10)
 - importance of peer relationships (Chapter 13)
 - parental expectations and academic achievement (Chapter 13)
 - health and health risks in adolescence (Chapter 14)
 - how adolescents spend their time (Chapter 16)
 - family ecologies of minority youth (Chapter 16)

New Chapter

The most striking new element in the Third Edition is a new capstone chapter on parenting, mentoring, and caregiving. This chapter is, we feel, a logical outgrowth of a statement we made in the preface to the previous edition: "Both our professional and personal experiences have impressed on us not only the tremendous complexity of human development but also the practical importance of studying development to all of society." That statement applies with special resonance to the relationships between children and the adults who care for them—and most adults probably *will*, at one time or another, take part in such a relationship. The mass market is bursting with advice on the subject, but some of it is woefully unscientific. We decided that including a chapter on caregiving, based solidly on research but presented in a practical way, would enhance the value of this book for our readers.

Naturally, we hope that many instructors will assign the chapter to students and build coverage of parenting, mentoring, and caregiving into their syllabus; we hope as well that those who don't will at least suggest that students read the chapter on their own.

We wish to point out that the addition of this chapter did not result from our removing material on parenting or related topics from other chapters; indeed, that material has been enhanced and updated throughout the text.

Special Features

The Third Edition of *Child and Adolescent Development* includes a number of unique features designed to enhance students' understanding of developmental psychology.

- *A Multicultural View* is a series of boxed inserts that focus on selected multicultural or cross-cultural topics related to child and adolescent development. Appearing in each chapter, they cover such topics as the development of ethnic awareness during the preschool years, cross-cultural variations in attachment, parental expectations and academic achievement, and the cultural context of child abuse and neglect. (For a complete list of Multicultural Views, with new ones marked, see page xv.) We hope these boxes will increase the reader's awareness of the importance of context and ethnicity in the development of children and adolescents.
- *Bridges*, a set of distinctive marginal callouts, graphically connects the cognitive, psychosocial, and physical domains of development and helps students see the links between how children think, feel, and grow. For example, in Chapter 6, on cognitive development during the first two years, a Bridges callout draws the student's attention to the link between parent/infant interaction and the development of cognitive and linguistic abilities. This feature is introduced in Chapter 1 (p. 6) and appears at various points throughout the age-stage chapters (Chapters 5–16). The Bridges feature has been streamlined in this edition for greater clarity and ease of use. We hope this feature will continually remind students of the interactive nature of all development, a theme that we articulate throughout the text.
- *Case-study photo essays* at the beginning of each age-level part trace the development of four different children over a period of years. There are studies of a low birthweight infant, a preschooler who must adjust to the birth of a baby brother, a school-age girl, and an adolescent son of divorced parents. Striking photos and relevant documents and facsimiles are blended with the text's sensitive narrative and explanatory comments. These original case-study photo essays can help students directly appreciate that all aspects of development are interconnected and that development is a human process that affects real people living in a real world.
- *Interviews* with children and adolescents of various ages are interspersed throughout the text. These interviews reinforce and bring to life the text's coverage of concepts and theories. The interviews consist of excerpts from an extensive collection of tape-recorded interviews conducted especially for this text by Bob Hoffnung. Follow-up questions at the end of each interview provide further reinforcement.
- *Boxed inserts*, titled "Perspectives," are incorporated throughout the text. These extend the text discussion by highlighting significant research or digging deeper into important contemporary issues such as "Are Children Truly Valued in American Society?" (A complete list, with new items marked, appears on pages xvii–xviii.)

In addition, the Third Edition of *Child and Adolescent Development* incorporates a number of carefully designed pedagogical features that not only help students learn the text material but also make it easier for both instructors and students to use the book. Included are the following features:

- *A chapter outline and focusing questions* at the beginning of each chapter serve as advance organizers and help students prepare for the material to be covered in each chapter.
- *Marginal glosses* printed in bold reinforce key points throughout the text.
- *End-of-chapter summaries* list the important topics covered in the chapter, grouped by heading.
- *Key terms* are highlighted in boldface type in the text and a list of key terms (with cross-references to the page numbers on which the terms are defined) appears at the end of each chapter.
- *End-of-chapter questions*—entitled “What Do You Think?”—are included to stimulate critical thinking and call on the student to relate personal values and experiences to the issues discussed.
- *Annotated lists of selected readings* that provide further insight into the chapter’s topics and may be of special interest to students appear at the end of each chapter.

Ancillaries

The Third Edition of *Child and Adolescent Development* is accompanied by an extensive package of instructor and student aids. Heading the list are a test bank, instructor’s resource manual, and study guide that are all unified by a shared set of learning objectives.

Test Bank The thoroughly revised and expanded version of the Test Bank consists of more than seventeen hundred multiple-choice items and nearly seventy essay questions, along with learning objectives for each chapter. In the Third Edition, half (850) of the multiple-choice items are totally new; in the other half, the foils have been re-ordered to ensure testing security.

To provide instructors with maximum flexibility in constructing examinations, answers to the multiple-choice items are listed both in a special section at the end of the book and next to each item. For the instructor’s convenience, alongside each item is also information on the topic covered by the test item, the pages in the textbook where the answer can be found, and whether the test item calls for factual or applied knowledge.

Instructor’s Resource Manual This manual has been revised and expanded, and offers numerous resources to facilitate course preparation. It includes for each chapter learning objectives, a detailed lecture outline, supplementary lecture discussion topics, and—*new* to this ancillary—an extensive set of student activities. To help instructors further enrich class lectures, suggestions for using media in the classroom and lists of films and videotapes are included in a special section.

Study Guide The Study Guide has been heavily revised. It contains for each chapter learning objectives, a chapter outline, a brief overview of material covered in the chapter, a *new* section of contextual fill-in-the-blank exercises, short-answer study questions, and multiple-choice practice tests with a special answer feedback section that explains why each option is either right or wrong.

Computerized Test Bank This interactive computer version of the Test Bank, available in IBM and Macintosh formats, offers maximum flexibility to instructors who wish to edit test items or add their own.

Videos A wide range of video programs on child development is available to qualified adopters.

Video Rental Policy Qualified adopters can borrow films or videos free of charge through a consortium of university film libraries.

Transparencies A set of fifty overhead transparencies, half in full color, is available free upon adoption of the text. It consists of figures from the text and a variety of helpful charts and definitions to highlight important concepts.

Audiotape Program: Voices—An Interview Resource This set of four half-hour audiocassettes consists of excerpts from an extensive series of interviews with children and adolescents conducted by Bob Hoffnung especially for this text, along with explanatory comments. It is available free upon adoption of the text.

Listening Guide Accompanying the audiotapes is a printed guide that includes all transcripts, additional commentary, exercises, and activities.

Acknowledgments

This book would not have been possible without the help of many individuals. We especially wish to thank David Hunter and Julian Ferholt, whose friendship and collegueship were invaluable, and Aaron Hoffnung for his encouragement and support. We are particularly grateful to The University of Manitoba, which provided time for this project from its beginning, and to the University of New Haven and Joseph Chepaitis, its Dean of Arts and Sciences, for their support.

A number of reviewers made constructive suggestions and provided thoughtful reactions at various stages in the development of the Third Edition, and we are very appreciative of the help we received from them. In particular, we would like to thank:

Mark B. Alcorn, *University of Northern Colorado*

James Condell, *Morehead State University*

Daniel Fasko, Jr., *Morehead State University*

Yolanda Yvette Harper, *University of Tulsa*

Jeffrey J. Haugaard, *Cornell University*

Bert Hayslip, Jr., *University of North Texas*

George W. Holden, *University of Texas*

Michael L. Jaffe, *Kean College*

William L. Johnson, *Ambassador College*

Kenneth Kallio, *SUNY, Geneseo*

Barbara Kane, *Indiana State University*

Roger Kobak, *University of Delaware*

Harold B. Koch, *Penn Valley Community College*

Eugene Wm. Krebs, *California State University, Fresno*

Judith R. Levine, *SUNY College of Technology*

Sandra M. Miller, *Ohio State University*

David R. Pederson, *University of Western Ontario*

Donald L. Peters, *University of Delaware*

Ardis L. Peterson, *Contra Costa College*

Roger D. Phillips, *Lehigh University*

Rosemary Rosser, *University of Arizona*

Kenneth E. Smith, *University of Nebraska, Omaha*

Arlene Sprague, *Lincoln Memorial University*

Cynthia A. Stifter, *Pennsylvania State University*

Judith Torney-Purta, *University of Maryland*

Pearl Meeks Vincent, *Jackson State University*

We would especially like to thank the following individuals for their assistance in developing the four case-study photo essays that appear in this book: Susan Buckler, Alan Carey, Helen Cohen, Johanna Granoff, and Sara Richlin. We are also very grateful to all of the people who participated in the interviews that appear in this book and on tape and who were so willing to share with us their thoughts and perceptions about development.

Special, warm thanks should go to our editors at Houghton Mifflin: Loretta Wolozin for her importance in giving birth to the book in the first place, Mike DeRocco for insuring that later editions reached their full potential, and Susan Granoff for her masterful editorial insights throughout all three editions.

Finally, we would like to thank our families, who rearranged much of their lives so that we could have time to write this book and who provided us with numerous examples of child and—more lately—adolescent development.

Kelvin L. Seifert Robert J. Hoffnung

Brief Contents

Multicultural Views	xv
Perspectives	xvii
Preface	xix

PART ONE **Studying Development** 1

- 1** Introduction: Studying Development 3
- 2** Theories of Development 33

PART TWO **Beginnings** 71

- 3** Genetics 73
- 4** Prenatal Development and Birth 103

PART THREE **The First Two Years** 135

- 5** The First Two Years: Physical Development 141
- 6** The First Two Years: Cognitive Development 175
- 7** The First Two Years: Psychosocial Development 211

PART FOUR **The Preschool Years** 243

- 8** The Preschool Years: Physical Development 249
- 9** The Preschool Years: Cognitive Development 279
- 10** The Preschool Years: Psychosocial Development 315

PART FIVE
The Middle Years **357**

- 11** The Middle Years: Physical Development 363
12 The Middle Years: Cognitive Development 387
13 The Middle Years: Psychosocial Development 427

PART SIX
Adolescence **473**

- 14** Adolescence: Physical Development 479
15 Adolescence: Cognitive Development 517
16 Adolescence: Psychosocial Development 545

PART SEVEN **589**

- 17** Parenting, Mentoring, and Caregiving from Infancy through
Adolescence 589

Glossary **G-1**

References **R-1**

Acknowledgments **A-1**

Author/Name Index **I-1**

Subject Index **I-9**

Contents

Multicultural Views xv

Perspectives xvii

Preface xix

PART ONE

Studying Development 1



1 Introduction: Studying Development 3

The Nature of Developmental Change 4

Three Domains of Development 4

An Example of Development: Aaron 6

Why Study Development? 8

The History of Developmental Study 8

Childhood and Adolescence as Concepts 9

A Multicultural View: Growing Up in India 10

Early Precursors to Developmental Study 11

The Emergence of Modern Developmental Study 12

Current Issues in Developmental Study 13

Nature and Nurture 13

Perspectives: The Nature and Nurture of “Wolf” Children 14

Continuity and Discontinuity 14

Universal and Context-Specific Development 15

Methods of Studying Children and Adolescents 17

The Scientific Method 17

Ways that Research Studies Vary 17

Quantitative Versus Qualitative Studies 18

Naturalistic Versus Experimental Studies 20

Time Frames for Studying Development 22

Sampling Strategies 24

Ethical Constraints on Studying Development 26

Perspectives: Are Children Truly Valued in American Society? 28

Strengths and Limitations of Developmental Knowledge 30

2 Theories of Development 33

The Nature of Developmental Theories 34

What Is a Developmental Theory? 35

Differences Among Developmental Theories 35

Psychodynamic Developmental Theories 36

Freudian Theory 36

Erikson’s Psychosocial Theory 37

Perspectives: Erik Erikson’s Identity Crisis: An Autobiographical Perspective 38

Other Psychodynamic Approaches 41

A Multicultural View: The Development of Ethnic Identity in Minority Group Adolescents 42

Evaluation of Developmental Themes in Psychodynamic Approaches 44

Behavioral and Social Learning Developmental Theories 45

Behavioral and Cognitive Behavioral Theories 45

Bandura’s Social Cognitive Theory 48

Evaluation of Developmental Themes in Behavioral and Social Learning Approaches 50

Cognitive Developmental Theories 51

Perspectives: Piaget's Methode Clinique 50

Piaget's Cognitive Theory 51

Neo-Piagetian Approaches 55

Information-Processing Theory 56

Evaluation of Developmental Themes in Cognitive Approaches 58

Contextual Developmental Theories 59

Bronfenbrenner's Ecological Systems Theory 59

Vygotsky's Sociohistorical Theory 61

Sameroff's Transactional Theory 62

Ethological Theory 62

Evaluation of Developmental Themes in Contextual Approaches 63

Developmental Theories Compared: Implications for the Student 63

Perspectives: A Transactional Approach to Early Intervention for High-Risk Children 64

PART TWO Beginnings

71



3 Genetics

73

Mechanisms of Genetic Transmission 74

The Role of DNA 74

Mitosis and Meiosis 76

Individual Genetic Expression 77

Genotype and Phenotype 77

Dominant and Recessive Genes 78

Transmission of Multiple Variations 79

Polygenic Transmission 80

The Determination of Sex 81

Genetic Abnormalities 82

Variations in the Number of Chromosomes 82

Abnormal Genes 84

Genetic Counseling 87

Prenatal Diagnosis 87

Early Medical Treatments 90

Relative Influence of Heredity and Environment 90

Key Concepts of Behavior Genetics 91

Observations of Specieswide Behaviors 92

Studies of Twins and Adopted Children 92

A Multicultural View: Ethnic Differences in Temperament 94

Cautions and Conclusions About the Influence of Heredity and Environment 97

Perspectives: The Potential and Ethical Problems of Genetic Engineering 98

Genetics and Developmental Psychology 98

4 Prenatal Development and Birth 103

Prenatal Stages of Development 104

Conception 104

The Germinal Stage (First Two Weeks) 106

The Embryonic Stage (Third Through Eighth Weeks) 107

The Fetal Stage (Ninth Week to Birth) 109

Perspectives: Alternatives to Normal Conception 110

Prenatal Influences on the Child 111

Biological Risks 113

Illnesses 114

Teratogens 116

Diet and Nutrition 119

Stress 120

Environmental Hazards 120

Birth 121

A Multicultural View: Reasons for Having a Child in the United States and Eight Other Countries 122

Stages of Labor 123

Managing Discomfort in Childbirth 124

Problems During Labor and Delivery 126

A Multicultural View: Cultural Differences in Perceptions of Pain During Childbirth 127

Premature and Low-Birth-Weight Infants 129

From Biological to Psychological Development 131

PART THREE

The First Two Years 135



David

David's Case 136

5 The First Two Years: Physical Development 141

Appearance of the Young Infant 143

The First Few Hours 143

Is the Baby All Right? 143

Newborn Weight 145

Size and Bodily Proportions 145

Development of the Nervous System 146

Growth of the Brain 147

States of Sleep and Wakefulness 148

Sensory Development 150

Visual Acuity 150

Perspectives: Influencing the Sleep Patterns of Infants 150

Auditory Acuity 152

Taste and Smell 153

Touch 153

Perspectives: Sudden Infant Death Syndrome 154

Motor Development 154

Early Reflexes 155

The First Motor Skills 156

Variations in Growth and Motor Development 159

Low-Birth-Weight Infants 159

A Multicultural View: Cultural Differences in Motor Stimulation 162

Gender Differences 164

Nutrition During the First Two Years 164

Special Nutritional Needs of Infants 165

Breast Milk Versus Formula 165

Nutrition in Later Infancy 166

A Multicultural View: The Effects of Serious Malnutrition 168

Infancy: The Real End of Birth 171

6 The First Two Years: Cognitive Development 175

Ways of Studying Perception and Cognition in Infants 177

Arousal and Infants' Heart Rates 177

Recognition, Memory, and Infant Habituation 178

Infant Perception 178

Visual Perception 179

Auditory Perception 183

Infant Cognition 184

Piaget's Theory of Sensorimotor Intelligence 185

Baby Jill's Intelligence: An Example 190

Assessment of Piaget's Theory of Infant Cognition 192

Behavioral Learning in Infancy 195

Classical Conditioning 195

Operant Conditioning 196

Imitation 197

Language Acquisition 198

Phonology 199

Semantics and First Words 201

Perspectives: Gestures as Communication During Infancy 202

Parental Influences on Language Acquisition 203

A Multicultural View: Cognitive Effects of Verbal Interaction 204

The End of Infancy 207

7 The First Two Years: Psychosocial Development 211

Emotions and Temperament in Infancy 213

Emotions in Infancy 213

Temperament 215

Perspectives: The Importance of Crying 216

Early Social Relationships 218

Caregiver-Infant Synchrony 218

A Talk with Jennifer and Her Parents: Infant Temperament 219

Social Interactions with Fathers and Siblings 220

Interactions with Nonparental Caregivers 222

Interactions with Peers 223

Attachment Formation 224

Phases of Attachment Formation 225