

# PREFACE

Preparing a new edition of *Child Development* is both a joy and a challenge. I enjoy revising this text because I continue to learn more about children and because the feedback from students and instructors has been consistently enthusiastic. The challenge of revising a successful text is always to continue meeting readers' needs and expectations, while keeping the material fresh and up to date. To meet this challenge, I have made a number of key changes, which I describe below.

## NEW TO THIS EDITION

For the eleventh edition of *Child Development*, I wrote two new chapters, expanded coverage in a number of key areas, incorporated the latest research and applications, and fine-tuned the aspects of the book that make learning easier and more engaging.

### Two New Chapters

At the request of adopters and reviewers, I added two new chapters to the book by significantly rearranging and revising the discussion of physical development. In the tenth edition, the two physical development chapters were primarily organized in a chronological manner with chapter 5 focusing on infancy and chapter 6 describing childhood and adolescence. In the eleventh edition, these two chapters have a much stronger topical, process emphasis.

In the eleventh edition, chapter 5 is now titled "Physical Development and Health." In the tenth edition, much of this material was in chapter 6, and it included no discussion of infancy. In the eleventh edition, the main headings in chapter 5 are "Body Growth and Change"; "The Brain"; "Sleep"; and "Health." Developmental changes from infancy through adolescence are now discussed within each of these topics.

The coverage of motor, sensory, and perceptual development has been expanded and chapter 6 is now devoted to these topics. The result is a far more cohesive discussion that follows from the increased interest in viewing perceptual and motor development as integrated.

Placing the discussion of motor, sensory, and perceptual development after physical development also provides a better connection of both of these chapters to material in adjacent chapters. Thus, the coverage of body growth and change in chapter 5 now immediately follows the discussion of birth, and the information on perceptual development now immediately precedes the coverage of cognitive processes.

### Research and Applications

Above all, a text on child development must include a solid research foundation as well as applied examples. In this edition, I have updated and expanded the coverage of research and applications.

**Recent Research** This edition of *Child Development* presents the latest research on the biological, cognitive, and socioemotional aspects of children's lives and includes more than 1,800 citations from the twenty-first century, including more than 600 from 2004, 2005, and 2006. The new research discussions include information from chapters in the sixth edition of the *Handbook of Child Psychology* (Damon & Lerner, 2006). Later in the preface I highlight the main content changes on a chapter-by-chapter basis.

### NEW! Research in Child Development Interludes

New to this edition are the Research in Child Development interludes. Appearing in each chapter, these interludes provide a more in-depth look at research related to a topic in the chapter. In most cases, they describe a research study, including the identity of the participants, the methods used to obtain data, and the main results. Most of the highlighted studies were conducted after 2000. Because students often have more difficulty reading about research studies than other text material, I wrote these in a way that students will understand them. Examples of the new Research in Child Development interludes are:

- Chapter 6 (Motor, Sensory, and Perceptual Development):  
Studying the Newborn's Perception
- Chapter 8 (Information Processing): Suggesting False Events to Children
- Chapter 12 (The Self and Identity): A Possible Selves Intervention to Enhance School Involvement
- Chapter 15 (Families): Marital Conflict, Individual Hostility, and the Use of Physical Punishment
- Chapter 16 (Peers): Aggressive Victims, Passive Victims, and Bullies
- Chapter 18 (Culture): Multiple Risks of Children Living in Poverty

**Expert Research Consultants** Child development has become an enormous, complex field and no single author, or even several authors, can possibly be an expert in many different areas of child development. To solve this problem, I sought the input of leading experts in many different research

areas of child development. The experts provided me with detailed evaluations and recommendations for chapters in their areas of expertise. The expert consultants for *Child Development*, eleventh edition, are:

**Ross Thompson**, *University of California–Davis*  
**Tiffany Field**, *University of Miami (Florida)*  
**Douglas Frye**, *University of Virginia*  
**Cynthia Hudley**, *University of California–Santa Barbara*  
**Kenneth Rubin**, *University of Maryland*  
**Elizabeth Vera**, *Loyola University–Chicago*  
**John Reiser**, *Vanderbilt University*  
**Vera John-Steiner**, *University of New Mexico*  
**John Gibbs**, *Ohio State University*  
**Barbara McCombs**, *University of Denver*

**Applications** Applied examples give students a sense that the field of life-span development has personal meaning for them. This edition retains the well-received Careers in Child Development inserts and also includes a new application titled Caring for Children.

**New! Caring for Children Interludes** In addition to giving special attention throughout the text to health and well-being, parenting, and educational applications, the eleventh edition of *Child Development* includes Caring for Children interludes, which describe important strategies for nurturing and improving the lives of children. Among the topics of the Caring for Children interludes are:

Chapter 1: (Introduction): Improving Family Policy  
 Chapter 3: (Biological Beginnings): Parenting Adopted Children  
 Chapter 11: (Emotional Development): Helping Children Cope with Stressful Events  
 Chapter 16: (Peers): Appropriate and Inappropriate Strategies for Making Friends

**Careers in Child Development** Instructors and students have provided extremely positive feedback about the emphasis on careers in child development in the text. The eleventh edition continues this emphasis. Each Careers in Child Development insert profiles an individual whose career relates to the chapter's content. Most of these inserts include a photograph of the person at work. A number of new Careers inserts appear in the eleventh edition of *Child Development*.

In addition, a Careers in Child Development section in chapter 1 encourages students to consider a career that involves working with children. The Careers in Child Development section describes a number of careers in education/research, clinical/counseling, medical/nursing/physical development, and family/relationships categories. Numerous Web links provide opportunities to read about these careers in more detail.

**Diversity** I made every effort to explore diversity issues in a sensitive manner in each chapter of the eleventh edition of

*Child Development*. The book continues to have an entire chapter devoted to culture, and I expanded the coverage of diversity in a number of places in this edition. New or expanded coverage of diversity includes:

Chapter 1 (Introduction): New section on socioeconomic status and poverty  
 Chapter 3 (Biological Beginnings): New discussion of the increased diversity of adopted children and adoptive parents  
 Chapter 9 (Intelligence): Much expanded coverage of cross-cultural comparisons of intelligence and new discussion of stereotype threat  
 Chapter 12 (The Self and Identity): New section, Sociocultural Contexts and new chapter opening story: Maxine Hong Kingston, Bridging Cultural Worlds  
 Chapter 13 (Gender): Coverage of very recent research on the gender socialization of Latino and Latina adolescents  
 Chapter 15 (Families): New section, Parenting Styles  
 Chapter 18 (Culture): Extensive new material on cross-cultural comparisons of health and well-being, gender, family, school, peers, and use of time; much expanded coverage of poverty and immigration

## ACCESSIBILITY AND INTEREST

The new edition of this text should be accessible to students because of the careful attention to clarity, the changes in organization, and the learning system.

## Writing and Organization

Every sentence, paragraph, section, and chapter of this book was carefully examined and when appropriate revised and rewritten. The result is a much clearer, better organized presentation of material in this edition.

## The Learning System

I strongly believe that students not only should be challenged to study hard and think more deeply and productively about child development, but should also be provided with effective learning aids. Instructors and students alike have commented that this book is very student-friendly.

Now more than ever, students struggle to find the main ideas in their courses, especially in courses like child development, which includes so much material. The book's learning system centers on learning goals that, together with the main text headings, keep the key ideas in front of the reader from the beginning to the end of the chapter. Each chapter has no more than five main headings and corresponding learning goals, which are presented side by side in the chapter-opening spread. At the end of each main section of a chapter, the learning goal is repeated in a feature called "Review and Reflect," which prompts students to review the key topics in the section

and poses a question to encourage them to think critically about what they have read. At the end of the chapter, under the heading “Reach Your Learning Goals,” the learning goals guide students through the bulleted chapter review.

In addition to the verbal tools just described, maps that link up with the learning goals are presented at the beginning of each major section in the chapter. At the end of each chapter, the section maps are assembled into a complete map of the chapter that provides a visual review guide. The complete learning system, including many additional features not mentioned here, is presented in a section following the preface titled “To the Student.”

## CHAPTER-BY-CHAPTER CHANGES

I made a number of changes in all 18 chapters of *Child Development*, eleventh edition. The highlights of these changes follow.



### Chapter 1 INTRODUCTION

- New Research in Child Development interlude: Early Childhood TV Viewing and Adolescent Behavior
- New Caring for Children interlude: Improving Family Policy
- New section on socioeconomic status (SES) in the coverage of Sociocultural Contexts, including the main points in a recent review of research on poverty and children’s development (Brooks-Gunn, 2003)
- Movement of Careers in Child Development to become the last main section of chapter 1 from its previous location as an appendix to improve the probability that students will read it
- Two new Careers in Child Development inserts: Valerie Pang, Professor of Teacher Education, and Katherine Duchen Smith, Nurse and Child Care Health Consultant



### Chapter 2 THE SCIENCE OF CHILD DEVELOPMENT

- New opening section on the foundations of child development as a science, including subsections on why research in child development is important and the scientific research approach
- New section on psychophysical methods
- New example of a case study focused on Erikson’s analysis of Mahatma Gandhi’s life
- Added assimilation and accommodation to discussion of Piaget’s theory
- Updated, clarified description of information-processing theory

- New Caring for Children interlude: Mesosystem Connection: Family and School Communication
- New section on Thinking Critically About Research on Child Development



### Chapter 3 BIOLOGICAL BEGINNINGS

- Extensive rewriting and reorganization of chapter
- Inclusion of a number of new introductions to topics and transitions between topics for improved clarity and understanding
- New section on evolutionary developmental psychology
- New figure 3.1 on the brain sizes of various primates in relation to the length of the juvenile period
- New section, The Epigenetic View
- Major revision and update of material on adoption, including dramatic increases in the diversity of adopted children and adopted parents
- New Caring for Children interlude: Parenting Adopted Children



### Chapter 4 PRENATAL DEVELOPMENT AND BIRTH

- Expanded discussion of alcohol effects on the fetus, including recent research linking moderate drinking to preterm risk and birth size
- Updated coverage of cocaine use by pregnant women, including increasing evidence of its negative effects
- New discussion of links between eating certain fish by pregnant women and risks to the fetus and child
- New Caring for Children interlude: Prenatal Care in the United States and Around the World, including new figure 4.6 on the use of timely prenatal care by women from different ethnic groups in the United States
- Updated research on low birth weight infants, including new figure 4.8
- New section on kangaroo care, including recent research of its positive effects on preterm infants
- New Research in Child Development interlude: Tiffany Field’s Research on Massage Therapy
- Much expanded coverage of postpartum depression, including new figure 4.11



### Chapter 5 PHYSICAL DEVELOPMENT AND HEALTH

- Completely new focus on chapter with emphasis on physical development and health in one chapter at the

request of instructors (previously, this material was spread across two chapters); the new organization of this chapter provides a much stronger topical focus to the material on physical development and health

- Substantial rewriting of chapter for improved clarity and understanding
- Expanded, updated coverage of puberty, especially in terms of adrenarche, gonadarche, and hormonal changes
- Substantially revised organization of coverage of the brain with a much improved introduction of basic aspects of brain physiology to help set the stage for improved understanding of the developmental changes in the brain; updated, expanded coverage of developmental changes in the brain during adolescence
- Expanded coverage of developmental changes in sleep, including updated research coverage of SIDS with the reasons why sleeping in a prone position is linked with SIDS and a new section on changes in sleep during adolescence



## Chapter 6 MOTOR, SENSORY, AND PERCEPTUAL DEVELOPMENT

- New chapter focused on motor, sensory, and perceptual development that involves expanded and more integrated coverage of these topics that in the previous edition were disconnected across two chapters; creating this new chapter provides a much stronger emphasis on the important topic of perceptual motor coupling
- Topics extensively revised and rewritten with special attention to providing more examples of concepts and explanations of challenging concepts, such as dynamic systems theory and ecological theory; movement of dynamic systems theory to beginning of chapter to emphasize its importance
- Much expanded and more detailed discussion of research techniques for studying infant perception in the Research in Child Development interlude, including the visual preference method, habituation, and tracking
- New chapter opening story on Stevie Wonder and Andrea Bocelli and their ability to adapt to their visual impairment, as well as expanded coverage of visual impairment in the chapter
- New discussion of binocular vision and its emergence at 3 to 4 months of age, providing a powerful cue to depth
- Expanded coverage of hearing in infancy to include changes in the perception of loudness, pitch, and sound localization, and new coverage of hearing in adolescence



## Chapter 7 COGNITIVE DEVELOPMENTAL APPROACHES

- Extensive rewriting of chapter for improved flow and student understanding
- Revised and expanded coverage of Piaget's concept of schemes
- New figure 7.1 that summarizes the main characteristics of Piaget's four stages
- Expanded coverage in the Research in Child Development insert with discussion of the violated-expectations method and new figure 7.4 to show the procedures used in the study of object permanence
- Provided extensive example of the zone of proximal development
- Expanded material on description of private speech with examples and research
- Updated coverage of Barbara Rogoff's ideas on cognitive apprenticeship
- Added criticisms of Vygotsky's approach



## Chapter 8 INFORMATION PROCESSING

- Extensively revised and reorganized chapter to give a stronger focus to developmental changes in children's attention, memory, thinking, and metacognition
- New figure 8.2 showing a simplified version of information processing to improve students' understanding of this approach
- New coverage of the explanations for increased processing speed in childhood
- Completely revised, updated coverage of developmental changes in attention in terms of selective attention, divided attention, and sustained attention
- New Research in Child Development interlude: Suggesting False Events to Children
- Expanded and updated coverage of false memories in children
- New section on the role of content knowledge in memory
- New material on the developmental shift to flexible, goal-directed problem solving in early childhood



## Chapter 9 INTELLIGENCE

- Extensive rewriting and reorganization of the chapter for better student understanding

- Brief discussion and definition of factor analysis added to help students understand the factor analytic approach to intelligence
- New section on the Sternberg Triarchic Abilities Test (STAT)
- Much expanded coverage of the influence of heredity and environment on intelligence
- New coverage of a leading expert's conclusions on what research indicates about the role of intervention in improving children's intelligence
- New section, Group Comparisons, with new material on gender comparisons
- Much expanded coverage of cross-cultural comparisons of intelligence, including recent research
- New coverage of the concept of stereotype threat and the intelligence of ethnic minority individuals (Aronson, Fried, & Good, 2002; Steele & Aronson, 1995)



## Chapter 10 LANGUAGE DEVELOPMENT

- Extensive rewriting and reorganization of chapter with the development of language now preceding the section on biological and environmental influences
- Updated material on change in language in early childhood and middle and late childhood
- New Research in Child Development interlude: Family Environment and Young Children's Language Development
- New figure 10.4 showing the research setting in Patricia Kuhl's studies of infants changing from being universal linguists to specializing in the speech of their native language
- New section on preparing for literacy
- New Careers in Child Development: Beverly Gallagher, elementary school teacher



## Chapter 11 EMOTIONAL DEVELOPMENT

- Extensively revised and rewritten chapter for better student understanding
- New discussion of biological foundations and experience in emotions, including early development in the brain and culture
- New photographs in figures 11.2 and 11.4 from Michael Lewis' laboratory showing seven different emotions being displayed by infants
- Expanded, revised, and updated coverage of emotion in adolescence
- New figure 11.7 on what to do and what not to do when you suspect that someone is about to attempt suicide

- Expanded, updated material on coping with death in childhood, including coping with stressful events involving death, such as September 11, 2001
- New Caring for Children interlude on helping children cope with stressful events
- Much expanded coverage of biological and experiential factors in temperament
- Updated coverage of the National Institute of Child Health and Development's longitudinal study of child care in the new Research in Child Development interlude
- New material on strategies parents can use in selecting quality child care based on expert Kathleen McCartney's ideas



## Chapter 12 THE SELF AND IDENTITY

- New chapter opening story: The Story of Maxine Hong Kingston, Bridging Cultural Worlds, and reference to the opening story at various points in the chapter
- New section on sociocultural contexts and the self
- New Research in Child Development interlude: A Possible Selves Intervention to Enhance School Involvement, based on the research of Daphina Oyserman and her colleagues with African American middle school students
- New discussion of how self-esteem does not always involve perceptions that match reality
- Revised and updated coverage of the controversy about whether self-esteem changes with age
- New section, Variations in Self-Esteem, with new coverage of research on the extent self-esteem is linked to school performance, initiative, physical appearance, happiness, depression, and other problems (Baumeister & others, 2003)
- New discussion of Susan Harter's research on links between self-esteem and physical appearance, including a new research figure
- New Caring for Children interlude: Increasing Children's Self-Esteem
- Revised and updated coverage of culture, ethnicity, and identity



## Chapter 13 GENDER

- New Research in Child Development interlude: Young Children's Gender Schemas of Occupations
- Expanded, updated, rewritten discussion of the evolutionary psychology view of gender
- New material on whether same-sex education benefits boys and/or girls

- Discussion of recent study on gender stereotyping by young children and their mothers and commentary about how children construct their understanding of gender
- Much expanded and updated discussion of developmental changes in gender stereotyping
- Updated coverage of gender differences in the brain
- Extensively rewritten and improved coverage of cognitive influences on gender, including updated material on gender and visuospatial skills
- Criticism of Tannen's ideas on gender differences in communication, including recent research documenting more similarities than differences in men and women in their talk about relationship problems and a meta-analytic review of research documenting the importance of context in gender differences
- Updated description of gender and relational aggression
- New section on gender differences in prosocial behavior
- Updated coverage of gender and emotion, including descriptions of developmental changes
- Updated discussion of gender controversy based on a recent review of meta-analyses of gender differences and similarities
- Recent research on gender-role classification and academic self-efficacy
- Coverage of recent research on differences in the gender socialization of Latino and Latina adolescents in the United States
- New Caring for Children interlude: Guiding Children's Gender Development



## Chapter 14 MORAL DEVELOPMENT

- Substantial rewriting of chapter on a line-by-line basis for improved student understanding and clarity
- Major new section on moral personality that includes the recent surge of interest in moral identity, moral character, and moral exemplars
- New material on the distinction between moral/conventional issues and personal issues
- New Research in Child Development interlude on the consistency and development of prosocial behavior
- New sections on relational quality, proactive strategies, and conversational dialogue in the discussion of parenting and moral development
- Recent research documenting the role of secure attachment as a precursor for a link between positive parenting and a child's conscience
- Discussion of new parenting recommendations based on Ross Thompson's analysis of parent-child relations and children's moral development
- Expanded and updated coverage of character education

- Expanded coverage of service learning with new discussion of Connie Flanagan's research
- Discussion of recent study linking father absence and incarceration of youth
- Description of recent research on peers and delinquency
- New Caring for Children interlude on strategies for reducing youth violence



## Chapter 15 FAMILIES

- New introduction in Family Processes section involving Bronfenbrenner's ecological theory and reference to it at different points in the chapter
- New section on Parenting Styles and Ethnicity, including recent research on Mexican American parenting styles
- New Research in Child Development interlude: Marital Conflict, Individual Hostility, and the Use of Physical Punishment
- Much expanded coverage of child maltreatment, including more in-depth discussion of types of abuse, recent research, and an effective prevention program
- New Caring for Children interlude: Communicating with Children About Divorce
- Inclusion of information from the recent NICHD Early Childhood Research Care Network Study of five types of before- and after-school care
- New coverage of study on the importance of paternal warmth and involvement in infancy when mothers were depressed
- Description of recent review of the use of nonabusive physical punishment by parents in African American families and child outcomes
- Coverage of longitudinal study showing a link between spanking in infancy and later behavioral problems
- Inclusion of recent research on sibling relations
- Discussion of recent study on divorce and attachment (Brockmeyer, Treboux, & Crowell, 2005)
- Updated coverage of father involvement in children's lives



## Chapter 16 PEERS

- Expanded and updated discussion of developmental changes in peer interaction
- Expanded, updated coverage of peer statuses, including description of average children
- New discussion of emotion in peer relations, including recent research on the emotional aspects of information in highly aggressive boys

- New Research in Child Development interlude: Aggressive Victims, Passive Victims, and Bullies
- Inclusion of John Coie's recent view on the reasons peer-rejected aggressive boys have problems in social functioning and may engage in antisocial behavior over time
- Much expanded discussion of peer-rejected children, including a recent successful intervention study
- Much expanded recommendations for teachers and parents in reducing bullying
- New section on the role of culture in peer relations
- New discussion of recent longitudinal research on the outcomes of not having a friend
- Updated and expanded coverage of gender differences in friendship
- New Caring for Children interlude: Appropriate and Inappropriate Strategies for Making Friends
- New description of developmental changes in crowds
- Expanded and updated coverage of the sequence of relationships in sexual minority youth
- Description of research on a link between dating and lower social anxiety in adolescents
- Coverage of recent research on the role of mixed-gender peer groups in romantic relationships in early adolescence



## Chapter 17 SCHOOLS AND ACHIEVEMENT

- Extensive rewriting and updating of chapter
- New chapter title that now includes achievement to reflect the expanded, updated, and revised material on achievement in the chapter
- New section on accountability in education as a major issue, including recent material on No Child Left Behind (NCLB)
- New discussion of controversy in early childhood education regarding academic emphasis
- Coverage of current consideration by the U.S. Congress of infusing Project Head Start with a stronger academic focus and commentary by early childhood experts about some concerns with this academic emphasis
- Inclusion of information from recent review of effective school dropout programs and new discussion of gender differences in school dropout rates and revised estimates of the dropout rate for Native American youth
- Updated and expanded coverage of the "I Have a Dream Program"
- More precise, updated explanation of how stimulants work in children with ADHD
- New sections on the identification of learning disabilities and the causes of learning disabilities
- New coverage of the 2004 reauthorization of the Individuals with Disabilities Act and its alignment with No Child Left Behind legislation

- New discussion of James Kauffman and his colleagues' views that in some cases inclusion has become too extreme and that too often children with disabilities are not challenged to become all they can be
- New section on attribution and achievement
- Inclusion of recent study linking mastery motivation to higher math and reading grades in elementary school students



## Chapter 18 CULTURE

- Extensive new material on cross-cultural comparisons in the areas of health and well-being, gender, family, school, peers, and adolescents' use of time
- Much expanded coverage of poverty and children's development, including information from a recent research review
- New Research in Child Development interlude: Multiple Risks of Children Living in Poverty, including two new research figures
- Coverage of recent study on parents' educational aspirations and adolescents' educational outcomes in low-income families
- New Caring for Children interlude: The Quantum Opportunities Program
- New discussion of collectivist orientation of many recent immigrant families to the United States and their emphasis on family obligation and duty
- New section on media use by children and adolescents, including recent surveys
- New section on television and sex that focuses on the influence of TV on adolescents' sexual attitudes and behavior
- New discussion of violent video games and children's aggression
- Updated and modified conclusions about links between television viewing and children's creativity, mental ability, and achievement
- Coverage of recent national study on media use by U.S. 8- to 18-year-olds, including new figure 18.6
- Recent update of Internet access at home by different ethnic groups

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## REVIEWERS

I owe much gratitude to the reviewers who provided detailed feedback about the book.

### Expert Consultants

A list of the expert consultants appears earlier in the preface. These experts provided detailed recommendations of new research to include in their areas of expertise.

### General Text Reviewers

I also owe a great deal of thanks to the instructors teaching the child development course who have provided feedback about the book. Many of the changes in *Child Development*, eleventh edition, stem from their input. For their help, I thank these individuals:

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 University*  
 Kimberly A. Gordon Rouse, *Ohio State University*  
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 Kimberlee L. Whaley, *Ohio State University*  
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## SUPPLEMENTS

The supplements listed here may accompany *Child Development*, eleventh edition. Please contact your McGraw-Hill representative for details concerning policies, prices, and availability as some restrictions may apply.

### For the Instructor

#### *Instructor’s Manual*

**Cosby Steele Rogers, Sarah Rogers, and Bonnie C. Graham, Virginia Polytechnic Institute and State University**

Each chapter of the *Instructor’s Manual* contains a Total Teaching Package Outline, a fully integrated tool to help instructors better use the many resources for the course. This outline shows instructors which supplementary materials can be used in the teaching of a particular chapter topic. In addition, there is a chapter outline, suggested lecture topics, classroom activities and demonstrations, suggested student research projects, essay questions, critical thinking questions, and implications for guidance.

#### *Test Bank and Dual Platform Computerized Test Bank on CD-ROM*

**Marilyn Moore, Illinois State University**

This comprehensive test bank includes more than 2,000 factual, conceptual, and applied multiple-choice questions, as well as approximately 75 essay questions per chapter. Available on

the Instructor's Resource CD-ROM as Word files and in computerized EZ Test format, the test bank is compatible with Macintosh and Windows platforms. McGraw-Hill's EZ Test is a flexible and easy-to-use electronic testing program. The program allows instructors to create tests from book-specific items. It accommodates a wide range of question types, and instructors may add their own questions. Multiple versions of the test can be created, and any test can be exported for use with course management systems such as WebCT, BlackBoard, or PageOut. EZ Test Online is a new service that gives you a place to easily administer your EZ Test-created exams and quizzes online. The program is available for Windows and Macintosh environments.

### PowerPoint Slide Presentations

#### Anita Rosenfield, Yavapai College

This resource offers the instructor an array of PowerPoint slides for each chapter of *Child Development*. The slides can be downloaded from the instructor's side of the Online Learning Center or from the Instructor's Resource CD-ROM.

### Instructor's Resource CD-ROM (IRCD)

This CD-ROM offers instructors a convenient tool for customizing the McGraw-Hill materials to prepare for and create lecture presentations. Included on the IRCD are the Instructor's Manual, Test Bank, and PowerPoint slides.

### McGraw-Hill's Visual Assets Database (VAD) for Life-span Development

#### Jasna Jovanovic, University of Illinois–Urbana-Champaign

McGraw-Hill's Visual Assets Database is a password-protected online database of hundreds of multimedia resources for use in classroom presentations, including original video clips, audio clips, photographs, and illustrations—all designed to bring to life concepts in human development. In addition to offering multimedia presentations for every stage of the life span, the VAD's search engine and unique "My Modules" program allows instructors to select from the database's resources to create customized presentations, or "modules." These customized presentations are saved in an instructor's folder on the McGraw-Hill site, and the presentation is then run directly from the VAD to the Internet-equipped classroom. For information about this unique resource, contact your McGraw-Hill representative.

### Taking Sides: Clashing Views on Controversial Issues in Childhood and Society

*Taking Sides* is a debate-style reader designed to introduce students to controversial viewpoints on some of the most critical issues in the field. Each issue is framed for the student, and the pro and con essays represent the arguments of leading scholars and commentators in their fields. An instructor's guide containing testing materials is available.

### Annual Editions: Child Growth and Development

Published by Dushkin/McGraw-Hill, this is a collection of articles on topics related to the latest research and thinking in child development. These editions are updated regularly and contain useful features, including a topic guide, an annotated table of contents, unit overviews, and a topical index. An instructor's guide, containing testing materials, is also available.

### Online Learning Center (OLC)

This extensive website, designed specifically to accompany this edition of *Child Development*, offers a wide variety of resources for instructors and students. The password-protected instructor's side of the site includes the *Instructor's Manual*, PowerPoint lecture slides, images, and a link to McGraw-Hill's Visual Asset Database of brief film clips, audio clips, and photographs. These resources and more can be found by logging on to the text website ([www.mhhe.com/santrockcd11](http://www.mhhe.com/santrockcd11)).

## For the Student

### Study Guide

#### Megan E. Bradley, Frostburg State University

This comprehensive study guide integrates the learning system found in the textbook. Designed to promote active learning, it includes true-false, multiple-choice, matching, critical thinking, and short-answer exercises. An answer key is included so that students can assess their comprehension of the text content.

### Online Learning Center (OLC)

This companion website for this edition of *Child Development* offers a wide variety of resources for instructors and students. For students, the website includes a Career Appendix, learning goals, chapter outlines, and multiple-choice and true-false quizzes. In addition, it offers interactive scenarios and short video clips from McGraw-Hill's Visual Assets Database for Life-span Development, and Web links to additional sources of information about the topics discussed in the book. These resources and more can be found by logging on to the website ([www.mhhe.com/santrockcd11](http://www.mhhe.com/santrockcd11)).

### Multimedia Courseware for Child Development

#### Charlotte J. Patterson, University of Virginia

This interactive CD-ROM includes video footage of classic and contemporary experiments, detailed viewing guides, challenging preview, follow-up and interactive feedback, graphics, graduated developmental charts, a variety of hands-on projects, related websites, and navigation aids. The CD-ROM is programmed in a modular format. Its content focuses on integrating digital media to better explain physical, cognitive, social, and emotional development throughout childhood and adolescence. It is compatible with both Macintosh and Windows computers.



# TO THE STUDENT

This book provides you with important study tools to help you more effectively learn about life-span development. Especially important is the learning goals system that is integrated throughout each chapter. In the visual walk-through of features, pay special attention to how the learning goals system works.

## THE LEARNING GOALS SYSTEM

Using the learning goals system will help you to learn the material more easily. Key aspects of the learning goals system are the learning goals, chapter maps, Review and Reflect sections, and Reach Your Learning Goals sections, which are all linked together.

At the beginning of each chapter, you will see a page that includes both a chapter outline and three to six learning goals that preview the chapter's main themes and underscore the most important ideas in the chapter. Then, at the beginning of each major section of a chapter, you will see a minichapter map that provides you with a visual organization of the key topics you are about to read in the section. At the end of each section is a Review and Reflect section, which restates the learning goal for the section and poses review questions related to the minichapter map as well as a question that encourages you to think critically about a topic related to the text you just read. At the end of the chapter, you will come to a section titled Reach Your Learning Goals. This includes an overall chapter map that visually organizes all of the main headings, a restatement of the chapter's learning goals, and a summary of the chapter's content that is directly linked to the chapter outline at the beginning of the chapter and the review questions asked in the Review and Reflect sections within the chapter. The summary essentially answers the questions asked in the chapter Review sections.

## CHAPTER OUTLINE AND LEARNING GOALS

*We reach backward to our parents and forward to our children and through their children to a future we will never see, but about which we need to care.*

—CARL JUNG  
Swiss Psychoanalyst, 20th Century

CHAPTER OUTLINE	LEARNING GOALS
<b>CHILD DEVELOPMENT—YESTERDAY AND TODAY</b> Historical Views of Childhood The Modern Study of Child Development Improving the Lives of Today's Children Resilience, Social Policy, and Children's Development	<b>1</b> Discuss the past and the present in the field of child development
<b>DEVELOPMENTAL PROCESSES AND PERIODS</b> Biological, Cognitive, and Socioemotional Processes Periods of Development	<b>2</b> Identify the most important developmental processes and periods
<b>DEVELOPMENTAL ISSUES</b> Nature and Nurture Continuity and Discontinuity Early and Later Experience Evaluating the Developmental Issues	<b>3</b> Describe three key developmental issues
<b>CAREERS IN CHILD DEVELOPMENT</b> Education and Research Clinical and Counseling Medical, Nursing, and Physical Development Families and Relationships	<b>4</b> Summarize the career paths that involve working with children

## MINI-CHAPTER MAP

### 1 CHILD DEVELOPMENT—YESTERDAY AND TODAY

Historical Views of Childhood

The Modern Study of Child Development

Improving the Lives of Today's Children

Resilience, Social Policy, and Children's Development

What do we mean when we speak of an individual's development? **Development** is the pattern of change that begins at conception and continues through the life span. Most development involves growth, although it also includes decay. Anywhere you turn today, the development of children captures public attention. Historically, though, interest in the development of children has been uneven.

#### Historical Views of Childhood

Childhood has become such a distinct period that it is hard to imagine that it was not always thought of as markedly different from adulthood. However, in medieval Europe, laws generally did not distinguish between child and adult offenses. After analyzing samples of art along with available publications, historian Philippe Ariès (1962) concluded that European societies prior to 1600 did not give any special status to children (see figure 1.1).

Were children actually treated as miniature adults with no special status in medieval Europe? Ariès primarily sampled aristocratic, idealized subjects, which might have been misleading. Childhood probably was recognized as a distinct phase of life more than Ariès believed, but his analysis helped to highlight cultural differences in how children are viewed and treated.

Throughout history, philosophers have speculated at length about the nature of children and how they should be reared. The ancient Egyptians, Greeks, and Romans held rich conceptions of children's development. More recently in European history, three influential philosophical views portrayed children in terms of original sin, tabula rasa, and innate goodness:

- In the **original sin view**, especially advocated during the Middle Ages, children were perceived as being born into the world as evil beings. The goal of child rearing was to provide salvation, to remove sin from the child's life.
- Toward the end of the seventeenth century, the **tabula rasa view** was proposed by English philosopher John Locke. He argued that children are not innately bad but, instead, are like a "blank tablet." Locke believed that childhood experiences are important in determining adult characteristics. He advised parents to spend time with their children and to help them become contributing members of society.
- In the eighteenth century, the **innate goodness view** was presented by Swiss-born French philosopher Jean-Jacques Rousseau. He stressed that children are inherently good. Because children are basically good, said Rousseau, they should be permitted to grow naturally, with little parental monitoring or constraint.

Today, the Western view of children holds that childhood is a highly eventful and unique period of life that lays an important foundation for the adult years and is markedly different from them. Most current approaches to childhood identify distinct periods in which children master specific skills and tasks that prepare them for adulthood. Childhood is no longer seen as an inconvenient waiting period during which adults must suffer the incompetencies of the young. Instead, we protect children from the stresses and responsibilities of adult work through strict child



**FIGURE 1.1** Historical Perception of Children. European paintings centuries ago often depicted children as miniature adults. Do these artists' creations indicate that earlier Europeans did not view childhood as a distinct period?

**development** The pattern of change that begins at conception and continues through the life span.

**original sin view** Advocated during the Middle Ages, the belief that children were born into the world as evil beings and were basically bad.

**tabula rasa view** The idea, proposed by John Locke, that children are like a "blank tablet."

**innate goodness view** The idea, presented by Swiss-born philosopher Jean-Jacques Rousseau, that children are inherently good.

**biological processes** Changes in an individual's body.

**cognitive processes** Changes in an individual's thought, intelligence, and language.

## REVIEW AND REFLECT

Review and Reflect • LEARNING GOAL 1

**1 Discuss the past and the present in the field of child development**

**Review**

- What is development? How has childhood been perceived through history?
- What are the key characteristics of the modern study of child development?
- What are some contemporary concerns about today's children?
- What is social policy, and what is its status in regard to America's children?

**Reflect**

- Imagine what your development as a child would have been like in a culture that offered fewer or distinctly different choices from your own. How might your development have been different if your family had been significantly richer or poorer than it was?

2 DEVELOPMENTAL PROCESSES AND PERIODS

Biological, Cognitive, and Socioemotional Processes

Periods of Development

Each of us develops in certain ways like all other individuals, like some other individuals, and like no other individuals. Most of the time, our attention is directed to a person's uniqueness, but psychologists who study development are drawn to our shared characteristics as well as what makes us unique. As humans, we all have traveled some common paths. Each of us—Leonardo da Vinci, Joan of Arc, George Washington, Martin Luther King, Jr., and you—walked at about the age of 1, engaged in fantasy play as a young child, and became more independent as a youth. What shapes this common path of human development, and what are its milestones?

#### Biological, Cognitive, and Socioemotional Processes

The pattern of human development is created by the interplay of several processes—biological, cognitive, and socioemotional. **Biological processes** produce changes in an individual's body. Genes inherited from parents, the development of the brain, height and weight gains, motor skills, and the hormonal changes of puberty all reflect the role of biological processes in development.

**Cognitive processes** refer to changes in an individual's thought, intelligence, and language. The tasks of watching a mobile swinging above a crib, putting together a two-word sentence, memorizing a poem, solving a math problem, and imagining what it would be like to be a movie star all involve cognitive processes.




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## REACH YOUR LEARNING GOALS

### REACH YOUR LEARNING GOALS

1 CHILD DEVELOPMENT—YESTERDAY AND TODAY

2 DEVELOPMENTAL PROCESSES AND PERIODS

Historical Views of Childhood

The Modern Study of Child Development

Improving the Lives of Today's Children

Resilience, Social Policy, and Children's Development

INTRODUCTION

3 DEVELOPMENTAL ISSUES

4 CAREERS IN CHILD DEVELOPMENT

Nature and Nurture

Continuity and Discontinuity

Early and Later Experience

Evaluating the Developmental Issues

Education and Research

Clinical and Counseling

Medical, Nursing, and Physical Development

Families and Relationships

### SUMMARY

**1 Discuss the past and the present in the field of child development**

- Development is the pattern of movement or change that occurs throughout the life span. The history of interest in children is long and rich. Prior to the nineteenth century, philosophical views of childhood were prominent, including the notions of original sin, tabula rasa, and innate goodness.
- Today, we conceive of childhood as an important time of development: The modern era of studying children spans a little more than a century, an era in which the study of child development has become a sophisticated science. Methodological advances in observation as well as the introduction of experimentation and the development of major theories characterize the achievements of the modern era.
- Five important contemporary concerns in children's development are health and well-being; families and parenting; education; the sociocultural contexts of culture, ethnicity, and socioeconomic status; and gender.
- Social policy is a government's course of action designed to promote the welfare of its citizens. The poor conditions of life for a significant percentage of U.S. children and the lack of attention to prevention point to the need for revised social policies.

**2 Identify the most important developmental processes and periods**

- Development is influenced by an interplay of biological, cognitive, and socioemotional processes.
- Development is commonly divided into the following periods from conception through adolescence: prenatal, infancy, early childhood, middle and late childhood, and adolescence.

**3 Describe three key developmental issues**

- The nature-nurture issue focuses on the extent to which development is mainly influenced by nature (biological inheritance) or nurture (experience).
- Some developmentalists describe development as continuous (gradual, cumulative change); others describe it as discontinuous (a sequence of abrupt stages).
- The early-later experience issue focuses on whether early experiences (especially in infancy) are more important in development than later experiences.
- Most developmentalists recognize that extreme positions on the nature-nurture, continuity-discontinuity, and early-later experience issues are unwise. Despite this consensus, these issues continue to be spiritedly debated.

**4 Summarize the career paths that involve working with children**

- Education and research careers include college/university professor, researcher, elementary or secondary teacher, exceptional children teacher, early childhood educator, preschool/kindergarten teacher, family and consumer science educator, educational psychologist, and school psychologist.
- Clinical and counseling careers include clinical psychologist, psychiatrist, counseling psychologist, school counselor, career counselor, social worker, and drug counselor.
- Medical, nursing, and physical development careers include obstetrician/gynecologist, pediatrician, neonatal nurse, nurse-midwife, pediatric nurse, audiologist, speech therapist, and genetic counselor.
- Families and relationships careers include child welfare worker, child life specialist, and marriage and family therapist.

## OTHER LEARNING SYSTEM FEATURES

### IMAGES OF CHILD DEVELOPMENT

Each chapter opens with a high-interest story that is linked to the chapter's content.

**The Stories of Jeffrey Dahmer and Alice Walker**



*Jeffrey Dahmer: What are some possible causes of the brutal acts of violence that he committed?*



*Alice Walker: What might be some reasons that she overcame trauma in her childhood to develop in positive ways?*

Jeffrey Dahmer had a troubled childhood. His parents constantly bickered before they divorced, his mother had emotional problems and doted on his younger brother, and he felt that his father neglected him. When he was 8 years old, Jeffrey was sexually abused by an older boy. But most individuals who suffer through such childhood pains never go on to commit Dahmer's grisly crimes.

In 1991, a man in handcuffs dashed out of Dahmer's bizarrely cluttered apartment in a tough Milwaukee neighborhood, called the police, and stammered that Dahmer had tried to kill him. At least 17 other victims did not get away.

Alice Walker was born in 1944. She was the eighth child of Georgia sharecroppers who earned \$300 a year. When Walker was 8, her brother accidentally shot her in the left eye with a BB gun. By the time her parents got her to the hospital a week later (they had no car), she was blind in that eye and it had developed a disfiguring layer of scar tissue.

Despite the counts against her, Alice Walker went on to become an essayist, a poet, and an award-winning novelist. She won the Pulitzer Prize for her book *The Color Purple*. Like her characters, especially the women, Alice Walker overcame pain and anger to celebrate the human spirit. Walker writes about people who "make it, who come out of nothing. People who triumph."

What leads one child to grow up and commit brutal acts of violence and another to turn poverty and trauma into a rich literary harvest? How can we explain how one child picks up the pieces of a life shattered by tragedy, while another becomes unshingled by life's stress? Why is it that some children are whirlwinds—full of energy, successful in school, and able to get along well with their peers—while others stay on the sidelines, mere spectators of life? If you ever have wondered about why children turn out the way they do, you have asked yourself the central questions we will explore in this book.

Why study children? Perhaps you are or will be a parent or teacher, and responsibility for children is or will be a part of your everyday life. The more you learn about children, the better you can guide them. Perhaps you hope to gain an understanding of your own history—as an infant, as a child, and as an adolescent. Perhaps you accidentally came across the course description and found it intriguing. Whatever your reasons, you will discover that the study of child development is provocative, intriguing, and informative.

## RESEARCH IN CHILD DEVELOPMENT INTERLUDE

One Research in Child Development interlude appears in each chapter. The research interludes each describe a research study or program. They are designed to acquaint you with the methods used to study child development.

90 Chapter 3 Biological Beginnings

babies will have life-threatening and costly problems, such as extremely low birth weight (Appelman & Furman, 2005).

The creation of families by means of the new reproductive technologies raises important questions about the psychological consequences for children. To read about a recent study that addresses these consequences, see the Research in Child Development interlude that follows.

**RESEARCH IN CHILD DEVELOPMENT**

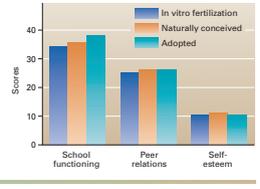
**In Vitro Fertilization and Developmental Outcomes in Early Adolescence**

A longitudinal study examined 34 in vitro fertilization families, 49 adoptive families, and 38 families with a naturally conceived child (Golombok, MacCallum, & Goodman, 2001). Each type of family included a similar portion of boys and girls. Also, the age of the young adolescents did not differ according to family type (their mean age was 11 years, 11 months).

Children's socioemotional development was assessed by (1) interviewing the mother and obtaining detailed descriptions of any problems the child might have, (2) administering a Strengths and Difficulties questionnaire to the child's mother and teacher, and (3) administering the Social Adjustment Inventory for Children and Adolescents, which examines functioning in school, peer relationships, and self-esteem.

No significant differences between the children from the in vitro fertilization, adoptive, and naturally conceiving families were found. The results from the Social Adjustment Inventory for Children and Adolescents are shown in figure 3.9. Thus, this study, as well as others (Hahn & DiPietro, 2001), support the idea that "test-tube" babies function well.

**FIGURE 3.9** Socioemotional Development at Adolescence of Children in Three Family Types: In Vitro Fertilization, Naturally Conceived, and Adopted. In this study, there were no significant differences in socioemotional development at the beginning of adolescence in terms of school functioning, peer relations, and self-esteem (Golombok, MacCallum, & Goodman, 2001). The mean scores shown for the different measures are all in the normal range of functioning.



Measure	In vitro fertilization	Naturally conceived	Adopted
School functioning	~35	~35	~35
Peer relations	~25	~25	~25
Self-esteem	~10	~10	~10

## CARING FOR CHILDREN INTERLUDE

One Caring for Children interlude appears in each chapter. These interludes focus on applications for improving the lives of children.

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and elected officials, the nation's economic strengths and weaknesses, and partisan politics all influence the policy agenda.

When concern about broad social issues is widespread, comprehensive social policies often result. Child labor laws were established in the early twentieth century to protect not only children but also jobs for adults; federal child-care funding during World War II was justified by the need for women laborers in factories; and Head Start and other War on Poverty programs in the 1960s were implemented to decrease intergenerational poverty.

Out of concern that policymakers are doing too little to protect the well-being of children, researchers increasingly are undertaking studies that they hope will lead to wise and effective decision making about social policy (Benson & others, 2006; Macoby, 2001; Selman & Dray, 2006). When more than 17 percent of all children and almost half of all ethnic minority children are being raised in poverty, when between 40 and 50 percent of all children born today can expect to spend at least five years in a single-parent home, when children and young adolescents are giving birth, when the use and abuse of drugs are widespread, and when the specter of AIDS persists, our nation needs revised social policy (Mahoney, Larson, & Eccles, 2005; Pittman & others, 2003). To read more about improving the lives of children through social policies, see the Caring for Children interlude that follows.

**CARING FOR CHILDREN**

**Improving Family Policy**

In the United States, the national government, state governments, and city governments all play a role in influencing the well-being of children (Liner & others, 2004). At the national and state levels, policymakers for decades have debated whether helping poor parents ends up helping their children as well. Researchers are providing some answers by examining the effects of specific policies.

For example, the Minnesota Family Investment Program (MFIIP) was designed in the 1990s primarily to affect the behavior of adults—specifically, to move adults off the welfare rolls and into paid employment. A key element of the program was that it guaranteed that adults who participated in the program would receive more money if they worked than if they did not. When the adults' income rose, how did that affect their children? A study of the effects of MFIIP found that increases in the incomes of working poor parents were linked with benefits for their children (Genietain & Miller, 2002). The children's achievement in school improved, and their behavior problems decreased.

Developmental psychologists and other researchers have examined the effects of many other government policies, and they have offered many suggestions for improving those policies. One frequent criticism is that the family policies of the United States are overwhelmingly treatment oriented: only those families and individuals who already have problems are eligible. Few preventive programs are available. For example, families in which the children are on the verge of being placed in foster care are eligible, and often required, to receive counseling families in which problems are brewing but are not yet full-blown usually cannot qualify for public services.

## CAREERS IN CHILD DEVELOPMENT PROFILE

Every chapter has at least one Careers in Child Development profile featuring a person working in a child development field related to the chapter's content.

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**CAREERS in CHILD DEVELOPMENT**

**Valerie Pang**  
Professor of Teacher Education

Valerie Pang is a professor of teacher education at San Diego State University and formerly an elementary school teacher. Like Dr. Pang, many professors of teacher education have a doctorate and have experience in teaching at the elementary or secondary school level.

Dr. Pang earned a doctorate at the University of Washington. She has received a Multicultural Educator Award from the National Association of Multicultural Education for her work on culture and equity. She also was given the Distinguished Scholar Award from the American Educational Research Association's Committee on the Role and Status of Minorities in Education.

Pang (2005) believes that competent teachers need to:

- Recognize the power and complexity of cultural influences on students.
- Be sensitive to whether their expectations for students are culturally biased.
- Evaluate whether they are doing a good job of seeing life from the perspective of students who come from different cultures.



Valerie Pang is a professor in the School of Teacher Education of San Diego State University and formerly an elementary school teacher. Valerie believes it is important for teachers to create a caring classroom that affirms all students.

**College/University Professor** Courses in child development are taught in many programs and schools in colleges and universities, including psychology, education, nursing, child and family studies, social work, and medicine. The work that college professors do includes teaching courses either at the undergraduate or graduate level (or both), conducting research in a specific area, advising students and/or directing their research, and serving on college or university committees. Some college instructors do not conduct research as part of their job but instead focus mainly on teaching. Research is most likely to be part of the job description at universities with master's and Ph.D. programs.

A Ph.D. or master's degree almost always is required to teach in some area of child development in a college or university. Obtaining a doctoral degree usually takes four to six years of graduate work. A master's degree requires approximately two years of graduate work. The training involves taking graduate courses, learning to conduct research, and attending and presenting papers at professional meetings. Many graduate students work as teaching or research assistants for professors in an apprenticeship relationship that helps them to become competent teachers and researchers.

If you are interested in becoming a college or university professor, you might want to make an appointment with your instructor in this class on child development to learn more about his or her profession and work. To read about the work of one college professor, see the Careers in Child Development interlude.

**Researcher** Some individuals in the field of child development work in research positions. In most instances, they have either a master's or Ph.D. in some area of child development. The researchers might work at a university, in some cases in a university professor's research program, in government at such agencies as the National Institute of Mental Health, or in private industry. Individuals who have full-time research positions in child development generate innovative research ideas, plan studies, carry out the research by collecting data, analyze the data, and then interpret it. Then, they will usually attempt to publish the research in a scientific journal. A researcher often works in a collaborative manner with other researchers on a project and may present the research at scientific meetings. One researcher might spend much of his or her time in a laboratory while another researcher might work out in the field, such as in schools, hospitals, and so on.

## KEY TERMS AND GLOSSARY

Key terms appear in boldface. Their definitions appear in the margin near where they are introduced.

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issues in the study of children's development include nature and nurture, continuity and discontinuity, and early and later experience.

### Nature and Nurture

The **nature-nurture issue** involves the debate about whether development is primarily influenced by nature or by nurture (Kagan & Fox, 2006; Kagan & Herschkowitz, 2005; Lippa, 2005). *Nature* refers to an organism's biological inheritance, *nurture* to its environmental experiences. Almost no one today argues that development can be explained by nature alone or by nurture alone. But some ("nature" proponents) claim that the most important influence on development is biological inheritance, and others ("nurture" proponents) claim that environmental experiences are the most important influence.

According to the nature proponents, just as a sunflower grows in an orderly way—unless it is deflected by an unfriendly environment—so does a person. The range of environments can be vast, but a genetic blueprint produces commonalities in growth and development. We walk before we talk, speak one word before two words, grow rapidly in infancy and less so in early childhood, and experience a rush of sexual hormones in puberty. Extreme environments—those that are psychologically barren or hostile—can stunt development, but nature proponents emphasize the influence of tendencies that are genetically wired into humans.

By contrast, other psychologists emphasize the importance of nurture, or environmental experiences, to development. Experiences run the gamut from the individual's biological environment (nutrition, medical care, drugs, and physical accidents) to the social environment (family, peers, schools, community, media, and culture). For example, a child's diet can affect how tall the child grows and even how effectively the child can think and solve problems. Despite their genetic wiring, a child born and raised in a poor village in Bangladesh and a child in the suburbs of Denver are likely to have different skills, different ways of thinking about the world, and different ways of relating to people.

### Continuity and Discontinuity

Think about your own development for a moment. Did you become the person you are gradually, like the seedling that slowly, cumulatively grows into a giant oak? Or did you experience sudden, distinct changes, like the caterpillar that changes into a butterfly (see Figure 1.7)?

The **continuity-discontinuity issue** focuses on the extent to which development involves gradual, cumulative change (continuity) or distinct stages (discontinuity). For the most part, developmentalists who emphasize nurture usually describe development as a gradual, continuous process, like the seedling's growth into an oak. Those who emphasize nature often describe development as a series of distinct stages, like the change from caterpillar to butterfly.

Consider continuity first. As the oak grows from seedling to giant oak, it becomes more oak—its development is continuous. Similarly, a child's first word, though seemingly an abrupt, discontinuous event, is actually the result of weeks and months of growth and practice. Puberty, another seemingly abrupt, discontinuous occurrence, is actually a gradual process occurring over several years.

Viewed in terms of discontinuity, each person is described as passing through a sequence of stages in which change is qualitatively rather than quantitatively different. As the caterpillar changes to a butterfly, it is not more caterpillar, it is a different kind of organism—its development is discontinuous. Similarly (as discussed in chapters 2 and 7), at some point a child moves from not being able to think abstractly about the world to being able to do so. This is a qualitative, discontinuous change in development, not a quantitative, continuous change.

**FIGURE 1.7** Continuity and Discontinuity in Development. Is human development more like that of a seedling gradually growing into a giant oak or more like that of a caterpillar suddenly becoming a butterfly?

**nature-nurture issue** Nature refers to an organism's biological inheritance, nurture to environmental influences. The "nature" proponents claim biological inheritance is the most important influence on development; the "nurture" proponents claim that environmental experiences are the most important.

**continuity-discontinuity issue** The issue regarding the extent to which development involves gradual, cumulative change (continuity) or distinct stages (discontinuity).

## CRITICAL THINKING AND CONTENT QUESTIONS IN PHOTOGRAPH CAPTIONS

Most photographs have a caption that ends with a critical thinking or knowledge question in italics to stimulate further thought about a topic.

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### Early and Later Experience

The **early-later experience issue** focuses on the degree to which early experiences (especially in infancy) or later experiences are the key determinants of the child's development. That is, if infants experience harmful circumstances, can those experiences be overcome by later, positive ones? Or are the early experiences so critical—possibly because they are the infant's first, prototypical experiences—that they cannot be overridden by a later, better environment? To those who emphasize early experiences, life is an unbroken trail on which a psychological quality can be traced back to its origin (Kagan, 1992, 2000). In contrast, to those who emphasize later experiences, development is like a river, continually ebbing and flowing.

The early-later experience issue has a long history and continues to be hotly debated among developmentalists (Caspi, 2006; Gottlieb, 2004; Gottlieb, Wahlsten, & Lickliter, 2006; Thompson, 2006). Plato was sure that infants who were rocked frequently become better athletes. Nineteenth-century New England ministers told parents in Sunday afternoon sermons that the way they handled their infants would determine their children's later character. Some developmentalists argue that, unless infants experience warm, nurturing care during the first year or so of life, their development will never quite be optimal (Carlson, Sroufe, & Egeland, 2004; Sroufe & others, 2005).

In contrast, later-experience advocates argue that children are malleable throughout development and that later sensitive caregiving is just as important as earlier sensitive caregiving. A number of life-span developmentalists (developmentalists who focus on the entire life span) stress that too little attention has been given to later experiences in development (Bates, 2003). They accept that early experiences are important contributors to development, but no more important than later experiences. Jerome Kagan (2000) points out that even children who show the qualities of an inhibited temperament, which is linked to heredity, have the capacity to change their behavior. In his research, almost one-third of a group of children who had an inhibited temperament at 2 years of age were not unusually shy or fearful when they were 4 years of age (Kagan & Sridaman, 1991).

People in Western cultures, especially those influenced by Freudian theory, have tended to support the idea that early experiences are more important than later experiences (Chan, 1963; Lamb & Sternberg, 1992). The majority of people in the world do not share this belief. For example, people in many Asian countries believe that experiences occurring after about 6 to 7 years of age are more important to development than are earlier experiences. This stance stems from the long-standing belief in Eastern cultures that children's reasoning skills begin to develop in important ways during middle childhood.

*What is the nature of the early and later experience issue?*

## KEY TERMS AND GLOSSARY

Key terms are alphabetically listed, defined, and page-referenced in a glossary at the end of the book.

GLOSSARY

**A**

**Ab error** The Piagetian object-permanence concept in which an infant progressing into substage 4 makes frequent mistakes, selecting the familiar hiding place (A) rather than the new hiding place (B).

**accommodation** (culture) Occurs when children adjust their knowledge to fit new information and experience.

**accommodation** Piagetian concept of adjusting schemes to fit new information and experiences.

**active (niche-picking) genotype-environment correlations** Correlations that exist when children seek out environments they find compatible and stimulating.

**adolescence** The developmental period of transition from childhood to early adulthood, entered at approximately 10 to 12 years of age and ending at 18 to 22 years of age.

**adolescent egocentrism** The heightened self-consciousness of adolescents, which is reflected in adolescents' beliefs that others are as interested in them as they are in themselves, and in adolescents' sense of personal uniqueness and invincibility.

**adoption study** A study in which investigators seek to discover whether, in behavior and psychological characteristics, adopted children are more like their adoptive parents, who provided a home environment, or more like their biological parents, who contributed their heredity. Another form of the adoption study is to compare adoptive and biological siblings.

**affordances** Opportunities for interaction offered by objects that are necessary to perform activities.

**altruism** An unselfish interest in helping another person.

**ambion** The life-support system that is a bag or envelope that contains a clear fluid in which the developing embryo floats.

**androgens** The main class of male sex hormones.

**androgyny** The presence of masculine and feminine characteristics in the same person.

**anger cry** A cry similar to the basic cry but with more excess air forced through the vocal cords (associated with exasperation or rage).

**animism** A facet of preoperational thought, the belief that inanimate objects have "like-like" qualities and are capable of action.

**anorexia nervosa** An eating disorder that involves the relentless pursuit of thinness through starvation.

**Appar Scale** A widely used method to assess the health of newborns at one and five minutes after birth. The Appar Scale evaluates infants' heart rate, respiratory effort, muscle tone, body color, and reflex irritability.

**aphasia** A loss or impairment of language ability caused by brain damage.

**assimilation** (Piaget) Occurs when children incorporate new information into their existing knowledge (schemes).

**assimilation** (culture) The absorption of ethnic minority groups into the dominant group, which often means the loss of some or virtually all of the behavior and values of the ethnic minority group.

**associative play** Play that involves social interaction with little or no organization.

**attachment** A close emotional bond between two people.

**attention** Concentrating and focusing mental resources.

**attention deficit hyperactivity disorder (ADHD)** A disability in which children consistently show one or more of the following characteristics: (1) inattention, (2) hyperactivity, and (3) impulsivity.

**attributions** Attributions are explanations people give for behavior; one way to classify these explanations is whether they are internal or external.

**authoritarian parenting** This is a restrictive, punitive style in which the parent exhorts the child to follow the parent's directions and to respect their work and effort. Firm limits and controls are placed on the child, and little verbal exchange is allowed. This style is associated with children's socially incompetent behavior.

**authoritative parenting** This style encourages children to be independent but still places limits and controls on their actions. Extensive verbal give-and-take is allowed, and parents are warm and nurturant toward the child. This style is associated with children's socially competent behavior.

**automaticity** The ability to process information with little or no effort.

**autonomous morality** The second stage of moral development in Piaget's theory, displayed by older children (about 10 years of age and older). The child becomes aware that rules and laws are created by people and that, in judging an action, one should consider the actor's intentions as well as the consequences.

**average children** Children who receive an average number of both positive and negative nominations from their peers.

**B**

**basal metabolism rate (BMR)** The minimum amount of energy an individual uses in a resting state.

**basic cry** A rhythmic pattern usually consisting of a cry, a brief silence, a shorter respiratory whistle that is higher pitched than the main cry, and then a brief rest before the next cry.

**basic skills and phonics approach** An approach that emphasizes that reading instruction should teach phonics and its basic rules for translating written symbols into sounds.

**Bayley Scales of Infant Development** Developed by Nancy Bayley, these scales are widely used in assessing infant development. The current version has three parts: a Mental Scale, a Motor Scale, and the Infant Behavior Profile.

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## KEY TERMS AND GLOSSARY

Key terms also are listed with page references at the end of each chapter.

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### KEY TERMS

development 7	ethnic identity 12	socioemotional processes 17	nature-nurture issue 19
original sin view 7	socioeconomic status (SES) 13	prenatal period 17	continuity-discontinuity issue 19
tabula rasa view 7	gender 13	infancy 17	early-later experience issue 20
innate goodness view 7	social policy 14	early childhood 17	
genetic epistemology 9	biological processes 16	middle and late childhood 17	
culture 12	cognitive processes 16	adolescence 17	
ethnicity 12			

## QUOTATIONS

These appear at the beginning of each chapter and occasionally in the margins to stimulate further thought about a topic.

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*Al! What would the world be to us if the children were no more? We should dread the desert behind us Worse than the dark before.*

—HENRY WADSWORTH LONGFELLOW  
*American Poet, 19th Century*

labor laws. We handle their crimes in a special system of juvenile justice. We also have provisions for helping children when families fail. In short, we now value childhood as a special time of growth and change, and we invest great resources in caring for and educating children.

### The Modern Study of Child Development

The modern era of studying children began with some important developments in the late 1800s (Cairns, 1983, 1998, 2006). Since then the study of child development has evolved into a sophisticated science with major theories as well as elegant techniques and methods of study that help organize our thinking about children's development (Lerner, 2002, 2006; Thomas, 2005). This new era began during the last quarter of the nineteenth century when a major shift took place—from a strictly philosophical approach to human psychology to an approach that includes systematic observation and experimentation.

## KEY PEOPLE

The most important theorists and researchers discussed in the chapter are listed and page-referenced at the end of the chapter.

KEY TERMS			
development 7	ethnic identity 12	socioemotional processes 17	nature-nurture issue 19
original sin view 7	socioeconomic status (SES) 13	prenatal period 17	continuity-discontinuity issue 19
tabula rasa view 7	gender 13	infancy 17	early-later experience issue 20
innate goodness view 7	social policy 14	early childhood 17	
genetic epistemology 9	biological processes 16	middle and late childhood 17	
culture 12	cognitive processes 16	adolescence 17	
ethnicity 12			
KEY PEOPLE			
Phillippe Ariès 7	G. Stanley Hall 8	Sigmund Freud 9	Jean Piaget 9
John Locke 7	Arnold Gesell 8	John Watson 9	Jeanne Brooks-Gunn 15
Jean-Jacques Rousseau 7	Charles Darwin 8	James Mark Baldwin 9	Jerome Kagan 20

## WEB LINKS

Web icons appear a number of times in each chapter. They direct you to the book's website, where you will find connecting links that provide additional information on the topic discussed in the text. The labels under the Web icon appear as Web links on the text's Online Learning Center under the heading *More Resources* for each chapter ([www.mhhe.com/santrockcd11](http://www.mhhe.com/santrockcd11)).



degree. The training involves taking a wide range of courses with a major or concentration in education as well as completing a supervised practice-teaching internship.

**Exceptional Children (Special Education) Teacher** A teacher of exceptional children spends concentrated time with individual children who have a disability or are gifted. Among the children a teacher of exceptional children might work with are children with learning disabilities, ADHD (attention deficit hyperactivity disorder), mental retardation, or a physical disability such as cerebral palsy. Some of this work will usually be done outside of the student's regular classroom, some of it will be carried out when the student is in the regular classroom. The exceptional children teacher works closely with the student's regular classroom teacher and parents to create the best educational program for the student.

Family and Consumer Science Education  
Educational Psychology  
School Psychology

## E-LEARNING TOOLS

**Taking It to the Net**, which appears at the end of each chapter, asks questions that you can answer by exploring the Internet. By going to the text's Online Learning Center and looking in the *Quizzes* section for a given chapter for Taking It to the Net exercises, you will be able to connect to other websites, where you can find information that will help you think more deeply about the question posed.

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### E-LEARNING TOOLS

To help you master the material in this chapter, visit the Online Learning Center for *Child Development*, eleventh edition ([www.mhhe.com/santrockcd11](http://www.mhhe.com/santrockcd11)), where you'll find these additional resources:

**Taking It to the Net**

- George is teaching fourth grade. He wants his students to learn about the difficulties and challenges of being a child in colonial America. What was life like for children in the early history of our country?
- Janice thinks that better and stricter gun control laws will help decrease violent crime among children. Her husband, Elliott, disagrees. Janice found a March, 2000, Department of Justice study that provides support for her argument. What facts in the report can she point to in order to convince Elliott?
- For his political science class, Darren has to track federal funding appropriations in the most recent Congress for any issue of his choice. He has chosen children's issues. What happened with funding for the No Child Left Behind Act in congressional appropriations in the first half of the 109th Congress?

**Nursing, Parenting, and Teaching Exercises**

Build your decision-making skills by trying your hand at the scenarios on the Online Learning Center.

**Video Clips**

The Online Learning Center includes the following videos for this chapter:

- Career in Child Development  
Dr. Lerner gives a humorous account of a decision to major in psychology in college.
- Career in Developmental Psychology  
Dr. Weinraub, one of the leading researchers on the NICHD Early Childcare Study, describes how she became interested in developmental psychology.

## VIDEO CLIPS

At the end of each chapter, you will find a list of short video clips that illustrate key topics from the chapter. These video clips are available on the Online Learning Center.

## NURSING, PARENTING, AND TEACHING EXERCISES

At the end of each chapter, you are directed to the text's Online Learning Center, where nursing, parenting, and teaching exercises will give you an opportunity to practice your decision-making skills.