JOHN W. SANTROCK

CHILD DEVELOPMENT

Fourteenth Edition

JOHN W. SANTROCK
University of Texas at Dallas

Mc Graw Hill Education

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With special appreciation to
my wife, Mary Jo; my children, Tracy and Jennifer;
and my grandchildren, Jordan, Alex, and Luke

about the author

John W. Santrock

John Santrock received his Ph.D. from the University of Minnesota in 1973. He taught at the University of Charleston and the University of Georgia before joining the program in Psychology and Human Development at the University of Texas at Dallas, where he currently teaches a number of undergraduate courses.

John Santrock (center) teaching an undergraduate psychology course.

John has been a member of the editorial boards of *Child Development* and *Developmental Psychology*. His research on father custody is widely cited and used in expert witness testimony to promote flexibility and alternative considerations in custody disputes. John also has authored these exceptional McGraw-Hill texts: *Psychology* (7th edition), *Children* (12th edition), *Adolescence* (14th edition), *Life-Span Development* (14th edition), and *Educational Psychology* (5th edition).

For many years John was involved in tennis as a player, a teaching professional, and a coach of professional tennis players. At the University of Miami (Florida), the tennis team on which he played still holds the NCAA Division I record for most consecutive wins (137) in any sport. His wife, Mary Jo, has a master's degree in special education and has worked as a teacher and a Realtor. He has two daughters—Tracy, who is a Realtor, and Jennifer, who is a medical sales specialist. He has one granddaughter, Jordan, age 21, currently an undergraduate student at Southern Methodist University, and two grandsons, Alex, age 8, and Luke, age 7. In the last decade, John also has spent time painting expressionist art.

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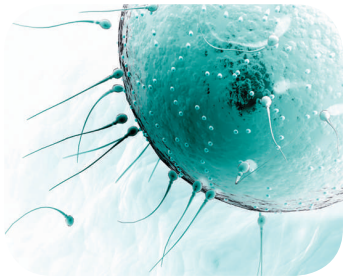

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expert consultants

Child development has become an enormous, complex field, and no single author, or even several authors, can possibly keep up with all of the rapidly changing content in the many different areas of child development. To solve this problem, author John Santrock sought the input of leading experts about content in a number of areas of child development. The experts provided detailed evaluations and recommendations in their area(s) of expertise.

The following individuals are among those who served as expert consultants for one or more of the previous thirteen editions of this text:

Claire Kopp, *University of California—Los Angeles*
Ross Thompson, *University of California—Davis*
Joan Grusec, *University of Toronto*
Hill Goldsmith, *University of Wisconsin*
Deanna Kuhn, *Columbia University*
Robert J. Sternberg, *University of Oklahoma*
Dante Cicchetti, *University of Minnesota*
Susan Harter, *University of Denver*
Scott Johnson, *University of California—Los Angeles*
Diane Hughes, *New York University*
Kirby Deater-Deckhard, *Virginia Tech University*
Tiffany Field, *University of Miami (Florida)*
Herb Pick, *University of Minnesota*
Cynthia Garcia Coll, *Brown University*
Robert Siegler, *Carnegie Mellon University*
Mary Gauvain, *University of California—Riverside*
Steven Ceci, *Cornell University*
Celia Brownell, *University of Pittsburgh*
Michael Lamb, *University of London*
Carolyn Saarni, *Sonoma State University*
Jeffrey Lachman, *Tulane University*
W. Andrew Collins, *University of Minnesota*
Catherine McBride-Chang, *The Chinese University of Hong Kong*
Daniel Hart, *Rutgers University*
Janet Spence, *University of Texas—Austin*
Lawrence Walker, *University of British Columbia*
Dale Schunk, *University of North Carolina—Greensboro*

Following are the biographies of the expert consultants for the fourteenth edition of this text, who (like the expert consultants for the previous editions) literally represent a Who's Who *in the field of child development.*

Rachel Keen Dr. Rachel Keen is widely recognized as one of the world's leading experts on children's motor and perceptual development. Formerly Rachel Keen Clifton, she currently is a professor of psychology at the University of Virginia and previously held that position at the University of Massachusetts–Amherst. Dr. Keen obtained her Ph.D. at the Institute of Child Development at the University of Minnesota. She is a former president of the International Society on Infant Studies and recently received the Distinguished Scientist Award from the Society for Research in Child Development. Dr. Keen has been awarded research grants from the National Institutes of Health, the National Science Foundation, and the March of Dimes. She held a Research Science Award from the National Institute of Mental Health for 20 years. Dr. Keen has served on the editorial boards of *Developmental Psychology, Child Development, Infant Behavior and Development,* and the *Journal of Experimental Child Psychology.* She also is a former editor of the *Monographs of the Society for Child Development.*

". . . the coverage of materials and writing style remain at the same high level as in previous editions of this text. . . . Every textbook author must be highly selective, but John Santrock has done an excellent job of using classical studies to lay the groundwork and recent research to keep the presentation cutting-edge. Strengths include Santrock's careful reading and assessment of the literature, a clear and friendly writing style, openness to new ideas and ways of presenting material, use of good figures to illustrate points, and the 'connections' feature to help students relate material across chapters. . . . the framework is strong. Ideas flow from one section to the other, and are as fully developed as is possible for an undergraduate text. The learning goal sections will help students to come away from the text and retain the material." **—Rachel Keen**

Michael Lewis Dr. Michael Lewis is widely recognized as one of the world's leading experts on children's socioemotional development. He currently is University Distinguished Professor of Pediatrics and Psychiatry, and Director of the Institute for the Study of Child Development at Robert Wood Johnson Medical School. Dr. Lewis also is Professor of Psychology, Education, and Biomedical Engineering at Rutgers University and serves on the Executive Committee of the Cognitive Science Center. He has written and edited more than 35 books including *Social Cognition and the Acquisition of Self,* (1979), *Children's Emotions and Moods,* (1983), and his *Handbook of Emotions* (1993; 2000; 2008) which was awarded the 1995 Choice Magazine's Outstanding Academic Book Award, *Shame, The Exposed Self* (1992), and *Altering*

Fate: Why The Past Does Not Predict The Future (1997). Dr. Lewis recently edited *The Cambridge Handbook of Environment in Human Development* (2012) and is currently working on the third edition of the *Handbook of Developmental Psychopathology.* His most recent book, *The Development of Emotional Life,* is scheduled to be published in 2014 by Guilford Press. In addition, Dr. Lewis has had published over more than 350 articles and chapters published in professional journals and scholarly texts. Among his honors, Dr. Lewis is a Fellow of the New York Academy of Sciences, American Psychological Association, and the American Association of the Advancement of Science, as well as the Japan Society for the Promotion of Science. In 2009, Dr. Lewis received the 2009 Urie Bronfenbrenner Award for Lifetime Contribution to Developmental Psychology in the Service of Science and Society from the American Psychological Association, and in 2012 The New York Zero-to-Three Network honored Dr. Lewis with the Hedi Levenback Pioneer Award.

"I have finished reviewing the new edition of John Santrock's textbook, Child Development. *This volume promises to be as excellent as the last . . . The edition has gone out of its way to present a highly readable text while at the same time presents up to date research findings in a style to capture undergraduate students' interest and attention."* **—Michael Lewis**

Debbie Laible Dr. Debbie Laible is a leading expert on children's emotional and moral development. She is currently an associate professor of psychology at Lehigh University. Dr. Laible obtained her Ph.D. in developmental psychology at the University of Nebraska–Lincoln. Her research interests focus broadly on children's social, emotional, and moral development. She has published numerous articles on attachment, mother–child emotional reminiscing, prosocial behavior, and children's socioemotional development. Dr. Laible is currently the associate editor of *Developmental Psychology* and has served or is serving on the editorial boards of *Child Development* and the *Journal of Youth and Adolescence.*

"There is no doubt that this chapter (Emotional Development) covers most of the important modern research. . . Actually, I think the strength of this text is that it has one of the most up-to-date coverages of research that I have ever seen in a text. John Santrock has managed to get his hands on research that is not even published yet. Thus, I have no doubt the text covers the most important ideas and thinking in developmental psychology. I also think the text is really approachable to students. . . . John Santrock does a lot to make sure he connects students to ideas. Thus, I really like some of the features of the text (such as making connections across chapters and the 'Reflect: Your Own Personal Journey of Life.' The book also handles diversity well and has a nice applied focus to it." **—Debbie Laible**

David Moore Dr. David Moore is a leading expert on biological and environmental influences on children's development as well as perceptual and cognitive development in infancy. He obtained his undergraduate degree in psychology at Tufts University and his Ph.D. in developmental and biological psychology at Harvard University. Following post-doctoral work at the City University of New York, he joined the faculties of Pitzer College and Claremont Graduate University, where he currently is a professor of psychology. His book, *The Dependent Gene,* was widely adopted for use in undergraduate education, was translated into Japanese, and was nominated for the Cognitive Development Society's Best Authored Volume award. Dr. Moore's empirical research has focused on infants' reactions to infant-directed speech, the development of spatial cognition, and infants' rudimentary perception of numerical quantities. His theoretical writings have explored the contributions of genetic, environmental, and epigenetic factors to human development. His most recent contribution in this area is "Genetics, Behavior Genetics, and Epigenetics" which appeared in the *Oxford Handbook of Developmental Psychology* (2013), and he is writing a book on behavioral epigenetics for Oxford University Press. Dr. Moore serves on the editorial board of *Child Development Perspectives.*

"I am pleased to report that I think the chapter (Biological Beginnings) *was engaging, thorough, well written, and current. . . . John Santrock has done an excellent job treating some sophisticated and controversial ideas in our field, presenting them to students in comprehensible and balanced ways. . . . I was impressed with the described 'connections' theme and with the 'learning system' that highlights various connections for readers. This approach should help students form an elaborated understanding of the ideas presented and help them avoid the feeling that they are learning a collection of isolated facts. I also believe the book's focus on research, real-life applications, and diversity will continue to attract the interest of professors hoping to really engage their students, because my students, too, are looking for textbooks with this kind of orientation."* **—David Moore**

Nancy Hazen Dr. Nancy Hazen is an expert on parenting and family relationships. She currently holds the position of Professor of Human Development and Family Sciences at the University of Texas at Austin. Dr. Hazen received her Ph.D. from the Institute of Child Development at the University of Minnesota. Her research focuses on the role of parenting and family relationships in the development of children's social competence, with a particular focus on attachment, peer relationships and the role of fathers. Dr. Hazen also studies the development children's emotional regulation and its link to internalizing and externalizing symptoms later in development. She teaches graduate and undergraduate classes in child development, peer relationships, and family relationships. Dr. Hazen serves on the editorial board of *Infancy* and is the President of the Society for Research in Human Development.

"These chapters (Families and Peers) *present a clear and thorough overview of key theories and research in the area of family and peer relationships. The research is up-to-date. . . In this edition, John Santrock does a nice job of making connections between different topics and between later and earlier periods of development, which is always a challenge in a topically arranged textbook. . . . John Santrock also meets the challenge of achieving both breadth and depth by including a few in-depth descriptions of key studies or programs of research within each chapter. These more detailed descriptions of research are presented in an interesting and straightforward fashion. . . . Another strength of these chapters is that they highlight the relevance of research and theory of family and peer relationships to students' everyday lives."* **—Nancy Hazen**

Joan Grusec Dr. Joan Grusec is one of the world's leading experts on family processes and socioemotional development. She obtained her Ph.D. at Stanford University and currently is professor of psychology at the University of Toronto. Dr. Grusec's longstanding research interests have focused on the influence of parenting and children's socialization, determinants of parenting practices, and emotional development. She has edited or co-edited a number of highly respected books in the field of child development, served as the associate editor of *Developmental Psychology,* and published a number of significant research studies on children's development. Among the chapters Dr. Grusec has contributed are "Socialization Processes" in the *Handbook of Child Psychology* (2006), "Socialization Processes in the Family: Social and Emotional Development" in the *Annual Review of Psychology* (2011), and "Social Development and Social Relationships in Middle Childhood" (with others) in the *Handbook of Psychology* (2nd ed., Vol. 6) (2013).

"It was a pleasure to read this chapter (Families). *It was pitched at just the right level that is easy to comprehend, and it is engagingly written. John Santrock also has a nice grasp of the literature—particularly impressive because this is such a small portion of the book. . . . The strengths of the chapter include its up-to-date coverage of the research literature. It is a very thorough survey of the evidence."* **—Joan Grusec**

John Columbo Dr. John Columbo is a leading expert on infant cognitive development. He obtained his Ph.D. in Psychology at the State University of New York at Buffalo. Dr. Columbo held faculty positions at Canisius College, Niagara University, and Youngstown State University before moving to the University of Kansas in the early 1980s. He currently is the Director of the Schiefelbusch Institute for Life Span Studies at the University of Kansas. His research interests focus on the developmental cognitive neuroscience of attention and learning, with a special focus on early individual differences in these areas and how they relate to the typical and atypical development of cognitive and intellectual functioning. Dr. Columbo is the author/editor of five books, more than 75 peer-reviewed articles, and 21 book chapters. He also has served on five different editorial boards for journals in developmental psychology, including two terms as an associate editor for *Child Development.*

". . . the level of updating and number of topics addressed in the Preface is impressive. John Santrock has done a really nice job in updating and covering important aspects of the science of child development. . . . Clearly, the author cares about students and about students' learning of content. He has put an enormous amount of work into this piece." **—John Columbo**

Catherine McBride-Chang Dr. Catherine McBride-Chang is a leading expert on children's language development. She currently is a professor and director of the Developmental Center at the University of Hong Kong. Dr. McBride-Chang obtained her Ph.D. in developmental psychology at the University of Southern California and was a post-doctoral fellow at Florida State University. Her research especially focuses on literacy development across cultures. She is the author of more than 100 peer-reviewed articles and two books. Dr. McBride-Chang also is an associate editor of *Developmental Psychology* and *Journal of Research on Reading.* She serves on the editorial boards of six other journals and is a Fellow in the American Psychological Association.

"This text provides a nice overview of the basics of language and literacy acquisition. Compared to most textbooks I have seen, this chapter (Language Development) provides a relatively strong foundation on certain elements of literacy, particularly reading and writing. . . . Thus, I especially appreciate John Santrock's consideration of reading and writing in relation to language development through adolescence. **—Catherine McBride-Chang**

Susan Harter Dr. Susan Harter is widely recognized as one of the pioneers and leading experts in children's and adolescents' development of the self and identity. She has served as a Professor of Psychology and Head of the Developmental Psychology Program (both graduate and postdoctoral components) at the University of Denver. After obtaining her bachelor's degree at Oberlin College, she received her Ph.D. from Yale University, which consisted of a joint degree in developmental and child-clinical psychology. Then Dr. Harter became the first female faculty member in Yale's psychology department, accepting a joint faculty appointment in the psychology department and the Yale Child Study Center, where she served as Chief Psychologist.

Dr. Harter joined the psychology faculty at the University of Denver in 1974. At the University of Denver she received the John Evans Professorship Award, the highest scholarly honor the University can bestow upon a faculty member for national and international recognition in one's chosen field of research. In two separate peer-reviewed publications she has been named as one of the 50 most influential developmental psychologists both in the United States and internationally.

She has published numerous scholarly articles and chapters, and has summarized much of her recent work in *The Construction of the Self: Developmental and Sociocultural Foundations* (2012). Her most recent interests include a detailed analysis of self-development over childhood and adolescence, self-processes in the classroom, the societal trend to unrealistically enhance the self-esteem and self-concepts of youth, cross-cultural approaches to the self, and a search for the authenticity of the self.

Making Connections . . . From My Classroom to *Child Development* to You

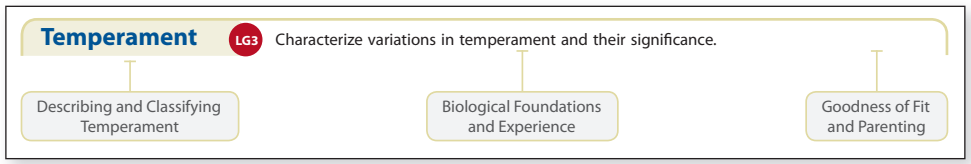
Having taught two or more undergraduate courses in developmental psychology—child development, adolescence, and life-span development—every year across four decades, I'm always looking for ways to improve my course and *Child Development*. Just as McGraw-Hill looks to those who teach the child development course for input, each year I ask the students in my undergraduate developmental courses to tell me what they like about the course and the text, and what they think could be improved. What have my students told me lately about my course and text? Students have said that highlighting connections among the different aspects of children's development would help them to better understand the concepts. As I thought about this, it became clear that a connections theme would provide a systematic, integrative approach to the course material. I have recently used this theme to shape my current goals for my course, which, in turn, influence the main goals of this text, as follows:

1. **Connecting with today's students** Helping students learn about child development more effectively
2. **Connecting research to what we know about children's development** Providing students with the best and most recent *theory and research* in the world today about each of the periods of child development
3. **Connecting topical and developmental processes** Guiding students in making *developmental connections* across different points in child development
4. **Connecting development to real life** Helping students understand ways to *apply* content about child development to the real world and improve people's lives, and to motivate students to think deeply about *their own personal journey through life* and better understand who they were, are, and will be

Connecting with Today's Students

My students often report that development courses are challenging because of the amount of material covered. To help today's students focus on the key ideas, the Learning Goals system I developed for *Child Development* provides extensive learning connections throughout the chapters. The learning system connects the chapter-opening outline, learning goals for the chapter, mini-chapter maps that open each main section of the chapter, ***Review, Connect, and Reflect*** at the end of each main section, and the chapter summary at the end of each chapter.

The learning system keeps the key ideas in front of the student from the beginning to the end of the chapter. The main headings of each chapter correspond to the learning goals, which are presented in the chapter-opening spread. Mini-chapter maps that link up with the learning goals are presented at the beginning of each major section in the chapter.



Then, at the end of each main section of a chapter, the learning goal is repeated in ***Review, Connect, and Reflect*****,** which prompts students to review the key topics in the section, connect these topics to existing knowledge, and relate what they learned to their own personal journey through life. ***Reach Your Learning Goals*****,** at the end of the chapter, guides students through the bulleted chapter review, connecting with the chapter outline/learning goals at the beginning of the chapter and the ***Review, Connect, and Reflect*** material at the end of each major section.

reach your **learning goals**

Emotional Development

Exploring Emotion — LG1 Discuss basic aspects of emotion.

What Are Emotions?

- Emotion is feeling, or affect, that occurs when people are engaged in interactions that are important to them, especially those that influence their well-being. Emotions can be classified as positive or negative. Darwin described the evolutionary basis of emotions, and today psychologists stress that emotions, especially facial expressions of emotions, have a biological foundation. Facial expressions of emotion are similar across cultures, but display rules are not culturally universal. Biological evolution endowed humans to be emotional, but culture and relationships with others provide diversity in emotional experiences.

A Functionalist View of Emotions

- The functionalist view of emotion emphasizes the importance of contexts and relationships in emotion. For example, when parents induce a positive mood in their child, the child is more likely to follow the parents' directions. In this view, goals are involved in emotions in a variety of ways, and the goal's specific nature can affect the individual's experience of a given emotion.

Emotional Competence

- Saarni argues that becoming emotionally competent involves developing a number of skills such as being aware of one's emotional states, discerning others' emotions, adaptively coping with negative emotions, and understanding the role of emotions in relationships.

Connecting Research to What We Know About Children's Development

Over the years, it has been important for me to include the most up-to-date research available. I continue this tradition in this fourteenth edition by looking closely at specific areas of research, involving experts in related fields, and updating research throughout. **Connecting Through Research** describes a study or program to illustrate how research

connecting through research

(continued)

system. The researcher computes a baseline high-amplitude sucking rate in a one-minute silent period. Following the baseline, presentation of a sound is made contingent on the rate of amplitude sucking. Initially babies suck frequently so that the sound occurs often. Gradually, they lose interest in hearing the same sound so they begin to suck less often. Then the researcher changes the sound that is being presented. If the babies renew their vigorous sucking, the inference is that they have discriminated the sound change and are sucking more because they want to hear the interesting new sound (Menn & Stoel-Gammon, 2009).

The Orienting Response

A technique that can be used to determine whether an infant can see or hear is the *orienting response,* which involves turning one's head toward a sight or sound. Also, a startle response can be used as an indicator of an infant's reaction to a noise (Bendersky & Sullivan, 2007).

Equipment

Technology can facilitate the use of most methods for investigating the infant's perceptual abilities. Videotape equipment allows researchers to investigate elusive behaviors. High-speed computers make it possible to perform complex data analysis in minutes. Other equipment records respiration, heart rate, body movement, visual fixation, and sucking behavior, which provide clues to what the infant is perceiving. For example, some researchers use equipment that detects whether a change in infants' respiration follows a change in the pitch of a sound. If so, it suggests that the infants heard the pitch change.

Eye Tracking

The most important recent advance in measuring infant perception is the development of sophisticated eye-tracking equipment (Franchak & others, 2011; Morgante, Zolfaghari, & Johnson, 2012; Navab & others, 2012). Figure 5.8 shows an infant wearing an eye-tracking headgear in a recent study on visually guided motor behavior and social interaction.

One of the main reasons that infant perception researchers are so enthusiastic about the recent availability of sophisticated eye-tracking equipment is that looking time is among the most important measures of infant perceptual and cognitive development (Aslin, 2012). The new eye-tracking equipment allows for much greater precision than human observation in assessing various aspects of infant looking and gaze (Oakes, 2012). Among the areas of infant perception in which eye-tracking equipment is being used are memory, joint attention, and face processing (Falck-Ytter & others, 2012). Further, eye-tracking equipment is improving our understanding of atypically developing infants, such as those with autism (Sasson & Elison, 2012), and infants at risk for atypical developmental outcomes, including infants at risk for developing autism and preterm infants (Bedford & others, 2012).

In recent research on infants (14 months old), children (4 to 8 years old), and adults (20 to 22 years old) in a room filled with colorful toys and objects using eye-tracking headgear, the infants only centered their gaze on the objects about one-fourth of the time (Adolph, 2011; Franchak & Adolph, 2010). Adults fixated on objects about one-third of the time, 4- to 8-year-old children about 60 percent of the time. Thus, in a majority of instances, infants rather remarkably navigated their environment by merely glancing at the objects rather than centering their vision on the objects.

FIGURE **5.8**
AN INFANT WEARING EYE-TRACKING HEADGEAR. Using the ultralight, wireless, head-mounted eye-tracking equipment shown here, researchers can record where infants are looking while they freely locomote. (Source: Courtesy of Dr. Karen Adolph's laboratory, New York University.)

Another recent eye-tracking study shed light on the effectiveness of TV programs and DVDs that claim to educate infants (Kirkorian, Anderson, & Keen, 2012). In this study, 1-year-olds, 4-year-olds, and adults watched *Sesame Street* and the eye-tracking equipment recorded precisely what they looked at on the screen. The 1-year-olds were far less likely to consistently look at the same part of the screen than their older counterparts, suggesting that the 1-year-olds showed little understanding of the *Sesame Street* video but instead were more likely to be attracted by what was salient than by what was relevant.

Scientists have had to be very creative when assessing the development of infants, discovering ways to "interview" them even though they cannot yet talk. Other segments of the population, such as adults who have suffered from a stroke, have trouble communicating verbally. What kinds of methods or equipment do you think researchers might use to evaluate their perceptual abilities?

in child development is conducted and how it influences our understanding of the discipline. Topics range from "Do Children Conceived Through In Vitro Fertilization Show Significantly Different Outcomes in Adolescence?" (Chapter 2) to "How Can We Study Newborns' Perception?" (Chapter 5) to "How Does Theory of Mind Differ in Children with Autism?" (Chapter 7).

The tradition of obtaining detailed, extensive input from leading experts in different areas of child development also continues in this edition. Biographies and photographs of the leading experts in the field of child development appear on pages xii to xiv and the chapter-by-chapter highlights of new research content will be described shortly. Finally, the research discussions have been updated in every period and topic. I expended every effort to make this edition of *Child Development* as up-to-date as possible. To that end, there are more than 1,200 citations from 2011, 2012, and 2013 in this new edition of the text.

Connecting Topical and Developmental Processes

Too often we forget or fail to notice the many connections from one point in child development to another. I have substantially increased these connections made in the text narrative and have created several features to help students connect topics across the processes and periods of child development:

1. ***Developmental Connections***, which appears multiple times in the margins of each chapter, points students to where the topic is discussed in a previous, current, or subsequent chapter. This feature highlights links across development *and* connections among biological, cognitive, and socioemotional processes. The key developmental processes are typically discussed in isolation from each other, and so students often fail to see their connections. Included in ***Developmental Connections*** is a brief description of the backward or forward connection. For example, consider the rapidly increasing interest in the field of developmental cognitive neuroscience that focuses on connections among development, cognitive processes, and the brain. This topic is initially presented in Chapter 1, "Introduction," and then highlighted again in various chapters, especially Chapter 4, "Physical Development and Health."
2. A *Connect* question now appears in self-reviews—***Review, Connect, and Reflect***—at the end of each main section in a chapter so students can practice making connections among topics. For example, in Chapter 9, students are asked to connect what they learned in Chapter 5 about the effect of culture on motor development to what they just read in Chapter 8 about how different cultures have different concepts of intelligence.

developmental **connection**

Biological Processes

Can specific genes be linked to specific environmental experiences? Chapter 2, p. 69

developmental **connection**

Research Methods

How does a correlational study differ from an experimental study? Chapter 1, p. 32

Connect

- In this section you learned that different cultures have different concepts of intelligence, and in Chapter 5 you learned about culture's effect on motor development. What do these findings have in common?

Connecting Development to Real Life

In addition to helping students make research and developmental connections, *Child Development* shows the important connections among the concepts discussed and the real world. In recent years, students in my development course have increasingly told me that they want more of this type of information. In this edition, real-life connections are explicitly made in the chapter-opening vignette, in ***Caring Connections***, ***Connecting with Diversity,*** and ***Connecting with Careers.***

Each chapter begins with a story designed to increase students' interest and motivation to read the chapter. ***Caring Connections*** provides applied information about parenting, education, or health and well-being in relation to topics ranging from "From Waterbirth to Music Therapy" (Chapter 3), to "Parents, Coaches, and Children's Sports" (Chapter 5), to "Guiding Children's Creativity" (Chapter 8). As will be seen later in the summary of chapter-by-chapter changes, I created a number of new ***Caring Connections*** interludes for this edition, as well as significantly updated and expanded applied topics in many areas of child development.

caring *connections*

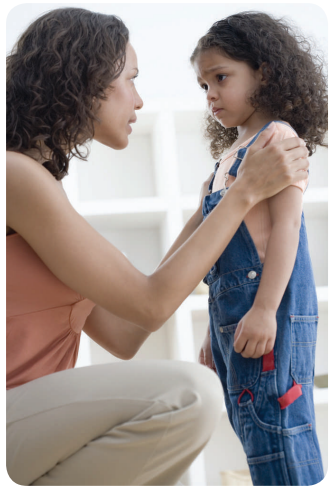
Parenting Recommendations for Raising a Moral Child

A research review (Eisenberg & Valiente, 2002, p. 134) concluded that, in general, children who behave morally tend to have parents who:

- "are warm and supportive rather than punitive;
- use inductive discipline;
- provide opportunities for the children to learn about others' perspectives and feelings;
- involve children in family decision making and in the process of thinking about moral decisions;
- model moral behaviors and thinking themselves, and provide opportunities for their children to do so;
- provide information about what behaviors are expected and why; and
- foster an internal rather than an external sense of morality."

Parents who show this configuration of behaviors likely foster concern and caring about others in their children, and create a positive parent-child relationship. In addition, parenting recommendations based on Ross Thompson's (2006, 2010; Thompson, Meyer, & McGinley, 2013) analysis of parent-child relations suggest that children's moral development is likely to benefit when there are mutual parent-child obligations involving warmth and responsibility, and when parents use proactive strategies.

One of the strategies above suggests modeling moral behaviors and thinking. According to the research cited in the Moral Exemplars section of this chapter, which two traits were common to moral exemplars?



What are some good strategies parents can adopt to foster their child's moral development?

Child Development puts a strong emphasis on diversity. For a number of editions, this text has benefited from the involvement of one or more leading experts on diversity to ensure that it provides students with current, accurate, sensitive information related to diversity in children's development.

connecting with diversity

Acculturation and Ethnic Minority Parenting

Ethnic minority children and their parents "are expected to transcend their own cultural background and to incorporate aspects of the dominant culture" into children's development (Garcia Coll & Pachter, 2002, p. 7). They undergo varying degrees of **acculturation,** which refers to cultural changes that occur when one culture comes in contact with another. Asian American parents, for example, may feel pressed to modify the traditional training style of parental control discussed earlier as they encounter the more permissive parenting typical of the dominant culture.

The level of family acculturation can affect parenting style by influencing expectations for children's development, parent-child interactions, and the role of the extended family (Cooper, 2011; Fuligni, 2012). For example, in one study, the level of acculturation and maternal education were the strongest predictors of maternal-infant interaction patterns in Latino families (Perez-Febles, 1992).

The family's level of acculturation also influences important decisions about child care and early childhood education. For example, "an African American mother might prefer to leave her children with extended family while she is at work because the kinship network is seen as a natural way to cope with maternal absence. This well-intentioned, culturally appropriate decision might, however, put the child at an educational and social disadvantage relative to other children of similar age who have the benefit of important preschool experiences that may ease the transition into early school years" (Garcia Coll & Pachter, 2002, pp. 7–8). Less acculturated and more acculturated family members may disagree about the appropriateness of various caregiving practices, possibly creating conflict or confusion.

The opportunities for acculturation that young children experience depend mainly on their parents and extended family. If parents send the children to a child-care center, school, church, or other community setting, the children are likely to learn about the values and behaviors of the dominant culture, and they may be expected to adapt to that culture's norms. Thus, Latino children raised in a traditional family in which the family's well-being is considered more important than the individual's interests may attend a preschool in which children are rewarded for asserting themselves. Chinese American children, whose traditional parents value behavioral inhibition (as discussed in Chapter 10), may be rewarded outside the home for being active and emotionally expressive. Over time, the differences in the level of acculturation experienced by children and by their parents and extended family may grow (Garcia Coll & Pachter, 2002).

How is acculturation involved in ethnic minority parenting?

In this interlude you learned that preschools may encourage behavior that is at odds with some ethnic groups' parenting styles. Is this common worldwide? Which type of parenting is most frequently found worldwide?

connecting with careers

Helen Schwe, Developmental Psychologist and Toy Designer

Helen Schwe obtained a Ph.D. from Stanford University in developmental psychology, but she now spends her days talking with computer engineers and designing "smart" toys for children. Smart toys are designed to improve children's problem-solving and symbolic thinking skills.

When she was a graduate student, Schwe worked part-time for Hasbro toys, testing its children's software on preschoolers. Her first job after graduate school was with Zowie Entertainment, which was subsequently bought by LEGO. According to Schwe, "Even in a toy's most primitive stage of development, . . . you see children's creativity in responding to challenges, their satisfaction when a problem is solved or simply their delight when they are having fun" (Schlegel, 2000, p. 50). In addition to conducting experiments and focus groups at different stages of a toy's development, Schwe also assesses the age appropriateness of a toy. Most of her current work focuses on 3- to 5-year-old children. (Source: Schlegel, 2000, pp. 50–51)

For more information about what researchers do, see page 42 in the Careers in Child Development appendix following Chapter 1.

Helen Schwe, a developmental psychologist, with some of the toys she designed for her current work on teaching foreign languages to children.

Diversity is discussed in every chapter, and Chapter 17, "Culture and Diversity," includes extensive material on the subject with substantial research updates in this edition of *Child Development*. Further, a feature called ***Connecting with Diversity*** appears throughout the text, focusing on a diversity topic related to the material at that point in the chapter. Topics range from "The Increased Diversity of Adopted Children and Adoptive Parents" (Chapter 2) to "Cultural Variations in Guiding Infants' Motor Development" (Chapter 5) to "The Contexts of Ethnic Identity Development" (Chapter 11).

Connecting with Careers profiles careers ranging from genetic counselor (Chapter 2) to toy designer (Chapter 7) to supervisor of gifted and talented education (Chapter 8), all of which require knowledge of child development. The careers highlighted extend from the Careers Appendix in Chapter 1, which provides a comprehensive overview of careers to show students where knowledge of child development could lead them.

Finally, part of applying knowledge of child development to the real world is understanding its impact on oneself. Accordingly, one of the goals of my child development course and this text is to motivate students to think deeply about their own journey through life. In reflecting about ways to encourage students to make personal connections to content in the text, I have added a ***Reflect: Your Own Personal Journey of Life*** prompt in the end-of-section review. This question asks students to reflect on some aspect of the discussion in the section they have just read and connect it to their own life. For example, in Chapter 1, related to a discussion of the early-later experience issue in development, students are asked,

> *Can you identify an early experience that you believe contributed in important ways to your development?*
>
> *Can you identify a recent or current (later) experience that you think had (is having) a strong influence on your development?*

Chapter-by-Chapter Changes

Following are the main chapter-by-chapter changes that were made in this new edition of *Child Development*.

Chapter 1: Introduction

- Substantial updating of citations, including many 2012 and 2013 references
- Expanded information about ethnic minority children, including concern about the discrimination and prejudice they experience (Benner & Graham, 2013; Tobler & others, 2013)
- Updated statistics on the increasing percentage of U.S. children and adolescents under 18 years of age living in poverty, especially in African American and Latino families (U.S. Census Bureau, 2012)
- New discussion of the recently created large-scale two-generation intervention, *Ascend,* by the Aspen Institute that is designed to help children escape from poverty through three avenues: education, economic support, and social capital (Aspen Institute, 2012)
- New section on cohort effects (Schaie, 2012)
- New material on cohort effects involving Millennial children, adolescents, and their parents, and how their experiences differ from those of earlier generations
- Inclusion of recent research and commentary on Millennials involving ethnic diversity and technology based on a recent national survey by the Pew Research Center (2010)
- New Figure 1.14 showing neuroimages of the brains of two adolescents (one a non-drinker, the other a heavy drinker) while they are engaging in a memory task
- Updated and expanded discussion of the leading journals in the field of child development
- Expanded coverage of cultural and ethnic bias, including reasons for studying Latino and Asian American adolescents and their families' acculturation level, generational status, and biculturalism (Gauvain, 2013; Schwartz & others, 2013)

Chapter 2: Biological Beginnings

- Updated coverage based on detailed reviews by leading experts David Moore and Kirby Deater-Deckard
- New discussion of the genome-wide association study that is increasingly used to identify genetic variations in individuals who have a disease, compared with those who don't (National Human Genome Research Institute, 2012)
- New coverage of some conditions for which genome-wide association studies recently have been conducted, including childhood obesity (Early Growth Genetics Consortium & others, 2012) and cardiovascular disease (Luisis, 2012)
- New discussion of linkage analysis in gene identification and discovery, including its use in the study of genetic influences on attention deficit hyperactivity disorder (Caylak, 2012), autism (O'Roak & others, 2012), and depression (Cohen-Woods, Craig, & McGuffin, 2012)
- New description of the recent interest in next-generation sequencing in determining genetic influences on disease and health (Rabbani & others, 2012)
- New coverage of the Thousand Genomes Project, the most detailed study of human genetic variation to date (Shibata & others, 2012)
- Expanded and updated material on modifications in DNA expression as a result of stress, radiation, and temperature (Georgakilas, 2011)
- Description of a recent study that found exposure to radiation changes the rate of DNA synthesis (Lee & others, 2011)
- Updated discussion of gene-gene interaction to include recent studies of immune system functioning (Reijmerink & others, 2011), asthma (Su & others, 2012), cancer (Bushel & others, 2012), and cardiovascular disease (Xiao & others, 2012)

- Updated material on noninvasive prenatal diagnosis (NIPD) (Chiu & Lo, 2012; Geaghan, 2012)
- New information about being able to determine the sex of the fetus at an earlier point in pregnancy through new noninvasive procedures (Kolialexi, 2012)
- Discussion of a recent meta-analysis indicating that a baby's sex can be determined as early as 7 weeks into pregnancy (Devaney & others, 2011)
- Coverage of recent reviews regarding child and adolescent outcomes for individuals conceived using new reproductive technologies (Golombok, 2011a, b; Golombok & Tasker, 2010)
- New material indicating that many U.S. adoptions now involve other family members (aunts/uncles/grandparents): 30 percent of U.S. adoptions are made by relatives and slightly more than 50 percent of U.S. adoptions involve the foster care system (Ledesma, 2012)
- Addition of information about epigenetic mechanisms involving the actual molecular modification of the DNA strand as a result of environmental inputs in ways that alter gene functioning (Feil & Fraga, 2012)
- Updated coverage of the concept of $G \times E$, which involves the interaction of a specific measured variation in the DNA sequence and a specific measured aspect of the environment (Bihagi & others, 2012; Petersen & others, 2012; Zannas & others, 2012)
- Description of recent research indicating that variations in dopamine-related genes interact with supportive or unsupportive environments to influence children's development (Bakermans-Kranenburg & van IJzendoorn, 2011)

Chapter 3: Prenatal Development and Birth

- Expanded and updated commentary about transport of drugs across the placenta (Menezes, Malek, & Keelan, 2011)
- Description of a recent study that found cigarette smoke weakened and increased oxidative stress in the fetal membranes from which the placenta develops (Menon & others, 2011)
- New discussion of the increasing inclusion of exercise in prenatal care programs
- Coverage of a recent study indicating that the risk of exercise-related injury during pregnancy was low (Vladutiu, Evenson, & Marshall, 2011)
- Description of a recent experimental study that found a three-month aerobic exercise program improved pregnant women's health-related quality of life (Montoya Arizabaleta & others, 2010)
- Inclusion of recent research indicating that exercise during pregnancy improved mothers' perception of their health (Barakat & others, 2011)
- Coverage of a recent experimental study of the effects of a CenteringPregnancy Plus program on high-stress pregnant women (Ickovics & others, 2011)
- Discussion of a recent research review indicating a link between prenatal home visits and improved prenatal care use but less evidence for their influence on newborns' birth weights (Issel & others, 2011)
- Inclusion of information from a recent research review indicating that high amounts of caffeine consumption by pregnant women does not increase the risk of miscarriage, congenital malformations, or growth retardation (Brent, Christian, & Diener, 2011)
- Coverage of recent research that found deficiencies in the brain pathways involved in the working memory of children with FASD (Diwadkar & others, 2012)
- Discussion of a recent meta-analysis linking maternal smoking during pregnancy to a modest increase in risk for childhood non-Hodgkin lymphoma (Antonopoulos & others, 2011)
- Information about a recent study that found environmental tobacco smoke exposure during pregnancy was linked to diminished ovarian functioning in female offspring (Kilic & others, 2012)

- Update on the most consistent negative outcomes of cocaine use during pregnancy (Gouin & others, 2011)
- Coverage of a recent research review that concluded cocaine quickly crosses the placenta to reach the fetus (De Giovanni & Marchetti, 2012)
- Description of recent research on the negative effects of cocaine exposure prenatally on children's attention and externalizing problems (Minnes & others, 2010; Richardson & others, 2011)
- New information from research on a link between prenatal cocaine exposure and elevated blood pressure at 9 years of age (Shankaran & others, 2010)
- Discussion of prenatal methamphetamine exposure and decreased brain activation, especially in the frontal lobes, in 7- to 15-year-olds (Roussotte, 2011)
- Coverage of a recent study that found prenatal meth exposure was associated with smaller head circumference, neonatal intensive care unit (NICU) admission, and referral to child protective services (Shah & others, 2012)
- Update on guidelines for eating certain types of fish during pregnancy (American Pregnancy Association, 2013; Mayo Clinic, 2013)
- Description of recent research on more than 30,000 offspring involving the time during prenatal development when maternal exposure to stress was most likely to increase the risk of preterm birth (Class & others, 2011)
- Coverage of recent research reviews that link maternal depression to preterm birth (Dunkel Schetter, 2011) and reduced empathy in childhood (Davalos, Yadon, & Tregellas, 2012)
- Description of a recent study that revealed paternal smoking around the time of the child's conception was linked to an increased risk of the child developing leukemia (Milne & others, 2012)
- Coverage of a recent research review indicating an increased risk of spontaneous abortion, autism, and schizophrenic disorders in offspring if the father is 40 years of age and older (Reproductive Endocrinology and Infertility Committee & others, 2012)
- Description of a recent study revealing that children born to fathers who are 40 years of age and older had increased risk of developing autism because of an increase in random gene mutations in the older fathers (Kong & others, 2012)
- Inclusion of recent research that found group prenatal care provided pregnant women with a broad network of social support (McNeil & others, 2012)
- Discussion of a recent study indicating that low Apgar scores are linked with development of ADHD in childhood (Li & others, 2011)
- Update on the dramatic 60 percent increase in cesarean deliveries in the United States from 1996 to 2009 and their effects on subsequent pregnancies (Hamilton, Martin, & Ventura, 2012; Solheim & others, 2011)
- New material on the recent increase in home births to non-Latino White women (Macdorman, Declercq, & Menacker, 2011)
- Discussion of a recent study that found waterbirth was linked with a shorter second stage of labor (Cortes, Basra, & Kelleher, 2011)
- Discussion of a recent study that revealed yoga and massage therapy sessions resulted in decreased levels of depression, anxiety, and back and leg pain (Field & others, 2012)
- Coverage of a recent research review that concluded practicing yoga during pregnancy is associated with a number of positive outcomes for mothers and a reduction in the incidence of low birth weight infants (Babbar, Parks-Savage, & Chauhan, 2012)
- Description of a recent research review that found positive outcomes for midwife-led care compared with physician-led care in low-risk women (Sutcliffe & others, 2012)
- Discussion of the results of two recent research reviews that indicated massage therapy reduces pain during labor (Jones & others, 2012; Smith, Levett, & others, 2012)
- Updated coverage of the percentage of infants born preterm in the United States, including the overall rate and ethnic variations in 2009 (National Center for Health Statistics, 2011)

- Updated data on the percentage of U.S. infants born with low birth weight (Hamilton, Martin, & Ventura, 2012)
- Description of recent research that found low birth weight was associated with childhood autism (Lampl & others, 2012)
- Description of a recent research review that concluded kangaroo care reduced the risk of mortality in low birth weight infants (Conde-Aguedelo, Belizan, & Diaz-Rossello, 2011)
- Coverage of a recent study that revealed the mechanisms responsible for weight gain in massaged preterm infants (Field, Diego, & Hernandez-Reif, 2010)
- New coverage of fathers having elevated depressive symptoms when their wives have postpartum depression (Letourneau & others, 2012; Ramchandani & others, 2011)

Chapter 4: Physical Development and Health

- Description of a recent study that found puberty is occurring earlier for boys, although the study has been criticized (Herman-Giddens & others, 2012)
- New discussion of the genetic and environmental contributions to puberty (Dvornyk & Waqar-ul-Haq, 2012)
- Inclusion of recent information on a longitudinal study of the sequence of pubertal events in boys and girls (Susman & others, 2010)
- Description of recent research that indicated severity of childhood sexual abuse was associated with early onset of menarche (Boynton-Jarrett & others, 2012)
- Coverage of a recent study that found a link between early maturation and substance abuse as well as early sexual intercourse (Gaudineau & others, 2010)
- Description of a recent study linking pubertal timing with subsequent engagement in delinquency (Negriff, Susman, & Trickett, 2011)
- Coverage of a recent study that found a linear increase in having a positive body image for both boys and girls as they moved from the beginning to the end of adolescence (Holsen, Carlson Jones, & Skogbrott Birkeland, 2012)
- Inclusion of changes in the coverage of the development of the brain based on leading expert consultant Martha Ann Bell's comments
- New section on the increasingly popular neuroconstructivist view to introduce the material on the development of the brain (Diamond, 2013; Peltzer-Karpf, 2012; Westerman, Thomas, & Karmiloff-Smith, 2011)
- Discussion of important research on the development of the brain in infancy conducted by Martha Ann Bell and her colleagues (Bell & Cuevas, 2012, 2013; Bell & Diaz, 2012; Morasch, Raj, & Bell, 2013) and John Richards and his colleagues (2009, 2010; Richards, Reynolds, & Courage, 2010; Sanchez, Richards, & Almli, 2012)
- Update on the role of myelination in providing energy for neurons (Harris & Attwell, 2012)
- New discussion of a recent study of adolescents from Mexican backgrounds that found those with stronger family obligation values showed decreased activation in the brain's regions involving reward sensitivity, which was linked to less real-life risk-taking behavior, and increased activation in the brain's regions involving cognitive control, which was associated with better decision-making skills (Telzer & others, 2013)
- Description of a recent research review of sleep patterns in infancy (Galland & others, 2012)
- Inclusion of information about a recent study that revealed by 6 months of age, a majority of infants slept through the night, awakening their mothers only once or twice a week (Weinraub & others, 2012)
- Discussion of a recent study that revealed nighttime wakings at 12 months of age predicted a lower level of sleep efficiency at 4 years of age (Tikotzky & Shaashua, 2012)
- New material on the most common sleep problem in infancy (The Hospital for Sick Children & others, 2010)

- Coverage of a recent study linking maternal emotional availability with fewer infant sleep problems (Teti & others, 2010)
- Discussion of a recent study indicating that paternal involvement in infant care was related to fewer infant sleep problems (Tikotzky, Sadeh, & Glickman-Gavrieli, 2010)
- Description of recent research on early life risk factors that are linked to infant sleep duration (Nevarez & others, 2010)
- Updated information about infant-parent bed sharing and an increasing trend of recommending that this not occur until the infant is at least 6 months old (Byard, 2012a, b; Weber & others, 2012)
- Coverage of a recent study indicating that infant-parent bed sharing was linked with higher rates of infant sleep problems, such as disordered breathing (Kelmanson, 2010)
- Updated and expanded coverage of SIDS, including the role of brain stem functioning and the neurotransmitter serotonin (Broadbent & others, 2012)
- New material on recent research indicating that as many as 10 to 15 percent of SIDS cases are linked to heart arrhythmias with gene mutations being involved in the arrhythmias (Brion & others, 2012; Van Norstrand & others, 2012)
- Discussion of a two recent research reviews linking breast feeding to a lower incidence of SIDS (Hauck & others, 2011; Zotter & Pichler, 2012)
- Description of a study linking sleep problems in early childhood with subsequent attention problems that in some cases persist into early adolescence (O'Callaghan & others, 2010)
- Coverage of a recent study indicating that having trouble sleeping in childhood was related to alcohol use problems in adolescence and early adulthood (Wong & others, 2010)
- Inclusion of a recent analysis indicating that chronic child sleep disorders that deprive children of adequate sleep may be lead to impaired brain development (Jan & others, 2010)
- New content on a comparison of U.S. and Asian adolescents' sleep patterns (Gradisar, Gardner, & Dohnt, 2011)
- New coverage of Mona El-Sheikh's (2013) recommendations for improving children's sleep environment
- Description of a recent study on delaying school start time for ninth- to twelfth-grade students and the resulting improvements in sleep, alertness, mood, and health (Owens, Belon, & Moss, 2010).
- New commentary about the intense search for possible genetic links to childhood cancers (Spector & others, 2013)
- Updated discussion of childhood cancer, including improving survival rates for some childhood cancers (National Cancer Institute, 2011; Wayne, 2011)
- Description of a recent study that found parental smoking was a risk factor for higher blood pressure in children (Simonetti & others, 2011)
- Coverage of a recent study that found the most frequently consumed vegetable by 2- and 3-year-olds was French fries or other fried potatoes (Fox & others, 2010)
- Inclusion of recent research that found low maternal sensitivity when infants were 15 and 24 months of age was linked to a higher risk of obesity in adolescence (Anderson & others, 2012)
- Updated data on the increasing percentage of U.S. women who breast feed their babies in the hospital and when the infant is six months old (Centers for Disease Control and Prevention, 2012b)
- Inclusion of the reconfirmation by the American Academy of Pediatrics Section on Breastfeeding (2012) of its recommendation of exclusive breast feeding in the first six months, followed by continued breast feeding as complementary foods are introduced, and further breast feeding for one year or longer as mutually desired by the mother and infant

- Coverage of recent data on the increasing percentage of 2- to 5-year-old obese children in the United States, including trends from 1976–1980 through 2007–2010 (Ogden & others, 2012)
- Discussion of a recent study indicating that preschool children who were overweight had a significant risk of being overweight/obese at 11 years of age (Shankaran & others, 2011)
- New discussion of a recent literacy intervention program with Spanish-speaking families in the Los Angeles WIC program that increased literacy resources and activities in homes, which in turn led to a higher level of school readiness in children (Whaley & others, 2011)
- Description of recent data on the percentage of U.S. 6- to 11-year-olds that are overweight or obese, which in 2009–2010 was significantly higher than the percentage of 2- to 5-year–olds who were overweight (Ogden & others, 2012)
- Updated data on trends in adolescent obesity from 1999–2000 to 2009–2010 with an increase in boys but not in girls during this time frame (Ogden & others, 2012)
- Description of a longitudinal study that found general and abdominal obesity increased in Chinese children from 1993 to 2009 (Liang & others, 2012)
- Coverage of recent intervention studies that indicate modifying parents' eating habits and increasing children's exercise can help overweight and obese children to lose weight (Brotman & others, 2012; Collins & others, 2011)
- Inclusion of recent research that found both peers and family members teased overweight children more than normal weight children (McCormack & others, 2011)
- Description of a recent study that found having two overweight/obese parents significantly increased the likelihood that children would be overweight/obese (Xu & others, 2011)
- Inclusion of information about a recent successful behavior modification program that increased overweight and obese children's exercise and reduced their TV viewing time (Goldfield, 2011)
- Inclusion of recent research on 9-year-olds that focused on the connection between physical activity level and risk for metabolic disease (Parrett & others, 2011)
- Description of recent research showing links between aerobic exercise and cognitive skills in children and adolescents (J. R. Best, 2010; Davis & others, 2011; Monti, Hillman, & Cohen, 2012)
- Inclusion of a recent experimental study that found positive effects of aerobic training on the insulin resistance and body fat levels of overweight/obese elementary school children (Davis & others, 2012)
- Updated date on gender and ethnic variations in adolescents' exercise patterns (Eaton & others, 2012)
- New coverage of the percentage of adolescents who participate in physical education classes at school (Eaton & others, 2012)
- New discussion of links between screen-based activity and physical exercise in adolescents, including recent research indicating that adolescents who combine low physical activity and high screen-based activity are nearly twice as likely to be overweight (Sisson & others, 2010)
- Discussion of a recent research review that found a higher level of screen time at 4 to 6 years of age was linked with a lower level of activity and being overweight from preschool to adolescence (te Velde & others, 2012)
- Coverage of a recent research review that found a higher level of screen-based sedentary behavior was associated with a number of adolescent problems, ranging from sleep disorders to depression (Costigan & others, 2012)
- Description of a recent study of young adolescents that found regular exercise was associated with higher academic achievement (Hashim, Freddy, & Rosmatunisah, 2012)
- Discussion of a recent study of depressed adolescents with low levels of exercise that revealed a 12-week exercise intervention lowered their depression (Dopp & others, 2012)

- New section on the role of peers in adolescent exercise, including a recent research review that indicated peer friend/support, friendship quality and acceptance, and peer victimization were associated with adolescents' physical activity (Fitzgerald, Fitzgerald, and Aherne, 2012)
- Description of a recent study that found a daily morning running program for three weeks improved adolescents' sleep quality, mood, and concentration (Kalak & others, 2012)

Chapter 5: Motor, Sensory, and Perceptual Development

- Inclusion of a number of chapter changes and updates based on leading expert Karen Adolph's feedback
- Updated discussion of infant reflexes arguing that reflexes are not exclusively inborn, genetic mechanisms but rather that infants can deliberately control such movements (Adolph & Berger, 2013)
- New coverage of recent research indicating that alternating leg movements occur during the fetal period and at birth (Adolph & Robinson, 2013)
- Description of a recent study by Karen Adolph and her colleagues (2012) that found 12- to 19-month-olds took 2,368 steps and fell 17 times an hour during free play, documenting the extensiveness of locomotor experience
- New discussion of the research of Karen Adolph and her colleagues (Adolph, 2011; Adolph & Berger, 2013; Adolph & Robinson, 2013) on the experimental conditions and outcomes involved when environmental features and experimental manipulation of body properties are instituted
- Added commentary about the traditional practice in many sub-Saharan villages of engaging babies in exercise (Super & Harkness, 2010)
- New examples of restricting movement in infants in some rural cultures, such as the use of sandbags in some rural Chinese provinces (Adolph, Karasik, & Tamis-LeMonda, 2010)
- Coverage of a recent study linking sports participation to a lower incidence of being overweight or obese (Antonogeorgos & others, 2011)
- New coverage of Rachel Keen's (2011) research suggesting that tool use is an excellent context for studying problem solving in children less than 3 years old because motor behavior can indicate how the infant tries to reach a goal
- Inclusion of recent research indicating that training infants to use sticky mittens resulted in advances in their reaching behavior (Libertus & Needham, 2011)
- New content on toddlers' and preschool children's tower-building that involves both planning and the development of motor skills, including new Figure 5.5 (Chen & others, 2010)
- A number of changes in the discussion of perceptual development based on feedback from leading experts Scott Johnson and Rachel Keen
- Revised, updated coverage of high-amplitude sucking as a measure of infant perceptual development
- Much expanded and updated coverage of the dramatic increase in the use of sophisticated eye-tracking equipment in the study of infant perception (Aslin, 2012; Oakes, 2012)
- Description of a recent eye-tracking study in which 1-year-old infants showed less efficient looking at an educational video than their older counterparts (Kirkorian, Anderson, & Keen, 2012)
- Description of a recent study indicating that imagining the various paths that a dropped ball might take improves preschoolers' ability to predict where it would land (Joh & others, 2011)
- Coverage of a recent study indicating that instructions to follow the path of a ball to the bottom of a tube improved 3-year-olds' ability to not succumb to a gravity bias (Bascandziev & Harris, 2011)

- Coverage of a recent fMRI study that confirmed the fetus can hear at 33 to 34 months into the prenatal period by assessing fetal brain responses to auditory stimuli (Jardri & others, 2012)
- Discussion of a recent study that found 7-month-old infants can process simultaneous pitches when they hear voices but are more likely to encode the higher-pitched voice (Marie & Trainor, 2012)
- New section on hearing problems in children that focuses on cochlear implants and otitis media
- New coverage of the longitudinal research of Daphne Maurer and her colleagues (Lewis & Maurer, 2009; Maurer, Mondloch, & Leis, 2007) on infants whose cataracts were removed at different points in development that illustrates how deprivation and experience influence visual development
- Added commentary suggesting that most perception is intermodal perception (Bahrick, 2010)

Chapter 6: Cognitive Developmental Approaches

- Expanded conclusions about the themes of the current field of infant cognitive development to emphasize the substantial increase in interest in cognitive developmental neuroscience and links between brain processes and cognitive processes (Diamond, 2013; Morasch & others, 2013; Peltzer-Karpf, 2012)
- Description of a recent fMRI study identifying brain locations that were linked to 9- and 10-year-olds' conservation success in comparison with non-conserving 5- and 6-year-olds (Houde & others, 2011)
- Expanded and updated coverage of the importance of perspective taking and ego development in explaining the imaginary audience and personal fable (Lapsley & Hill, 2010)
- New coverage of Daniel Lapsley and his colleagues' (Hill, Duggan, & Lapsley, 2012; Lapsley & Stey, 2012) view that the separation-individuation process, rather than cognitive developmental changes, is responsible for adolescent invulnerability
- Inclusion of recent research on the importance of distinguishing between two types of invulnerability (danger and psychological), which have different outcomes (Lapsley & Hill, 2010)
- Expanded and updated coverage of Barbara Rogoff's research, including recent work on the inadequate opportunities for children to participate in valued family and community activities in middle-SES European-heritage communities (Rogoff, Correa-Chavez, & Silva, 2011; Rogoff, Morelli, & Chavajay, 2010; Rogoff & others, 2011)

Chapter 7: Information Processing

- Discussion of a recent study indicating that processing speed was linked to oral reading fluency in children (Jacobson & others, 2011)
- Coverage of a recent study that found infants visually attend to events that are of intermediate complexity and are more likely to look away from events that are overly simple or complex (Kidd, Piantadosi, & Aslin, 2012)
- Discussion of a recent study that found responding to joint attention at 1 month of age was linked to self-regulation skills at 3 years of age (Van Hecke & others, 2012)
- Coverage of a recent research study linking television watching and video game playing to children's attention problems (Swing & others, 2010)
- Description of a recent study indicating that joint attention enhanced the long-term memory of 9-month-old infants (Kopp & Lindenberger, 2012)
- New material on using computer exercises to improve children's attention, including a Web site (www.teach-the-brain.org/learn/attention/index.htm) about how to use the games with children (Jaeggi, Berman, & Jonides, 2009; Steiner & others, 2011; Tang & Posner, 2009)

- Discussion of a recent study that revealed a region of the prefrontal cortex was activated when 5-month-old infants engaged in joint attention with another person (Grossmann & Johnson, 2010)
- Expanded coverage of attention in adolescence including new material on the importance of controlling attention and being able to reduce distractions that can interfere with learning (Bjorklund, 2012; Gillig & Sanders, 2011)
- Discussion of a recent study that found a computerized working memory program improved 9- to 11-year-olds' reading performance (Loosli & others, 2012)
- Description of a recent study that found assessment of working memory in kindergarten was a key process in predicting match achievement at the end of the first grade (Monette, Bigras, & Guay, 2011)
- New commentary suggesting that one of the reasons memory improves with age in childhood is the increasing use of effective strategies in middle and late childhood (Schneider, 2011)
- Revised definition of concepts and addition of *concepts* to the list of key terms
- Addition of recent commentary about learning by infant researcher Alison Gopnik (2010) on the importance of putting things into the right categories
- Updated and expanded discussion of the increasing interest in executive function, including the importance of its early development in the preschool years (Carlson & White, 2013; Carlson, Zelazo, & Faja, 2013)
- New Figure 7.11 that includes a photograph of a research setting in Stephanie Carlson's study of executive function in young children
- New description of Ann Masten and her colleagues' (Herbers & others, 2011; Masten, 2013; Masten & others, 2008) research that has found executive function and parenting skills are linked to school success in homeless children
- New coverage of Adele Diamond's (2013; Diamond & Lee, 2011) view on the key dimensions of executive function in 4- to 11-year-old children and interventions that have been shown to improve executive function
- Coverage of a 30-year longitudinal study that found children who were better at inhibitory control showed a number of positive aspects of development as adults (Moffitt, 2012; Moffitt & others, 2011)
- Expanded coverage of mindfulness and recent proposals for using mindfulness training, as well as other aspects of reflective science such as yoga, to improve children's cognitive and socioemotional skills (Roeser & Zelazo, 2012; Zelazo & Lyons, 2012)
- New discussion of the debate about how much benefit is derived from placing various cognitive processes under the broader concept of executive function
- New discussion of the importance of executive function in adolescent cognitive development, including Deanna Kuhn's (2009) view that executive function represents the key cognitive changes at this point in development
- New commentary on debate regarding whether infants have a theory of mind (Rakoczy, 2012)
- Expanded coverage of cognitive factors other than theory of mind that might be involved in autism, including eye gaze, face processing, memory, and language impairment (Boucher, Mays, & Bigham, 2012)
- Description of a recent study that found children improve their selection of effective strategies in solving problems from the third grade to the seventh grade (Lemaire & Lecacheur, 2011)
- New discussion of recent research indicating that adolescents make riskier decisions in stressful than non-stressful situations, but that the extent to which they make risky decisions in stressful contexts is associated with the type of risk taker they are (impulsive, calculated, or conservative) (Johnson, Dariotis, & Wang, 2012)
- Expanded coverage of the dual process model of decision making to include material on the importance of adolescents quickly getting the gist of a dangerous situation,

which can cue personal values that will reduce the likelihood that adolescents engage in risky decision making (Chick & Reyna, 2012)
- Inclusion of information about how adolescents who have a higher trait level of inhibition (self-control) and find themselves in risky situations are less likely to engage in risky decision making (Chick & Reyna, 2012)
- Expanded description of what metacognition involves (Dimmitt & McCormick, 2012)
- Discussion of a recent study that found young adolescents increasingly use metacognitive skills from 12 to 14 years of age, and use them more effectively in math and history classes than other subjects (van der Stel & Veenman, 2010)
- Description of a recent study with college students indicating that metacognition is a key factor in the ability to engage effectively in critical thinking (Magno, 2010)

Chapter 8: Intelligence

- Substantial updating of research with addition of a number of 2011, 2012, and 2013 research citations
- New coverage of the link between lower intelligence in childhood and illness, chronic disease, and how long people will live (Deary & Batty, 2011)
- Description of a recent study of predicting academic performance based on measures of general mental abilities and emotional intelligence (Song & others, 2010)
- Discussion of a recent study that revealed the frontoparietal network is responsible for cognitive control and connectivity to brain regions outside the network (Cole & others, 2012)
- Description of a recent research review that concluded more than 1,000 genes may influence an individual's intelligence (Davies & others, 2011)
- New information from a recent research review about the environment's role in intelligence that is reflected in the 12- to 18-point IQ gain children make when they are adopted from lower-SES to middle-SES homes (Nisbett & others, 2012)
- Coverage of a recent analysis of the Abcedarian early childhood intervention when the children had reached 30 years of age, which found benefits for years of education attained but no gains regarding social adjustment and criminal activity (Campbell & others, 2012)
- Discussion of a recent study that revealed an accelerated Flynn effect for children whose mothers have more education and for children from higher-income families (Ang, Rodgers, & Wanstrom, 2010)
- Updated information about the reduction in the IQ gap between African American and non-Latino Whites (Nisbett & others, 2012)
- Expanded and updated coverage of ethnic comparisons of children's intelligence, including consistent ordering of children from different ethnic groups on intelligence tests (Suzuki, Short, & Lee, 2011)
- Description of the decreasing gap in intelligence between non-Latino White and African American children in the last three decades (Nisbett, 2009).
- Coverage of a longitudinal study indicating that information-processing skills in infancy and early childhood were linked to general intelligence at 11 years of age (Rose & others, 2012)
- Replacement of the label *mental retardation* with the currently used term of *intellectual disability* (Hodapp & others, 2011)
- New estimate of the percentage of children who are categorized as being gifted (Ford, 2012)
- New commentary about the underrepresentation of African American, Latino, and Native American children in gifted programs and the reasons for the underrepresentation (Ford, 2012)
- Expanded discussion of children's creative thinking, including recent research indicating a decline in creative thinking by U.S. schoolchildren and increased interest in teaching creative thinking in Chinese schools (Kim, 2010; Plucker, 2010)

- New description of noncognitive factors, such as motivation, creativity, and optimism, involved in giftedness (Reis & Renzulli, 2011)

Chapter 9: Language Development

- New description of the increasing emphasis on the development of pointing in infancy as a key aspect of joint attention and an important index of the social aspects of language (Begus & Southgate, 2012; Goldin-Meadow & Alibali, 2013)
- Updated information about developmental aspects of the pointing gesture in the first two years of life (Colonessi & others, 2010)
- Description of a recent study that revealed 6-month-old infants comprehend names of parts of their body, such as "feet" and "hands" (Tincoff & Jusczyk, 2012)
- New material on Kathy Hirsh-Pasek, Roberta Golinkoff, and Justin Harris' (Harris, Golinkoff, & Hirsch-Pasek, 2012; Hirsh-Pasek & Golinkoff, 2013) six principles for optimal word learning in young children
- New material on strategies for using books with preschoolers (Galinsky, 2010)
- Inclusion of information indicating that a computer-based program emphasizing phonics improved first-grade students' reading skills (Savage & others, 2009)
- New coverage of the important role that metacognitive strategies—especially those involving planning, drafting, revising, and editing—play in improving writing during the elementary school years (Dimmitt & McCormick, 2012; Harris & others, 2009; McCormick, Dimmitt, & Sullivan, 2013)
- Coverage of recent research indicating that bilingual children have a lower vocabulary in each language than monolingual children (Bialystok, 2011)
- Updated and revised discussion of English language learners (EELs), including recent research indicating that ELL children who are taught using a dual-language approach (home language and English) have a higher level of achievement (Genesee & Lindholm-Leary, 2012)
- Discussion of a recent research review that concluded the earlier and more frequently that adults read to children, the better their literacy and language skills were (Dunst, Simkus, & Hamby, 2012). In this study, the average age of children when adults began reading to them was 22 months
- Increased emphasis on how important it is for children's optimal development that parents and teachers provide children with many opportunities to talk and be talked with (Hirsh-Pasek & Golinkoff, 2013)

Chapter 10: Emotional Development

- Discussion of a recent study that revealed newborns of depressed mothers showed less vocal distress at the cries of another infant, reflecting emotional and physiological dysregulation (Jones, 2012)
- Description of a recent study that found mothers' emotional reactions (anxiety and anger) increased the risk of subsequent attachment insecurity (Leerkes, Parade, & Gudmundson, 2011)
- Inclusion of recent research indicating a link between problems in infant soothability at 6 months of age and insecure attachment at 12 months of age (Mills-Koonce, Propper, & Barnett, 2012)
- Discussion of a recent study that found emotionally reactive infants who also showed a high level of emotional regulation were more likely to have primary caregivers who engaged in positive parenting (Ursache & others, 2013)
- Coverage of a recent study that found fathers' emotion coaching was related to children's social competence (Baker, Fenning, & Crnic, 2011)
- Discussion of research indicating that mothers' knowledge about what distresses and comforts their children predicts children's coping, empathy, and prosocial behavior (Vinik, Almas, & Grusec, 2011)

- Discussion of a recent study that found parents' elicitation of talk about emotion with toddlers was associated with toddlers' sharing and helping (Brownell & others, 2012)
- New description of recent research by Cybelle Raver and her colleagues (Raver & others, 2012; Zhai, Raver, & Jones, 2012) on links between increased caregiver emotional expression, self-regulation, and reduced behavior problems in Head Start families
- Updated coverage of how various aspects of disasters and traumatic events affect children (McDermott & Cobham, 2012; Salloum & Overstreet, 2012)
- New material on dose/response effects in the study of how disasters and traumatic events affect children's adjustment and adaptation (Masten, 2013)
- Coverage of a recent study linking behavioral inhibition at 3 years of age with shyness at age 7 (Volbrecht & Goldsmith, 2010)
- Description of recent research that found being fearful in situations that are relatively low in threat at 24 months of age was related to higher levels of anxiety in kindergarten (Buss, 2011)
- Inclusion of recent research indicating that children with a lower level of cortisol regulation or mothers who were more likely to endorse non-supportive emotional reactions engaged in more maladaptive play behavior (Davis & Buss, 2012)
- Discussion of a recent longitudinal study linking shyness/inhibition in infancy/childhood to social anxiety at 21 years of age (Bohlin & Hagekull, 2009)
- Discussion of a recent study that revealed U.S. infants showed more temperamental fearfulness while Finnish infants engaged in more positive affect, especially effortful control (Gaias & others, 2012)
- New commentary suggesting that too often the biological foundations of temperament are interpreted as meaning that temperament doesn't develop and change; however, key dimensions (such as adaptability and soothability) of the self-regulatory aspect of temperament do develop and change as neurobiological and experiential processes develop and change (Easterbrooks & others, 2013)
- Addition of information about research indicating that decreases in infants' negative emotionality are related to higher levels of parents' sensitivity, involvement, and responsivity (Bates, 2012a, b; Penela & others, 2012)
- Inclusion of information from a recent study that linked maternal sensitivity to subsequent secure attachment during infancy (Leerkes, 2011)
- Coverage of a longitudinal study that found changes in attachment security/insecurity from infancy to adulthood were linked to stresses and supports in socioemotional contexts (Van Ryzin, Carlson, & Sroufe, 2011)
- New description of the developmental cascade model that is increasingly being used to study connections across domains over time that influence developmental pathways and outcomes (Cicchetti, 2013; Masten, 2013)
- Coverage of a recent study that found infants who were insecurely attached to both their mother and father had more externalizing problems in the elementary school years than their counterparts who were securely attached to at least one parent (Kochanska & Kim, 2012)
- New commentary noting that some researchers have not found support for gene-environment interactions related to infant attachment (Luijk & others, 2011; Roisman & Fraley, 2012)
- New main section on attachment in middle and late childhood
- New discussion of research by Kathryn Kerns and her colleagues (Brumariu, Kerns, & Siebert, 2012; Kerns & Siebert, 2012; Kerns, Siener, & Brumariu, 2011) that focuses on the role of secure attachment in internalizing symptoms, anxiety, depression, and emotion regulation
- Description of a recent research review that revealed a strong link between levels or patterns of oxytocin and aspects of mother-infant attachment (Galbally & others, 2011)
- Discussion of recent research indicating that fathers with a college-level education engaged in more stimulating physical activities with their infants and that fathers in a

conflicting couple relationship participated in less caregiving and physical play with their infants (Cabrera, Hofferth, & Chae, 2011)

- Coverage of a recent study that revealed infants who showed a higher level of externalizing, disruptive problems at 1 year of age had fathers who displayed a low level of engagement with their infants as early as the third month of life (Ramchandani & others, 2013)
- Description of a recent study that found depressed fathers focused more on their own needs than their infants' needs and used more negative and critical speech when interacting with their infants (Sethna, Murray, & Ramchandani, 2012)
- Inclusion of recent research that found high-quality child care during the infant/toddler years was linked to better memory skills at the end of the preschool years (Li & others, 2013)
- Coverage of recent research linking early higher quality of child care with higher cognitive-academic achievement and lower externalizing behavior at 15 years of age (Vandell & others, 2010)
- Description of a recent study using the NICHD SECCYD data indicating that the worst socioemotional outcomes for children occurred when both home and child care settings conferred risk (Watamura & others, 2011)

Chapter 11: The Self and Identity

- Revised and updated content on the development of the self based on comments from leading expert consultant Susan Harter
- Inclusion of a definition of the self
- Expanded and updated discussion of young children's optimistic self-conception to consider some young children's negative self-evaluations, especially when they experience stress and adverse family conditions (Goodvin & others, 2008; Thompson, 2011)
- Expanded and updated material on the increasing belief that young children are more socially sensitive than was previously envisioned and that this means parents and teachers can help young children to better understand people's internal cognitive and emotional states (Thompson, 2013c, d)
- Description of the current debate about Ross Thompson's (2013b, c) view that young children are more socially sensitive and Susan Harter's (2012) view that they are more egocentric
- Expanded discussion of the increase in social comparison in adolescence, including information about the looking glass self
- Description of recent research on young children's understanding of joint commitments (Grafenhain & others, 2009)
- New discussion of the role of executive function and children's perspective taking (Galinsky, 2010)
- Discussion of a recent study that focused on the positive aspects of perspective taking skills in children who are emotionally reactive (Bengtsson & Arvidsson, 2011)
- New section on understanding others in adolescence
- New section on perspective taking in adolescence, including recent research on gender differences (Smith, Rose, & Schwartz-Mette, 2010), developmental changes in perceiving social justice (Rubenstein, 2012), and relational aggression (Batanova & Loukas, 2011)
- New discussion of developmental changes in perceiving others' traits in adolescence
- New section on social cognitive monitoring in adolescence
- New information indicating that the foundations of self-esteem in middle and late childhood occur through the quality of relationships with parents in infancy and early childhood (Thompson, 2011, 2013a, b, c, d)
- Coverage of a recent study that found adolescents with low self-esteem had lower life-satisfaction at 30 years of age (Birkeland & others, 2012)

- Inclusion of a definition of identity
- New discussion based on a recent research review indicating that adolescents who have a mature identity are better adjusted and are characterized by more positive personality traits, such as conscientiousness and emotional stability (Meeus, 2011)
- Coverage of a recent study indicating that individuals from 12 to 20 years of age increasingly pursue in-depth exploration of their identity (Klimstra & others, 2010)
- Added commentary about the results of the recent meta-analysis by Jane Kroger and her colleagues (2010) indicating that mastery of identity development by early adulthood is far more elusive than Erikson (1968) envisioned
- Coverage of a recent research review indicating that identity is more stable in adults than adolescents (Meeus, 2011)
- Description of a recent meta-analysis that found links between secure attachment and identity achievement (Arseth & others, 2009)
- New section on identity and peer/romantic relationships (Galliher & Kerpelman, 2012)
- Description of recent research that found an open, active exploration of identity with close friends was linked to the positive quality of the friendship (Deamen & others, 2012)
- Inclusion of recent research indicating that friends were often a safe haven for exploring identity in adolescence, providing a potential testing ground for trying out self-disclosures with others (McLean & Jennings, 2012)
- New material on how adolescents and emerging adults in a romantic relationship are in the process of constructing their identities, with each partner providing the other with a context for identity exploration (Pittman & others, 2012)
- Revised and updated information about diversity, especially ethnic identity and immigration, based on feedback from leading expert Diane Hughes
- Extensive updating and expansion of the discussion of cultural and ethnic identity, including recent cross-cultural comparisons of identity development between North American and East Asian countries (Cheng & Berman, 2013; Schwartz & others, 2013)
- New coverage of findings by Seth Schwartz and his colleagues (2013) suggesting that individuals who have grown up as a member of an ethnic minority group or immigrated from another country are more likely to include cultural dimensions in their identity than are non-Latino Whites in the United States who have grown up in the majority culture
- Discussion of recent research indicating that Latino high school and college students were more likely to say that cultural identity was an important dimension of their overall self-concept than were non-Latino White students (Urdan, 2009, 2012)
- Inclusion of a definition of bicultural identity
- Coverage of a recent study of 14- to 21-year-olds' responses to the label "White" (Marks, Patton, & Garcia Coll, 2011)
- Coverage of a recent study that found a positive ethnic identity helped to buffer the negative effects of discrimination experienced by Mexican American adolescents (Umana-Taylor & others, 2012)

Chapter 12: Gender

- New discussion of greater acceptance of masculine girls who are described as tomboys than feminine boys who are described as sissies (Pasterski, Golombok, & Hines, 2011)
- New material on gender segregation in adolescence involving "hanging out" (Mehta & Strough, 2010)
- New section on the influence of schools and teachers on children's gender development
- Coverage of a recent gender stereotyping study of 6- to 10-year-olds who reported that math is mainly for boys (Cvencek, Meltzoff, & Greenwald, 2011)
- Description of a recent research review that focused on girls' negative attitudes about math and the negative expectations that parents and teachers have for girls' math competence (Gunderson & others, 2012)

- Substantial updating and expansion of same-sex education, including its dramatic increase in recent years (NASSPE, 2012).
- Inclusion of two recent research reviews, both of which concluded there have been no benefits of same-sex education for low-income youth of color (Goodkind, 2012; Halpern, Beninger, & Straight, 2011)
- New discussion of possible benefits of same-sex education exclusively for African American males and discussion of the successful Urban Prep Academy for Young Men in Chicago that opened in 2010 in which 100 percent of the school's first graduates enrolled in college (Mitchell & Stewart, 2013)
- Expanded and updated coverage of media influences on gender (Near, 2013)
- Description of recent research that found male teachers perceived boys more positively and viewed them as more educationally competent than did female teachers (Mullola & others, 2012)
- Coverage of a recent study of how gender is displayed in MTV music videos (Wallis, 2011)
- Inclusion of information about a recent meta-analysis that revealed no gender differences in math for adolescents (Lindberg & others, 2010)
- Updated data on the continuing gender gap in reading and writing among U.S. students (National Assessment of Educational Progress, 2012)
- Updated material on gender differences in high school dropout rates (National Center for Education Statistics, 2011)
- Update on the increasing gender difference involving more women than men attending college after high school (Women in Academia, 2011)
- Coverage of a recent large-scale study linking girls' positive attitudes about school to their higher grades and boys' negative attitudes toward school to their lower grades (Orr, 2011)
- Updated and expanded discussion of gender differences in emotion (Hertenstein & Keltner, 2011)
- Revised and updated discussion of gender differences in relationships, including information from recent research reviews indicating that girls are more people oriented and boys are more object oriented (Galambos, Berenbaum, & McHale, 2009; Perry & Pauletti, 2011)
- Discussion of a recent meta-analysis of children's emotional expression that found a small overall gender difference with girls showing more positive and internalizing emotions; however, this gender difference became more pronounced with age, increasing during middle and late childhood and adolescence (Chaplin & Aldao, 2013)
- Coverage of a recent research review indicating that gender differences in adolescence are small (Perry & Pauletti, 2011)
- Inclusion of information about a recent study that indicated hyper-gender behavior in boys and girls was linked to a lower level of school engagement and school attachment (Ueno & McWilliams, 2010)

Chapter 13: Moral Development

- Substantial updates based on feedback from leading experts Darcia Narváez and Daniel Lapsley
- Updated and expanded coverage of criticisms of Piaget's view of young children's moral development based on research indicating that young children often show a non-egocentric awareness of others' intentions and know when someone violates a moral prohibition (Thompson, 2012)
- Updated and expanded coverage of the personality domain and domain theory, including expanded examples of domains, in the opening material explaining moral development
- Expanded information about the domain theory of moral development and the distinction between moral, social conventional, and personal domains (Smetana, 2011a, b, 2013a, b; Smetana & others, 2012)

- Description of recent research indicating that 2½- to 4-year-old children distinguished hypothetical moral from conventional transgressions on many criteria but only older preschoolers did so when rating whether someone deserved punishment (Smetana & others, 2012)
- Description of a recent study of children's unwillingness to donate any money after watching a UNICEF film on children suffering from poverty until an adult gently probed their intentions, which supports the situational nature of moral behavior (van IJzendoorn & others, 2010)
- Coverage of a recent study of 5- to 13-year-olds that found with increasing age children attributed more positive emotions to people who sacrifice their own desires to help others who are needy and become more discriminating about the contexts that call for altruistic action (Weller & Lagattuta, 2013)
- Coverage of a recent study that revealed links between a higher level of multicultural experience and a lower level of closed mindedness, a growth mindset, and higher moral judgment (Narváez & Hill, 2010)
- Expanded discussion of moral identity with an emphasis on Darcia Narváez's (2010a) recent view that moral metacognition, especially through self-monitoring and self-reflection, is linked to moral maturity
- Description of a recent study that found adolescents' moral motivation was related to the quality of their relationship with their parents (Malti & Buchmann, 2010)
- Coverage of a recent study that linked authoritative parenting to an increase in adolescents' moral identity (Hardy & others, 2010)
- Discussion of two recent studies that revealed an important role of early secure attachment in children's and adolescents' future outcomes (Kochanska & others, 2010a, b)
- Discussion of recent research by Gustavo Carlo and his colleagues (2010) that illustrated the importance of considering the multidimensional aspects of prosocial behavior
- Coverage of a recent study of parenting techniques and adolescent moral development in which parental induction, as well as expression of disappointed expectations, was considered more appropriate by adolescents (Patrick & Gibbs, 2012). In this study, parental induction was linked to a higher level of adolescents' moral identity
- Inclusion of recent research showing that 3-year-olds were less likely to offer assistance to an adult they previously had observed being harmful to another person (Vaish, Carpenter, & Tomasello, 2010)
- Discussion of a recent study that found mothers', but not fathers', authoritative parenting was associated with adolescents' engagement in prosocial behavior one year later (Padilla-Walker & others, 2012)
- New discussion of a recent study that found adolescents' volunteering activity in the community was linked to a higher level of identity status and identity achievement (Crocetti, Jahromi, & Meeus, 2012)
- Description of a recent study that revealed adolescents' volunteer activities provided opportunities to explore and reason about moral issues (van Goethem, 2012)
- New material on the current efforts to get U.S. students involved in service learning that is mainly coordinated by the Corporation for National and Community Service
- Inclusion of a recent research study revealing that forgiveness varied when encountering a transgressing peer based on whether the peer was liked or disliked (Peets, Hodges, & Salmivalli, 2012)
- Description of a recent study that found expressing gratitude was linked to a lower level of depressive symptoms in adolescents (Lambert, Fincham, & Stillman, 2012)
- Coverage of a recent study of Chinese adolescents that found those who had a higher level of gratitude were less likely to engage in suicide ideation and suicide attempts (Li & others, 2012)
- Discussion of a four-year longitudinal study that found the most grateful adolescents had a stronger sense of meaning of life, were more satisfied with their life, were

happier and more helpful, and had a lower level of negative emotions and were less depressed than the least grateful adolescents (Bono, 2012)

- New commentary about how we still do not have adequate research information about how youth perceive prosocial norms and the influence of school policies and peers on adolescents' prosocial behavior (Siu, Shek, & Law, 2012)
- Discussion of recent research on the role of parental monitoring and support during adolescence in reducing criminal behavior in emerging adulthood (Johnson & others, 2011)
- Coverage of a recent study that found for both African American and non-Latino White adolescents, low parental control predicted delinquency indirectly through its link to deviant peer affiliation (Deutsch & others, 2012)
- Description of recent research that revealed authoritative parenting increased youths' perception of the legitimacy of parental authority and that youths' perception of parental legitimacy was associated with a lower level of future delinquency (Trinkner & others, 2012)
- Inclusion of recent research on the role of engaged parenting and mothers' social network support in reducing delinquency in low-income families (Ghazarian & Roche, 2010)
- Discussion of a recent meta-analysis of five programs for reducing the recidivism of juvenile offenders, revealing that family treatment was the only one that was effective (Schwalbe & others, 2012)
- Description of a recent study that found repeated poverty was a high risk factor for delinquency (Najman & others, 2010)
- New description of a recent study that found poor academic performance and reduced attachment to school at age 15 predicted a higher level of criminal activity at 17 to 19 years of age (Savolainen & others, 2012)
- Discussion of recent research suggesting that school connectedness served as a protective factor against the development of conduct problems in young adolescents (Loukas, Roalson, & Herrera, 2010)
- Updated coverage of outcomes for the Fast Track delinquency intervention study through age 19 that found the program was successful in reducing juvenile arrest rates (Conduct Problems Prevention Research Group, 2010b; Miller & others, 2011)
- New coverage of distinctions between religion, religiousness, and spirituality based on a recent analysis by Pamela King and her colleagues (King, Carr, & Boiter, 2011; King, Ramos, & Clardy, 2012)
- Update of college freshmen's religious activities and preference (Pryor & others, 2010)
- Coverage of a recent meta-analysis that found adolescents' spirituality/religiosity was positively linked to their well-being, self-esteem, and three of the Big Five factors of personality (conscientiousness, openness, and agreeableness); in this meta-analysis, spirituality/religion was negatively associated with risk behavior and depression (Yonker, Schnabelrauch, & DeHaan, 2012)
- Inclusion of a recent study that found parents' religiousness during youths' adolescence was positively linked to youths' own religiousness during adolescence (Spilman & others, 2012)
- Discussion of recent research linking church engagement with a lower level of depression in adolescents (Kang & Romo, 2011)

Chapter 14: Families

- Inclusion of new information about the concept of transactions reflecting reciprocal socialization (Sameroff, 2009)
- New section on parental roles and the timing of parenthood that includes content on trends in the age at which adults have children and differences in parenting between younger and older parents (Carl, 2012; Lauer & Lauer, 2012)

- Expanded and updated discussion of the effects of punishment on children's development, including longitudinal studies that have linked early physical punishment to later aggression (Gershoff & others, 2012; Lansford & others, 2011), and cross-cultural studies that have found in countries in which physical punishment is considered normal and necessary for handling children's transgressions, the effects of punishment are less harmful (Lansford & others, 2005; Lansford & Deater-Deckard, 2012)
- Expanded and updated coverage of family-related factors that can contribute to child maltreatment (Cicchetti, 2013; Laslett & others, 2012; Turner & others, 2012)
- Discussion of research indicating links between early childhood maltreatment and subsequent problems in emotional development (Kim-Spoon, Cicchetti, & Rogosch, 2013)
- Coverage of a recent study that revealed a significant increase in suicide attempts before age 18 when repeated child maltreatment occurred (Jonson-Reid, Kohl, & Drake, 2012)
- Description of recent research studies that linked child maltreatment to risk for various diseases and physical health problems, sexual problems, and depression as adults (Lacelle & others, 2012; Nanni, Uher, & Danese, 2012)
- Discussion of a 30-year study that found middle-aged adults who had experienced child maltreatment had an increased risk of diabetes, lung disease, malnutrition, and visual problems (Widom & others, 2012)
- Coverage of a recent study linking fathers' play with young children to an increase in supportive coparenting (Jia & Schoppe-Sullivan, 2011)
- Inclusion of recent research studies on the transition to parenthood that involve negative changes in relationships for both married and cohabiting women with their partners, and violated expectations (Biehle & Mickelson, 2012; Mortensen & others, 2012)
- Description of recent research on factors linked to new mothers' low marital satisfaction (Dew & Wilcox, 2011)
- New section on managing and guiding infants' behavior (Holden, Vittrup, & Rosen, 2011)
- New material on the percentage of parents who use various management and corrective methods in dealing with infants' undesirable behaviors, including new Figure 14.2 (Vittrup, Holden, & Buck, 2006)
- Discussion of recent research focused on parent-adolescent relationships of Asian American parents and their adolescents (Russell, Crockett, & Chao, 2010)
- Inclusion of recent research on more than 36,000 eighth- and tenth-graders revealing that a higher level of parental monitoring was associated with lower alcohol and marijuana use, with the effects strongest among female adolescents and adolescents with the highest risk-taking profile (Dever & others, 2013)
- Expanded and updated discussion of the increasing interest in adolescents' management of their parents' access to information, including recent research findings (Metzger & others, 2013; Rote & others, 2012; Smetana, 2011a, b)
- New coverage of a recent study of U.S. and Chinese adolescents that found adolescents' disclosure to parents was linked to a higher level of academic competence over time (Cheung, Pomerantz, & Dong, 2013)
- New material on parent-adolescent conflict in immigrant families, such as Latinos and Asian Americans, that focuses on core cultural values with the conflict not always appearing openly but as underlying internal feelings (Fuligni, 2012; Juang & Umana-Taylor, 2012)
- New discussion of a study that found a higher level of parent-adolescent conflict was related to peer-reported aggression and juvenile delinquency (Ehrlich, Dykas, & Cassidy, 2012)
- Discussion of a recent study that found regardless of where they were born, Mexican-origin adolescent girls living in the United States had age expectations for autonomy at an earlier age than their parents preferred (Bamaca-Colbert & others, 2012)

- Inclusion of recent research on adolescents' perceptions of their parents' promotion of more psychological autonomy and less psychological control, and links to adolescent adjustment (Sher-Censor, Parke, & Coltrane, 2011)
- Description of a recent analysis that concluded the most consistent outcomes of secure attachment in adolescence involve positive peer relations and the development of emotion regulation capacities (Allen & Miga, 2010)
- Inclusion of recent research on the effects of sibling conflict about issues of equality and fairness, as well as invasion of one's personal domain, on subsequent well-being (Campione-Barr, Bassett-Greer, & Kruse, 2013)
- Added commentary about effects of parental work on adolescents not being only a maternal employment issue, but often involving the father as well (Parke & Clarke-Stewart, 2011)
- Coverage of a recent study that found adolescent girls from divorced families displayed lower levels of romantic competence, but that their mothers' coherent account of their own romantic experiences alleviated the negative link of divorce to daughters' romantic behavior (Shulman & others, 2012)
- Coverage of a recent study that found parental conflict during children's kindergarten years was linked to higher levels of emotional insecurity later in childhood, which in turn were associated with adjustment problems in adolescence such as depression and anxiety (Cummings & others, 2012)
- Expanded and updated coverage of the relationship between divorced parents and its link to visitations by the noncustodial parent (Fabricius & others, 2010)
- Added comment about father involvement dropping off more than mother involvement following a divorce, especially for fathers of girls
- Coverage of a recent study indicating that an intervention aimed at improving the mother-child relationship was linked to improvements in the coping skills of children in divorced families (Velez & others, 2011)
- Inclusion of information about joint custody working best for children when the divorced parents can get along with each other (Parke & Clarke-Stewart, 2011)
- Revised discussion of remarried families in terms of some of these families being more adult-focused, while others are more child-focused (Anderson & Greene, 2011)
- Coverage of recent information about child and adolescent outcomes for individuals conceived by new reproductive technologies, which are increasingly used by gay and lesbian adults (Golombok, 2011a, b; Golombok & Tasker, 2010)
- Discussion of recent research linking the transmission of divorce across generations, although this transmission has decreased in recent years (Wolfinger, 2011)

Chapter 15: Peers

- Coverage of a recent study that found children who were associated with prosocial peers at age 9 had a higher level of self-control at age 10 and children who were associated with deviant peers at age 9 had a lower level of self-control at age 10 (Meldrum & Hay, 2012)
- Description of recent research with 4-year-old children that found gender was a strong influence on the young children's selection of playmates (Martin & others, 2013)
- New research that indicated low parental control was associated with higher delinquency in adolescence through its link to deviant peer affiliation (Deutsch & others, 2012)
- Description of a recent meta-analysis that revealed the link between mother and peer attachment was much stronger than the association of father and peer attachment (Gorrese & Ruggieri, 2012)
- Coverage of a recent analysis indicating that one of the most consistent outcomes of attachment research in adolescence is that secure attachment to parents is linked to positive peer relations (Allen & Miga, 2010)

- New discussion of social knowledge and peer relations, including a recent study linking adolescents' social intelligence with their peer popularity (Meijs & others, 2010)
- New description of the role that play can have as an important context for the development of language and communication skills (Hirsh-Pasek & Golinkoff, 2013)
- New discussion of concerns expressed by Kathy Hirsh-Pasek, Roberta Golinkoff, and Dorothy Singer (Hirsh-Pasek & others, 2009; Singer, Golinkoff, & Hirsh-Pasek, 2006) about the decline of play in young children's lives causing them to miss out on the many positive cognitive and socioemotional outcomes that result from play
- Coverage of a recent study that found having supportive friends was linked to lower levels of bullying and victimization (Kendrick, Jutengren, & Stattin, 2012)
- New content on bullies' perceptions of their parents (Espelage & Holt, 2012)
- Discussion of recent research showing a higher level of depression and suicide in children who are the victims of bullying (Fisher & others, 2012; Lemstra & others, 2012)
- Description of a recent longitudinal study of more than 6,000 children that found a link between bullying/victimization and suicide ideation (Winsper & others, 2012)
- Coverage of a recent study indicating that victims of peer bullying were more likely to develop borderline personality symptoms (Wolke & others, 2012)
- Discussion of a recent study that asked former victims of bullying what had made the bullying stop (Frisen, Hasselblad, & Holmqvist, 2012)
- Description of a recent study linking bullying and moral disengagement (Obermann, 2011)
- Coverage of a recent study of developmental changes in the importance placed on peer popularity (LaFontana & Cillessen, 2010)
- Inclusion of information about a recent study linking preschool children's aggression in peer interaction to their self-regulation skills (Olson & others, 2011)
- New section on other-sex friendships that includes information about girls reporting more other-sex friendships than boys did
- Inclusion of information on parents likely monitoring their daughters' other-sex friendships more than their sons and recent research indicating that a higher level of parental monitoring led to fewer other-sex friendships, which in turn was associated with a lower level of subsequent alcohol use for girls but not boys (Poulin & Denault, 2012)
- Updated and expanded coverage of the positive outcomes of positive friendship relationships in adolescence (Kendrick, Jutengren, & Stattin, 2012; Tucker & others, 2012; Way & Silverman, 2012)
- Discussion of a study of young adolescents' friendships and depression (Brendgen & others, 2010)
- Description of research indicating benefits of mixed-age friendships for some young adolescents who don't have friends in their grade (Bowker & Spencer, 2010)
- Coverage of a recent study that found some adolescents who identified with certain crowds had more internalizing behavior problems while others who identified with other crowds had more externalizing problems (Doornwaard & others, 2012)
- Coverage of a recent meta-analysis that found a number of gender differences in adolescent girls' and boys' friendships (Gorrese & Ruggieri, 2012)
- Description of recent research that indicated adolescents with a more intense romantic involvement were more likely to engage in delinquency than their counterparts with a lower level of romantic involvement (Cui & others, 2012)
- Coverage of a recent study that revealed young adolescents who had negative relationships with their parents turned to romantic relationships for intimacy and support, which in turn provided the opportunity for early sexual initiation (de Graaf & others, 2012)
- New content on a longitudinal study that found links between adolescents' personality traits, beliefs about marriage, and romantic relationships in early adulthood (Masarik & others, 2012)

- Description of recent research on the negative outcomes of adolescent girls having an older romantic partner (Haydon & Halpern, 2010)
- Coverage of a recent study that found romantic activity was associated with depression in early adolescent girls (Starr & others, 2012)
- New section on parent-adolescent relationships and adolescents' and emerging adults' dating and romantic relationships
- Description of recent research linking the mother's marital satisfaction with the adolescent's romantic competence (Shulman, Davila, & Shachar-Shapira, 2011)
- Discussion of a recent study that found parental divorce influenced the timing of the adolescent's first romantic relationship but only when the divorce occurred in early adolescence (Ivanova, Veenstra, & Mills, 2012)
- Inclusion of recent information from a longitudinal study indicating that better-quality parent-adolescent and dating relationships in adolescence were linked to better-quality romantic relationships in emerging adulthood (Madsen & Collins, 2011)

Chapter 16: Schools and Achievement

- Description of a recent study that found Early Head Start had a protective effect on the risks children might experience in parenting, language development, and self-control (Ayoub, Vallotton, & Mastergeorge, 2011)
- New discussion of Robert Crosnoe's (2011) recent book, *Fitting In, Standing Out,* that emphasizes how the conformity demands of complex peer cultures in high school undermine students' academic achievement
- Updated and expanded discussion of high school dropout rates, including recent data for 2011 and revised Figure 16.3 (National Center for Education Statistics, 2012).
- New discussion of the controversy in determining accurate school dropout rates
- Updated data on the percentage of students who receive special education services and the areas in which they receive those services (Condition of Education, 2012)
- Discussion of recent research indicating that mindfulness training can be effective in improving the attention of adolescents who have ADHD, at least in the short term (van de Weijer-Bergsma & others, 2012)
- New description of some developmental outcomes of children with ADHD, including increased risks for dropping out of school, adolescent pregnancy, substance abuse problems, and engaging in antisocial behavior (Chang, Lichtenstein, & Larsson, 2012; Von Polier, Vioet, & Herpertz-Dahlman, 2012)
- Expanded discussion of the possible misdiagnosis, including details of a recent experimental study that found clinicians overdiagnosed ADHD symptoms, especially in boys (Bruchmiller, Margraf, & Schneider, 2012)
- Coverage of a recent study indicating delayed development in the frontal lobes of children with ADHD, likely due to delayed or decreased myelination (Nagel & others, 2011)
- Description of a recent study that linked cigarette smoking during pregnancy to ADHD in children (Sciberras, Ukoumunne, & Efron, 2011)
- New coverage of executive function deficits in children with ADHD and their links to brain functioning (Jacobson & others, 2011; Rinsky & Hinshaw, 2011)
- New material on deficits in theory of mind in children with ADHD (Buhler & others, 2011; Shuai, Chan, & Wang, 2011)
- Inclusion of recent estimates indicating that in 2008 1 in 88 children had an autistic spectrum disorder, a dramatic increase since 2002 estimates (Centers for Disease Control & Prevention, 2012c)
- New discussion of the role that connectivity between different brain regions might play in the development of autism (Just & others, 2012; Philip & others, 2012)
- Coverage of a recent study of 34 high school classrooms that revealed students who perceived their classrooms as allowing and encouraging autonomy in the first several

weeks of the semester were more engaged in their classrooms throughout the course (Hafen & others, 2012)

- New section on sustained attention, effort, and task persistence exploring the influence of these important processes on adolescent achievement
- Description of a recent study in which task persistence in early adolescence predicted career success in middle age (Andersson & Bergman, 2011)
- New Figure 16.10 that shows a module used in Carol Dweck's recent research on brainology
- Updated information about recent research conducted by Carol Dweck and her colleagues (Dweck, 2012; Good, Rattan, & Dweck, 2012; Job, Dweck, & Walton, 2010; Miller & others, 2012) examining how a growth mindset can prevent negative stereotypes from undermining achievement and how willpower is a virtually unlimited mindset that predicts how long people will work and resist temptations during stressful circumstances
- Discussion of a recent study showing positive developmental outcomes for adolescents with high self-efficacy parents (Steca & others, 2011)
- Expanded material on goal-setting, including the importance of setting personal goals (Wigfield & Cambria, 2010)
- Description of a study demonstrating the importance of intentional self-regulation and extracurricular activities in supporting positive developmental outcomes for young adolescents from low-income backgrounds (Urban, Lewin-Bizan, & Lerner, 2010)
- New coverage of the work done by Barry Zimmerman and his colleagues (Zimmerman, 2002; Zimmerman & Kitsantas, 1997; Zimmerman & Labuhn, 2012) in creating a three-phase model of self-regulation in achievement
- New discussion of the importance of delaying gratification in reaching goals, especially long-term goals (Cheng, Shein, & Chiou, 2012; Schlam & others, 2013)
- Coverage of a large-scale longitudinal study that focused on the importance of academic resources at home, especially in support of African American or low-SES students' achievement (Xia, 2010)
- Inclusion of recent international comparisons of 15-year-olds' reading, math, and science achievement in 65 countries, including new Figure 16.11 (OECD, 2010)
- New discussion of the importance of parental involvement in children's learning, describing the research of Eva Pomerantz and her colleagues (Cheung & Pomerantz, 2012; Pomerantz, Cheung, & Qin, 2012; Pomerantz, Kim, & Cheung, 2012) that especially focuses on comparisons of U.S. and Chinese children and their parents

Chapter 17: Culture and Diversity

- Updated data on the percentage of U.S. children and adolescents living in poverty (U.S. Census Bureau, 2012)
- Discussion of a recent study linking early and persistent poverty to lower cognitive functioning in 5-year-old children (Schoon & others, 2011)
- Inclusion of recent research on outcomes among 9- to 19-year-old African American boys who had experienced the New Hope antipoverty program (McLoyd & others, 2011)
- New discussion of the New Hope Project's work-based, anti-poverty intervention that had positive effects on adolescents' future orientation (Purtell & McLoyd, 2013)
- Description of a recent study that found neighborhood affluence, but not family wealth, was linked to adolescent problems (Lund & Dearing, 2013)
- Updated and expanded introduction to immigration and adolescent development that describes the complexity of immigration (Crosnoe & Fuligni, 2012)
- New coverage of two models of immigration—immigrant risk model and immigrant paradox model—and the conclusion that research supports both models to some degree (Crosnoe & Fuligni, 2012)

- Expanded and updated coverage of the stressful and difficult experiences that children in many immigrant families face, including children in undocumented families (Yoshikawa, 2012)
- Coverage of a recent study that found Mexican American adolescents spent less time with their family and identified less with family values after immigrating to the United States (Updegraff & others, 2012)
- Description of how ethnic/immigrant families often focus on issues associated with promoting children's ethnic pride, knowledge of their ethnic group, and discrimination (Rogers & others, 2012; Simpkins & others, 2012)
- Inclusion of recent research indicating that parents' education before migrating was strongly linked to their children's academic achievement (Pong & Landale, 2012)
- Expanded and updated material on immigrant families and their bicultural orientation, including recent research by Ross Parke and his colleagues (2011) on immigrant Mexican American families
- New discussion of immigrant adolescents as cultural brokers for their parents (Villanueva & Buriel, 2010)
- Discussion of a recent study of the outcomes of discrimination directed toward Latino and Asian American adolescents (Huynh & Fuligni, 2010)
- Discussion of a recent study that found African American adolescents' perceived racial discrimination was linked to their higher level of delinquency (Martin & others, 2011)
- Expanded and updated introduction to media use including the recent creation of the term *screen time* that encompasses the wide range of media/computer/communication/information devices that adolescents now use (De Decker & others, 2012)
- Description of a new study of 8- to 12-year-old girls that found a higher level of media multitasking was linked to negative social well-being while a higher level of face-to-face communication was associated with a higher level of social well-being, such as social success, feeling normal, and having fewer friends whom parents perceived as a bad influence (Pea & others, 2012)
- Substantial updating of media use based on a 2009 national survey of more than 2,000 U.S. adolescents, including comparisons with other previous national surveys to show trends in adolescent media use (Rideout, Foehr, & Roberts, 2010)
- New Figure 17.7 illustrating the dramatic recent increase in adolescent media use
- Description of a new study of 8- to 12-year-old girls that found a higher level of media multitasking was linked to negative social well-being while a higher level of face-to-face communication was associated with a higher level of social well-being, such as social success, feeling normal, and having fewer friends whom parents perceived as a bad influence (Pea & others, 2012)
- Updated and expanded discussion that focuses on the increasing concern about the extensive time young children spend in media and screen time (De Decker & others, 2012)
- Description of recent research indicating that 22 percent of 5- to 8-year-olds use computers daily (Common Sense Media, 2011)
- Much expanded coverage of video game use, including research that substantiates the negative effects of playing violent video games (DeWall, Anderson, & Bushman, 2013) but that also indicates positive child outcomes for prosocial skills after playing prosocial video games (Gentile & others, 2009), improved visuospatial skills (Schmidt & Vandewater, 2008), and weight loss for overweight adolescents following video game playing that requires exercise (Bond, Richards, & Calvert, 2013)
- New commentary that most studies of video game playing by adolescents have focused on possible negative rather than positive outcomes (Adachi & Willoughby, 2013)
- Description of a recent experimental research study that found overweight adolescents lost more weight following a 10-week competitive condition that involved playing the Nintendo Wii EA Sports Active video (Staiano, Abraham, & Calvert, 2012).

- New coverage of a research review on children's and adolescents' TV viewing and creativity concluding that overall there is a negative association between TV viewing and creativity but that there is an exception when children and adolescents watch educational TV content designed to teach creativity through the use of imaginative characters (Calvert & Valkenberg, 2011)
- Inclusion of a recent recommendation that for children 2 to 4 years of age, screen time should be limited to no more than one hour per day (Tremblay & others, 2012)
- Coverage of a recent study linking 3- to 5-year-olds' sleep problems to watching TV after 7 p.m. and watching violent TV shows (Garrison, Liekwig, & Christakis, 2011)
- Description of a recent national survey of trends in adolescents' use of social media, including dramatic increases in social networking and text messaging, and declines in tweeting and blogging (Lenhart & others, 2010)
- Updated coverage of social networking, with Facebook surpassing Google as the most visited Web site in 2010
- New commentary about text messaging now being the main way that adolescents prefer to connect with their friends (Lenhart & others, 2010)
- Inclusion of recent research on links between children's cyber aggression and negative effects on peer relations (Schoffstall & Cohen, 2011)
- Description of a recent study of parenting predictors of adolescent media use (Padilla-Walker & Coyne, 2011)

Resources

The resources listed here may accompany *Child Development*, 14th edition. Please contact your McGraw-Hill representative for details concerning policies, prices, and availability.

Online Learning Center at www.mhhe.com/santrockcd14e. The book's website contains an Instructor's Manual, Test Bank files, PowerPoint slides, Image Gallery, and other valuable materials to help you design and enhance your course. Ask your local McGraw-Hill representative for your password.

Instructor's Manual. Authored by Ralph Carlini, University of Massachusetts-Dartmouth, each chapter of the Instructor's Manual is introduced by a Total Teaching Package Outline. This fully integrated tool helps instructors more easily locate and choose among the many resources available for the course by linking each element of the Instructor's Manual to a particular teaching topic within the chapter. These elements include chapter outlines, suggested lecture topics, classroom activities and demonstrations, suggested student research projects, essay questions, critical thinking questions, and implications for guidance.

Test Bank and Computerized Test Bank. Developed by Diane Powers-Willard, Iowa Central Community College, this comprehensive Test Bank includes more than 1,500 multiple-choice and approximately 75 essay questions. Organized by chapter, the questions are designed to test factual, applied, and conceptual understanding. All test questions are compatible with EZ Test, McGraw-Hill's Computerized Test Bank program.

PowerPoint Presentations. Created by Len Mendola, Adelphia University, these presentations cover the key points of each chapter and include charts and graphs from the text. They can be used as is or modified to meet your specific needs.

McGraw-Hill's Visual Assets Database for Lifespan Development (VAD 2.0) at www.mhhe.com/vad. This online database of videos has been created specifically for instructors to use in the classroom. Customize classroom presentations by downloading the videos to your computer and showing the videos on their own or insert them into your course cartridge or PowerPoint presentations. All of the videos are available with or without captions. Ask your McGraw-Hill representative for access information.

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Reviewers

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Expert Consultants

Child development has become an enormous, complex field, and no single author can possibly be an expert in all areas of the field. To solve this problem, beginning with the sixth edition I have sought the input of leading experts in many different areas of child development. This tradition continues in the fourteenth edition. The experts have provided me with detailed recommendations of new research to include. The panel of experts is literally a *Who's Who* in the field of child development. Their biographies appear on pages xii–xiv.

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CHILD DEVELOPMENT

prologue

If I had my child to raise over again

If I had my child to raise over again,
I'd finger paint more, and point the finger less.
I'd do less correcting, and more connecting.
I'd take my eyes off my watch, and watch more with my eyes.
I would care to know less, and know to care more.
I'd take more hikes and fly more kites.
I'd stop playing serious, and seriously play.
I would run through more fields, and gaze at more stars.
I'd do more hugging, and less tugging.
I would be firm less often, and affirm much more.
I'd build self-esteem first, and the house later.
I'd teach less about the love of power,
And more about the power of love.

—Diane Loomans

section **one**

In every child who is born, under no matter what circumstances, and of no matter what parents, the potentiality of the human race is born again.

—James Agee
American Writer, 20th Century

The Nature of Child Development

Examining the shape of childhood allows us to understand it better. Every childhood is distinct, the first chapter of a new biography in the world. This book is about children's development, its universal features, its individual variations, its nature at the beginning of the twenty-first century. *Child Development* is about the rhythm and meaning of children's lives, about turning mystery into understanding, and about weaving together a portrait of who each of us was, is, and will be. In Section 1, you will read one chapter: "Introduction" (Chapter 1).

chapter 1

INTRODUCTION

chapter **outline**

1 Caring for Children

Learning Goal 1 Identify five areas in which children's lives need to be improved, and explain the roles of resilience and social policy in children's development.

Improving the Lives of Children
Resilience, Social Policy, and Children's Development

2 Developmental Processes, Periods, and Issues

Learning Goal 2 Discuss the most important processes, periods, and issues in development.

Biological, Cognitive, and Socioemotional Processes
Periods of Development
Age and Cohort Effects
Issues in Development

3 The Science of Child Development

Learning Goal 3 Summarize why research is important in child development, the main theories of child development, and research methods, designs, and challenges.

The Importance of Research
Theories of Child Development
Research Methods for Collecting Data
Research Designs
Challenges in Child Development Research

Ted Kaczynski sprinted through high school, not bothering with his junior year and making only passing efforts at social contact. Off to Harvard at age 16, Kaczynski was a loner during his college years. One of his roommates at Harvard said that he avoided people by quickly shuffling by them and slamming the door behind him. After obtaining his Ph.D. in mathematics at the University of Michigan, Kaczynski became a professor at the University of California at Berkeley. His colleagues there remember him as hiding from social circumstances—no friends, no allies, no networking.

Ted Kaczynski, the convicted Unabomber, traced his difficulties to growing up as a genius in a kid's body and not fitting in when he was a child.

Ted Kaczynski, about age 15–16.

After several years at Berkeley, Kaczynski resigned and moved to a rural area of Montana, where he lived as a hermit in a crude shack for 25 years. Town residents described him as a bearded eccentric. Kaczynski traced his own difficulties to growing up as a genius in a kid's body and sticking out like a sore thumb in his surroundings as a child. In 1996, he was arrested and charged as the notorious Unabomber, America's most wanted killer. Over the course of 17 years, Kaczynski had sent 16 mail bombs that left 23 people wounded or maimed and 3 people dead. In 1998, he pleaded guilty to the offenses and was sentenced to life in prison.

A decade before Kaczynski mailed his first bomb, Alice Walker spent her days battling racism in Mississippi. She had recently won her first writing fellowship, but rather than use the money to follow her dream of moving to Senegal, Africa, she put herself into the heart and heat of the civil rights movement. Walker had grown up knowing the brutal effects of poverty and racism. 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. Since her parents had no car, it took them a week to get her to a hospital. By the time she received medical care, she was blind in that eye, and it had developed a disfiguring layer of scar tissue. Despite the counts against her, Walker overcame pain and anger and went on to win a Pulitzer Prize for her book *The Color Purple*. She became not only a novelist but also an essayist, a poet, a short-story writer, and a social activist.

Alice Walker won the Pulitzer Prize for her book *The Color Purple*. Like the characters in her book, Walker overcame pain and anger to triumph and celebrate the human spirit.

Alice Walker, about age 8.

What leads one individual, so full of promise, to commit brutal acts of violence and another to turn poverty and trauma into a rich literary harvest? If you have ever wondered why people turn out the way they do, you have asked yourself the central question we will explore in this book.

preview

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 and the way researchers study them, 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. In this first chapter, we will explore historical views and the modern study of child development, consider why caring for children is so important, examine the nature of development, and outline how science helps us to understand it.

Caring for Children

LG1 Identify five areas in which children's lives need to be improved, and explain the roles of resilience and social policy in children's development.

- Improving the Lives of 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 decline. Anywhere you turn today, the development of children captures public attention.

Caring for children is an important theme of this text. To understand why caring for children is so important, we will explore why it is beneficial to study children's development, identify some areas in which children's lives need to be improved, and explore the roles of resilience and social policy in children's development.

Children are the legacy we leave for the time we will not live to see.

—Aristotle
Greek Philosopher, 4th Century B.C.

IMPROVING THE LIVES OF CHILDREN

If you were to pick up a newspaper or magazine in any U.S. town or city, you might see headlines like these: "Political Leanings May Be Written in the Genes," "Mother Accused of Tossing Children into Bay," "Gender Gap Widens," and "FDA Warns About ADHD Drug." Researchers are examining these and many other topics of contemporary concern. The roles that health and well-being, parenting, education, and sociocultural contexts play in child development, as well as how social policy is related to these issues, are a particular focus of this textbook.

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

—Carl Jung
Swiss Psychoanalyst, 20th Century

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

Health and Well-Being Does a pregnant woman endanger her fetus if she has a few beers a week? How does a poor diet affect a child's ability to learn? Are children exercising less today than in the past? What roles do parents and peers play in whether adolescents abuse drugs? Throughout this text, we will discuss many questions like these regarding health and well-being.

Health professionals today recognize the power of lifestyles and psychological states in children's health and well-being (Burns & others, 2013; Graham, Holt-Hale, & Parker, 2013). In every chapter of this book, issues of health and well-being are integrated into our discussion.

Clinical psychologists are among the health professionals who help people improve their well-being. In *Connecting with Careers,* you can read about clinical psychologist Luis Vargas, who helps adolescents with problems. A Careers Appendix that follows Chapter 1 describes the education and training required to become a clinical psychologist or to pursue other careers in child development.

connecting with careers

Luis Vargas, Clinical Child Psychologist

Luis Vargas is Director of the Clinical Child Psychology Internship Program and a professor in child and adolescent psychiatry at the University of New Mexico School of Medicine. He obtained an undergraduate degree in psychology from Trinity University in Texas and a Ph.D. in clinical psychology at the University of Nebraska–Lincoln.

Vargas' work includes assessing and treating children, adolescents, and their families, especially when a child or adolescent has a serious mental disorder. Vargas also trains mental health professionals to provide culturally responsive and developmentally appropriate mental health services. In addition, he is interested in cultural and assessment issues with children, adolescents, and their families.

Vargas' clinical work is heavily influenced by contextual and ecological theories of development (which we will discuss later in this chapter). His first undergraduate course in human development, and subsequent courses in development, contributed to his decision to pursue a career in clinical child psychology.

Following this chapter you can read about many careers in child development, including more about the field of child clinical psychology. Also, at appropriate places throughout the book we will provide profiles of individuals in various child development careers.

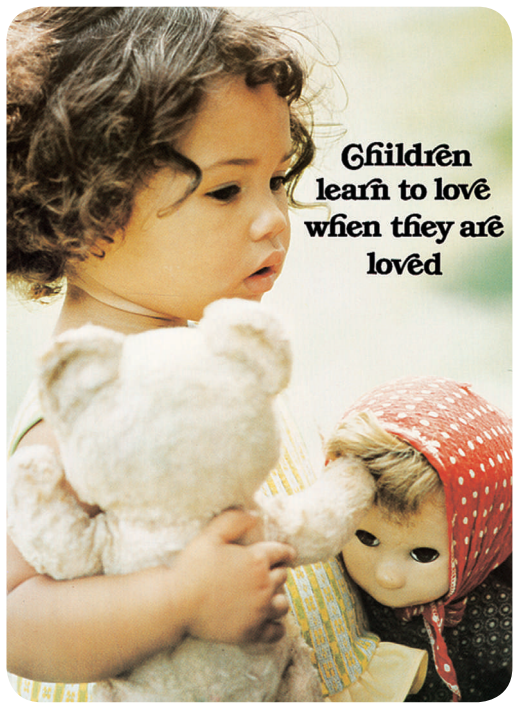
Luis Vargas (*left*) conducting a child therapy session.

For more information about what clinical psychologists do, see page 43 in the Careers in Child Development appendix that directly follows this chapter.

Parenting Can two gay men raise a healthy family? Are children harmed if both parents work outside the home? Does spanking have negative consequences for a child's development? How damaging is divorce to children's development? Controversial answers to questions like these reflect pressures on the contemporary family (Grusec & others, 2013; Patterson, 2013). We'll examine these questions and others that provide a context for understanding factors that influence parents' lives and their effectiveness in raising their children. How parents, as well as other adults, can make a positive difference in children's lives is another major theme of this book.

You might be a parent someday or might already be one. You should take seriously the importance of rearing your children, because they are the future of our society. Good parenting takes considerable time. If you plan to become a parent, commit yourself day after day, week after week, month after month, and year after year to providing your children with a warm, supportive, safe, and stimulating environment that will make them feel secure and allow them to reach their full potential as human beings. The poster on this page that states "Children learn to love when they are loved" reflects this theme.

Understanding the nature of children's development can help you become a better parent (Grusec & others, 2013). Many parents learn parenting practices from their parents. Unfortunately, when parenting practices and child-care strategies are passed from one generation to the next, both desirable and undesirable ones are usually perpetuated. This book and your instructor's lectures in this course can help you become more knowledgeable about children's development and sort through which practices in your own upbringing you should continue with your own children and which you should abandon.



These two Korean-born children on the day they became U.S. citizens represent the dramatic increase in the percentage of ethnic minority children in the United States.

Inderjeet Poolust, 5, from India celebrates being one of 27 schoolchildren who recently became U.S. citizens at an induction ceremony in Queens, New York.

context The settings, influenced by historical, economic, social, and cultural factors, in which development occurs.

culture The behavior patterns, beliefs, and all other products of a group that are passed on from generation to generation.

cross-cultural studies Comparisons of one culture with one or more other cultures. These provide information about the degree to which children's development is similar, or universal, across cultures, and the degree to which it is culture-specific.

ethnicity A characteristic based on cultural heritage, nationality, race, religion, and language.

socioeconomic status (SES) Categorization based on a person's occupational, educational, and economic characteristics.

gender The characteristics of people as males and females.

Education There is widespread agreement that something needs to be done to improve the education of our nation's children (Eccles & Roeser, 2013; McCombs, 2013; Reynolds & Miller, 2013). Among the questions involved in improving schools are the following: Are U.S. schools teaching children to be immoral? Are schools failing to teach students how to read and write and calculate adequately? Should there be more accountability in schools, with adequacy of student learning and teaching assessed by formal tests? Should schools challenge students more? Should schools focus only on developing children's knowledge and cognitive skills, or should they pay more attention to the whole child and consider the child's socioemotional and physical development as well? In this text, we will examine such questions about the state of education in the United States and consider recent research on solutions to educational problems (Miller & Reynolds, 2013).

Sociocultural Contexts and Diversity Health and well-being, parenting, and education—like development itself—are all shaped by their sociocultural context (Bennett, 2012; Gauvain, 2013). The term **context** refers to the settings in which development occurs. These settings are influenced by historical, economic, social, and cultural factors (Spring, 2013). Four contexts that we pay special attention to in this text are culture, ethnicity, socioeconomic status, and gender.

Culture encompasses the behavior patterns, beliefs, and all other products of a specific group of people that are passed on from generation to generation. Culture results from the interaction of people over many years (Gauvain, 2013). A cultural group can be as large as the United States or as small as an isolated Appalachian town. Whatever its size, the group's culture influences the behavior of its members. **Cross-cultural studies** compare aspects of two or more cultures. The comparison provides information about the degree to which development is similar, or universal, across cultures, or is instead culture-specific (Mistry, Contreras, & Dutta, 2013; Zhang & Sternberg, 2013).

Ethnicity (the word *ethnic* comes from the Greek word for "nation") is rooted in cultural heritage, nationality, race, religion, and language. African Americans, Latinos, Asian Americans, Native Americans, Polish Americans, and Italian Americans are a few examples of ethnic groups. Diversity exists within each ethnic group (Trejos-Castillo, Bedore, & Trevino, 2013). Contrary to stereotypes, not all African Americans live in low-income circumstances; not all Latinos are Catholics; not all Asian Americans are high school math whizzes. A special concern is the discrimination and prejudice experienced by ethnic minority children (Benner & Graham, 2013; Tobler & others, 2013).

Socioeconomic status (SES) refers to a person's position within society based on occupational, educational, and economic characteristics. Socioeconomic status implies certain inequalities. Generally, members of a society have (1) occupations that vary in prestige, with some individuals having more access than others to higher-status occupations; (2) different levels of educational attainment, with some individuals having more access than others to better education; (3) different economic resources; and (4) different levels of power to influence a community's institutions. These differences in the ability to control resources and to participate in society's rewards produce unequal opportunities (Doob, 2013; Purtell & McLoyd, 2013).

Gender is another key dimension of children's development. **Gender** refers to the characteristics of people as males and females. Few aspects of our development are more central to our identity and social relationships than gender (Hyde & Else-Quest, 2013; Leaper, 2013; Matlin, 2012). How you view yourself, your relationships with other people, your life, and your goals are shaped to a great extent by whether you are male or female and how your culture defines the proper roles of males and females (Eagly, 2013; Patterson, 2013).

In the United States, the sociocultural context has become increasingly diverse in recent years (Leong & others, 2013). The U.S. population includes a greater variety of cultures and ethnic groups than ever before. This changing demographic tapestry promises not only the richness that diversity produces but also difficult challenges in extending the American dream to all individuals (Schaefer, 2013; Spring, 2013). We will discuss sociocultural contexts and diversity in each chapter. In addition, *Connecting with Diversity,* which highlights an issue related to diversity, appears in every chapter. The *Connecting with*

connecting with diversity

Gender, Families, and Children's Development

Around the world, the experiences of female children and adolescents continue to be quite different from those of males (Mistry, Contreras, & Dutta, 2013; UNICEF, 2012). For example, one analysis found that a higher percentage of girls than boys around the world have never had any education (UNICEF, 2004) (see Figure 1.1). The countries with the fewest females being educated are in Africa, where girls and women in some areas receive no education at all. Canada, the United States, and Russia have the highest percentages of educated women. In developing countries, 67 percent of women over the age of 25 (compared with 50 percent of men) have never been to school. At the beginning of the twenty-first century, 80 million more boys than girls were in primary and secondary educational settings around the world (United Nations, 2002).

A special cross-cultural concern is the educational and psychological conditions of females around the world (UNICEF, 2012). Inadequate educational opportunities, violence, and mental health issues are just some of the problems faced by many females.

In many countries, adolescent females have less freedom to pursue a variety of careers and engage in various leisure acts than males (Helgeson, 2009; UNICEF, 2012). Gender differences in sexual expression are widespread, especially in India, Southeast Asia, Latin America, and Arab countries, where there are far more restrictions on the sexual activity of adolescent females than males. In certain areas around the world, these gender differences do appear to be narrowing over time. In some countries, educational and career opportunities for women are expanding, and in some parts of the world control over adolescent girls' romantic and sexual relationships is weakening. However, in many countries females still experience considerable discrimination, and much work is needed to bridge the gap between the rights of males and females.

Consider Dhaka, Bangladesh, where sewers overflow, garbage rots in the streets, and children are undernourished. Nearly two-thirds of the young women in Bangladesh get married before they are 18. Doly Akter, age 17, who lives in a slum in Dhaka, recently created an organization supported by UNICEF in which girls go door-to-door to monitor the hygiene habits of households in their neighborhood. The girls' monitoring has led to improved hygiene and health in the families. Also, the organization Doly formed has managed to stop several child marriages by meeting with parents and convincing them that early marriage is not in their daughter's best interests. When talking with parents in their neighborhoods, the girls in the organization emphasize how staying in school will improve their daughter's future. Doly says the girls in her organization are far more aware of their rights than their mothers were (UNICEF, 2007).

What health and well-being, parenting, and educational problems and interventions have affected the development of females worldwide?

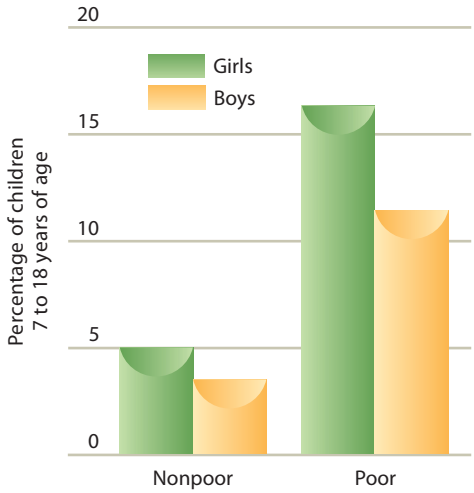


FIGURE **1.1**

PERCENTAGE OF CHILDREN 7 TO 18 YEARS OF AGE AROUND THE WORLD WHO HAVE NEVER BEEN TO SCHOOL OF ANY KIND. When UNICEF (2004) surveyed the education that children around the world are receiving, it found that far more girls than boys receive no formal schooling at all.

Doly Akter