

# Preface

Preparing a new edition of *Life-Span Development* is both a joy and a challenge. I enjoy revising this text because I continue to learn more about the human life span and the journey of life each of us takes. It also is gratifying to revise the text because the feedback from students and instructors has been consistently enthusiastic. The challenge of revising a successful text is always to continue meeting readers' needs and expectations, while keeping the material fresh and up to date. For the twelfth edition of *Life-Span Development*, I have reduced the book's length, expanded coverage in a number of key areas (such as the development of brain), incorporated the latest research and applications, and fine-tuned the aspects of the book that make learning easier and more engaging.

## REDUCED LENGTH

At the request of numerous adopters and reviewers, I reduced the length of the book for the new twelfth edition. To accomplish this reduction in length, I combined Chapter 1 (Introduction) and Chapter 2 (The Science of Life-Span Development) from the eleventh edition into a single chapter (Introduction) in the twelfth edition. I also carefully examined each chapter and reduced content that was dated or less central to current thinking in the field of life-span development.

## INCREASED COVERAGE OF BRAIN DEVELOPMENT

The creation of brain-imaging techniques such as fMRI have led to remarkable increases in our knowledge about brain development in recent years. I have substantially expanded the coverage of brain development in this new edition and where appropriate incorporated images of brains scans. Here are some of the main changes related to brain development:

### Chapter 2 Biological Beginnings

- New coverage of the increasing use of fetal MRI to detect fetal malformations (Garel, 2008; Obenauer & Maestre, 2008)
- New Figure 2.12 with a photograph of a fetal MRI

### Chapter 3 Prenatal Development and Birth

- Important new section on the development of the brain in the prenatal period, including a photo of the tubular appearance of the human nervous system six weeks after conception in Figure 3.4 (Moulson & Nelson, 2008; Nelson 2009)

- New discussion of neural tube defects and what characterizes anencephaly and spina bifida
- Description of recent MRI study of brain deficiencies in children born very preterm (Narberhus & others, 2008)

### Chapter 4 Physical Development in Infancy

- Updated coverage of the development of the brain (Fischer, & Immordino Yang, 2008; Nelson, 2009)
- Expanded description of the function of myelination (Haynes & others, 2006)
- Expanded and updated discussion of links between spurts in brain growth and cognitive functioning (Immordino-Yang & Fischer, 2007)

### Chapter 5 Cognitive Development in Infancy

- New description of the main region of the brain involved in infant attention
- New discussion of connections between development of the brain and development of memory in infancy, including new figure
- New description of the numerous areas of the brain likely involved in infant imitation, including the role that mirror neurons might play in infant imitation (Jackson, Meltzoff, & Decety, 2006; Nash, 2006)

### Chapter 7 Physical and Cognitive Development in Early Childhood

- New Figure 7.1 that shows an electron microscope image of myelination

### Chapter 9 Physical and Cognitive Development in Middle and Late Childhood

- Important new section, The Brain, including recent research on changes in the prefrontal cortex and diffuse/focused activation in the brain, as well as the connection of these changes to cognitive functioning in areas such as cognitive control (Durston & others, 2006)
- Discussion of cortical thickening in children 5 to 11 years of age (Toga, Thompson, & Sowell, 2006)
- New discussion of brain pathways involved in reading disabilities based on recent MRI brain scans (Shaywitz, Lyon, & Lyon, 2006)

- New Figure 9.5 of a 9-year-old boy with dyslexia going through an MRI scanner in a research study focused on learning disabilities
- New material documenting a three-year delay in the thickening of the cerebral cortex in children with ADHD, including a new figure

### Chapter 10 Socioemotional Development in Middle and Late Childhood

- Connection of increased self-regulation to the discussion of developmental advances in the brain's prefrontal cortex in Chapter 9

### Chapter 11 Physical and Cognitive Development in Adolescence

- Updating and expansion of changes in the brain's development in adolescence, including new Figure 11.4 (Giedd, 2008)
- New discussion of the implications of recent research on brain development in adolescence for the legal system, including whether this research can be used to decide whether an adolescent should be given the death penalty (Ash, 2006)
- Coverage of recent research on changes in the brain in adolescence and resistance to peer pressure (Paus & others, 2008)

### Chapter 17 Physical Development in Late Adulthood

- Coverage of recent neuroimaging study on the slowing of activity in the prefrontal cortex of older adults during retrieval of information on a cognitive task (Rypma, Eldreth, & Rebbelchi, 2007)
- Considerable expansion and updating of research and current knowledge about various aspects of the aging brain (Hillman, Erikson, & Kramer, 2008; Libert, Cohen, & Guarente, 2008; Yuan, 2008)
- Updated description of the current status of knowledge about the limitations of neurogenesis in humans to the hippocampus and olfactory bulb, as well as what is known about neurogenesis and the functioning of neurons (Nelson, 2006)
- Coverage of recent study linking exercise with an increase in brain volume in older adults (Colcombe & others, 2006)
- New material on individual differences in brain lateralization and aging, including a new Figure 17.7 showing an fMRI scan of 80-year-old T. Boone Pickens' brain (Helman, 2008)

### Chapter 18 Cognitive Development in Late Adulthood

- Expanded and updated material on cognitive neuroscience and aging, including discussion of recent research on the role of exercise in cognitive advances related to changes in brain functioning assessed by neuroimaging techniques (Kramer & Erickson, 2007)
- New material on older adults' frontal and parietal regions while they are engaging in tasks that require cognitive control processes, such as attention (Grady, 2008)

## RESEARCH AND APPLICATIONS

While reducing the book's overall length, I replaced dated material and significantly updated research in virtually every age period and topic in the text. The twelfth edition continues my view, that above all, a text on life-span development must include a solid research foundation.

### Recent Research

This edition of *Life-Span Development* presents the latest, most contemporary research on each period of the human life span. The new twelfth edition includes more than 1,200 citations from 2007, 2008, and 2009. Shortly, I will list the main chapter-by-chapter content changes.

### Research in Life-Span Development Interludes

*Research in Life-Span Development* interludes appear once in each chapter and provide a more in-depth look at research related to a topic in the chapter. I call them interludes rather than boxes because they follow directly in the text after they have been introduced. In most instances, they consist of a description of a research study, including the identity of the participants, the methods used to obtain data, and the main results. In most cases, they are research studies that have been conducted in the twenty-first century. Because students often have more difficulty reading about research studies than other text material, I wrote these with an eye toward student understanding. Several new and updated research interludes appear in this new edition, including Tiffany Field and her colleagues recent research on massage therapy with preterm infants (Diego, Field, & Hernandez-Reif, 2008; Field, Diego, & Hernandez-Reif, 2008) (Chapter 3), and recent research on the Fast Track intervention with high risk children and adolescents (The Conduct Problems Prevention Research Group, 2007) (Chapter 12).

### Expert Research Consultants

Life-span development has become an enormous, complex field, and no single author, or even several authors, can possibly be an expert in many different areas of life-span development. To solve this problem, I sought the input of leading experts in many different research areas of life-span development. The experts provided me with detailed evaluations and recommendations for a chapter(s) or topics in their area(s) of expertise. The expert research consultants for *Life-Span Development*, twelfth edition, were:

#### Expert

**Maria Hernandez-Reif**

*University of Alabama*

**Andrew Meltzoff**

*University of Washington*

#### Chapters and Topics

Chapters 3 (Prenatal Development and Birth) and Chapter 4 (Physical Development in Infancy)

Chapter 5 (Cognitive Development in Infancy)

<b>Ross Thompson</b> <i>University of California— Davis</i>	Chapter 6 (Socioemotional Development in Infancy) and Chapter 8 (Socioemotional Development in Early Childhood)
<b>Candice Mills</b> <i>University of Texas at Dallas</i>	Chapter 17 (Physical and Cognitive Development in Early Childhood)
<b>L. Monique Ward</b> <i>University of Michigan</i>	Chapter 11 (Physical and Cognitive Development in Adolescence) and Chapter 12 (Socioemotional Development in Adolescence)
<b>John Schulenberg</b> <i>University of Michigan</i>	Chapter 13 (Physical and Cognitive Development in Early Adulthood) and Chapter 14 (Socioemotional Development in Early Adulthood)
<b>Phyllis Moen</b> <i>University of Minnesota</i>	Careers, Work, and Gender in Adulthood and Aging (Chapters 14, 15, and 18)
<b>Karen Fingerman</b> <i>Purdue University</i>	Social Relationships (Chapters 14, 16, and 19)
<b>K. Warner Schaie</b> <i>Pennsylvania State University</i>	Chapter 18 (Cognitive Development in Late Adulthood)
<b>Margie Lachman</b> <i>Brandeis University</i>	Chapter 16 (Socioemotional Development in Middle Adulthood)
<b>Arthur Kramer</b> <i>University of Illinois</i>	Chapter 17 (Physical Development in Late Adulthood) and Chapter 18 (Cognitive Development in Late Adulthood)
<b>Wolfgang Stroebe</b> <i>University of Utrecht, The Netherlands</i>	Chapter 20 (Death, Dying, and Grieving)

## Applications

It is important to not only present the scientific foundations of life-span development to students, but also to provide applied examples of concepts and to give students a sense that the field of life-span development has personal meaning for them. To underscore the importance of applications, I have included an *Applications in Life-Span Development* interlude in every chapter that focuses on health and well-being, parenting, and education. A new *Applications* interlude appears in Chapter 3: From Waterbirth to Music Therapy (Field, 2007).

In addition to giving special attention throughout the text to health and well-being, parenting, and educational applications, the twelfth edition of *Life-Span Development* also includes a *Careers in Life-Span Development* profile in every chapter. They describe an individual whose career relates to the chapter's content. Most of these profiles have a photograph of the person at work. In addition, a *Careers in Life-Span Development* appendix follows Chapter 1 and describes a number of careers in education/

research, clinical/counseling, medical/nursing/physical development, and family/relationships categories. Several new *Career* profiles appear in this new edition, including Helen Schwe, Developmental Psychologist and Toy Designer (Chapter 7).

## ADULT DEVELOPMENT, AGING, AND DIVERSITY

Two very important aspects of a text on life-span development are strong coverage of adult development and aging, as well as diversity.

### Adult Development and Aging

Instructors have repeatedly told me that most life-span texts don't give adequate attention to adult development and aging. In the twelfth edition, I have substantially modified, expanded, and updated the adult development and aging content, continuing a process I began a number of editions ago. Examples of new coverage include:

- Coverage of a longitudinal study on the characteristics of emerging adults who became competent after experiencing difficulties while growing up (Masten, Obradovic, & Burt, 2006)
- New description of research on college students' mental health problems, including new Figure 13.1 (American College Health Association, 2008)
- Updated material on obesity in emerging and early adulthood, including longitudinal data and new Figure 13.3 (Centers for Disease Control and Prevention, 2006), and also coverage of recent large-scale study of more than 168,000 adults in 63 countries (Balkau & others, 2007)
- Description of recent research on stress in the U.S. workplace (American Psychological Association, 2007)
- Extensively updated and expansion of material on adult attachment based on a recent research review by leading experts (Mikulincer & Shaver, 2007, 2009)
- Coverage of two recent studies on gender differences and similarities in the use of words for various purposes (Mehl & others, 2007; Nelson & others, 2008)
- Description of longitudinal study that compared the risk of dying for married and never-married individuals (Ikeda & others, 2007)
- Updated description of gender differences in attraction (Eastwick & Finkel, 2008)
- Coverage of recent research comparing same-sex couples with opposite-sex dating, engaged, and married dyads (Roisman & others, 2008)
- New Figure 15.3 showing NK cells destroying a tumor and coverage of a recent study revealing high NK cell levels in persistently unemployed young and middle-aged adults (Cohen & others, 2007)
- Coverage of the increasing trend for midlife couples to have to plan for two retirements, his and hers (Moen, Kelly, & Magennis, 2008)

- Expanded and updated coverage of menopause (Gosden, 2007; Zaborowska & others, 2007)
- Inclusion of new data from K. Warner Schaie's (2007) Seattle Longitudinal Study on generational differences in parents and their offspring at 60 to 67 years of age
- Coverage of a recent study on developmental comparisons of older, middle-aged, and younger adults on the Big Five factors of personality (Allemand, Zimprich, & Hendriks, 2008)
- Substantial updating and expansion of conclusions about stability and change in personality development based on a recent review by Brent Roberts and Daniel Mroczek (2008)
- Description of a recent study on support between adult siblings (Voorpostel & Blieszner, 2008)
- Coverage of a recent study documenting the stronger role of mothers in intergenerational connections than fathers (Monserud, 2008)
- Inclusion of information about two recent studies that document how various characteristics influence the degree individuals have intergenerational contact (Bucx & others, 2008; Sarkisian & Gerstel, 2008)
- Description of recent study linking parental generativity with young adult offspring's conscientiousness and agreeableness (Peterson, 2006)
- Discussion of recent study on the intergenerational transmission of conduct disorder (D'Onofrio & others, 2007)
- New coverage of a gender difference in health that surprisingly favors men (Perls, 2007)
- Updated and expanded discussion of the role that telomerase inhibition might play in reducing cancerous cells (Chen, Yang, & Zhang, 2008; Fakhoury, Nimmo, & Autexier, 2007)
- Coverage of a recent study linking smoking with a higher concentrations of free radicals (Reddy Thavanti & others, 2008)
- New illustration of mitochondria to accompany the mitochondrial theory of aging (Figure 17.4)
- Coverage of recent neuroimaging study on slowing prefrontal cortex activity during retrieval of information (Rypma, Eldreth, & Rebbeci, 2007)
- Considerable expansion and updating of research and current knowledge about various aspects of the aging brain (Chen & others, 2007; Gould, 2007; Mora & others, 2007)
- Updated description of the limitations of neurogenesis in the aging brain (Nelson, 2006)
- Coverage of recent study on exercise and brain volume in older adults (Colcombe & others, 2006)
- New description of falls as the leading cause of injury death in 65-year and older adults (National Center for Health Statistics, 2008)
- Considerable expansion and updating of research and current knowledge about various aspects of the aging brain (Hillman, Erikson, & Kramer, 2008; Libert, Cohen, & Guarente, 2008; Yuan, 2008)
- New material on individual differences in brain lateralization and aging, including new Figure 17.7 showing an fMRI scan of 80-year-old T. Boone Pickens' brain (Helman, 2008)
- Coverage of recent national study revealing that older adults have only slightly increased their level of exercise in recent years, including new Figure 17.9 (Centers for Disease Control and Prevention, 2008)
- New discussion of the role that resveratrol plays in increasing longevity through moderate drinking and description of its link to a key enzyme, SIRT1 (Pallas & others, 2008; Putics & others, 2008)
- Discussion of recent longitudinal study on physical fitness, weight, and longevity across a 12-year period (Sui & others, 2007)
- New material from recent large-scale study on the sexual activity of older adults, including new Figure 17.13 (Lindau & others, 2007)
- Description of three factors most likely to contribute to cognitive decline in fluid mechanics in late adulthood (Lovden & Lindenberger, 2007)
- Discussion of recent research indicating that trial-to-trial variability on perceptual speed tasks signals impending decline in the cognitive performance of older adults (Lovden & others, 2007)
- Revised conclusion about age differences in sustained attention and vigilance (Isella & others, 2008)
- Coverage of Sherry Willis and her colleagues' (2006) extensive cognitive aging intervention study with older adults
- Inclusion of recent ideas about the engagement model of cognitive optimization in older adults and recent research on the Senior Odyssey program that implements this model (Stine-Morrow & others, 2007)
- Coverage of recent research on how important cohort effects are in cognitive aging (Zelinski & Kennison, 2007)
- Expanded and updated coverage of cognitive neuroscience and aging, including activity increases in older adults' frontal and parietal regions while they are engaging in tasks that require cognitive control processes, such as attention (Grady, 2008)
- Description of recent study on the role of sustained attention in older adults' decision making (Isella & others, 2008)
- Inclusion of research in men in their seventies, indicating that reading daily reduced their mortality (Jacobs & others, 2008)
- New photo and description of the Young@Heart Chorus to illustrate the "use it" side of "use it or lose it"
- Inclusion of recent research on the *apoE* gene and onset of Alzheimer disease (Sando & others, 2008)

- Coverage of recent research on the use of deep brain stimulation in treating Parkinson disease (Ellrichmann, Harati, & Müller, 2008)
- Coverage of a recent study linking years of education and cognitive ability in 79-year-olds (Gow & others, 2008)
- Inclusion of recent research on a link between on regular religious attendance and a lower risk of mortality (Gillum & others, 2008)
- New *Diversity in Life-Span Development* interlude, *Work and Retirement Around the World*, describing a recent large-scale study of 21,000 40- to 79-year-old adults in 21 countries (HSBC Insurance, 2007)
- Description of information about ibuprofen and coffee being linked to a lower risk of developing Parkinson disease (Chand & Litvan, 2007)
- Discussion of five characteristics in late adulthood that are linked to low self-esteem (Giarrusso & Bengtson, 2007)
- Coverage of 12-year longitudinal study of older men linking aspects of neuroticism to a lower level of survival (Mroczek & Spiro, 2007)
- Inclusion of research on conscientiousness as a predictor of mortality risk from childhood through late adulthood (Martin, Friedman, & Schwartz, 2007)
- Description of recent studies indicating that older adults are more inclined to use passive emotion regulation strategies (such as distracting themselves from the problem and suppressing feelings) and less inclined to express anger in solving interpersonal problems than younger adults are (Blanchard-Fields & Coats, 2007; Coats & Blanchard-Fields, 2008)
- Inclusion of recent study on positive and negative emotions in older and younger adults (Lochenhoff, Costa, & Lane, 2008)
- Inclusion of recent study on relationships between aging parents and their children (Fingerman & others, 2008)
- Description of recent study on older adults' social networks (Cornwell, Laumann, & Schumm, 2008)
- Discussion of recent study on the types of emotions experienced with new and established friends in younger and older adults, including new Figure 19.7 (Charles & Piazza, 2007)
- Coverage of recent research on the importance of unmarried older adults being embedded in a friendship network (Fiori, Smith, & Antonucci, 2007)
- New description of three factors most often related with living the "good life" as an older adult in most cultures (Fry, 2007)
- New section on Kastenbaum's (2007) view of the death system
- New Figure 20.1 that focuses on how the death system was involved in Hurricane Katrina (Kastenbaum, 2007)
- Recently proposed ideas about what might constitute a "good death" (Brink & Smith, 2008)
- New section, *Coping and Type of Death* (Wortman & Boerner, 2007)
- Description of a recent study indicating that when older adults engaged in helping behavior following a spouse's death, they experienced an accelerated decline in depressive symptoms (Brown & others, 2008)
- New coverage of the increasingly used terms of complicated grief and disenfranchised grief (Zuckoff & others, 2006; Read & Elliott, 2007)
- Description of the outpouring of support and forgiveness to the widow of Charles Roberts by the Amish following his murder of five Amish school girls in October 2006

## Diversity

Diversity is another key aspect of life-span development. I made every effort to explore diversity issues in a sensitive manner in each chapter. In addition to weaving diversity into discussions of life-span topics, I've included *Diversity in Life-Span Development* interludes in each chapter. Several new and updated *Diversity* interludes appear in this new edition, including recent research by Aletha Huston and her colleagues (2006) on interviewing in impoverished families (Chapter 10) the "I Have a Dream" Program ("I Have a Dream" Foundation, 2008) (Chapter 11) and *Work and Retirement Around the World* (HSBC Insurance, 2007) (Chapter 18). The discussion of diversity also includes new material on these topics:

- Expanded discussion of poverty and children, including updated statistics (Federal Interagency Forum on Child and Family Statistics, 2007)
- Updated coverage of cultural variation in infant motor development (Adolph, 2008)
- Updated and expanded description of cultural variations in infant emotion (Cole & Tan, 2007)
- Discussion of recent research on acculturation of Latino families and links to infant cognitive development (Cabrera & others, 2007)
- Expanded and updated coverage of young children's nutrition in low-income families (Darton-Hill & others, 2007; Sausenthaler & others, 2007)
- New description of low-income families having fewer resources than higher-income families (Conger & Dogan, 2007; Patterson & Hastings, 2007)
- Coverage of recent study in four developing countries linking caregiver depression with childhood injuries (Howe, Hutley, & Abramsky, 2007)
- Description of recent study of parental monitoring of Latino children's eating habits (Arrendondo & others, 2006)
- Updated and expanded coverage of family leave policies around the world related to childbirth in the *Diversity in Life-Span Development* interlude (Tolani & Brooks-Gunn, 2008)

- New coverage of Marva Collin’s work with children from impoverished areas
- Inclusion of recent research on factors involved in inconsistent contraceptive use by female adolescents living in low-income circumstances (Davies & others, 2006)
- Updating of the continuing improvement in school dropout rates for different ethnic groups (National Center for Education Statistics, 2007)
- Description of the recent initiative by the Bill and Melinda Gates Foundation (2008) to reduce the dropout rate in schools with high dropout rates
- Coverage of recent study on the bicultural identity of Mexican American and Asian American college students (Devos, 2006)
- Inclusion of recent studies linking discrimination of African American and Latino adolescents to more problems and lower academic achievement, including new Figure 12.5, showing the types of racial hassles African American adolescents experience (DeGarmo & Martinez, 2006; Sellers & others, 2006)
- Inclusion of recent research comparing the religion and spirituality of African American, Caribbean Black, and non-Latino White older adults (Taylor, Chatters, & Jackson, 2007)
- New description of cultural variations in social support for older adults (Antonucci, Akiyama, & Sherman, 2007)

## WRITING, ORGANIZATION, AND THE LEARNING SYSTEM

The new edition of this text should be accessible to students because of the extensive rewriting, organization, and learning system. Every sentence, paragraph, section, and chapter of this book was carefully examined and, when appropriate, revised and rewritten. The result is a much clearer, better-organized presentation of material in this new edition.

Students should not only be challenged to study hard and think more deeply and productively about life-span development, but also be provided with an effective learning system. Instructors and students have commented about how student-friendly this book has become in recent editions.

Now more than ever, students struggle to find the main ideas in their courses, especially in courses like life-span development, which include so much material. The learning system centers on learning goals that, together with the main text headings, keep the key ideas in front of the reader from the beginning to the end of the chapter. Each chapter has no more than six main headings and corresponding learning goals, which are presented in the chapter-opening spread. At the end of each main section of a chapter, the learning goal is repeated in a featured called Review and Reflect, which prompts students to review the key topics in the section and poses a question to encourage them to think critically about what they have read. At the end of the chapter, under the heading Reach Your Learning Goals, the learning goals guide students through the chapter review.

In addition to the verbal tools just described, mini-chapter maps that link up with the learning goals are presented at the

beginning of each major section in the chapter. The complete learning system, including many additional features not mentioned here, is presented later in a section titled Visual tour for Students.



### CHAPTER 1 INTRODUCTION

- Extensively revised Chapter 1, which in this new edition combines Chapters 1 and 2 from the previous edition; change requested by a number of adopters and reviewers to help shorten the early part of the text
- Significant updating of research and citations
- Revised definition of gender
- Expanded discussion of poverty and children, including updated statistics on the percentage of U.S. children living in poverty (Federal Interagency Forum on Child and Family Statistics, 2007)
- Updated coverage of family policy (Coltrane & others, 2008; Conger & Conger, 2008)
- Description of recent research revealing the cumulative effects of poverty on physiological indices of stress in children (Evans & Kim, 2007)
- Deleted section on history of interest in children and aging
- Reduced amount of material on Freud’s theory at reviewers’ and adopters’ requests



### CHAPTER 2 BIOLOGICAL BEGINNINGS

- Considerable rewriting and editing to make chapter shorter in length without sacrificing any content
- Description of recent search documenting how stress hormones can damage DNA (Flint & others, 2007)
- Updated material on the approximate number of genes that humans possess (20,500) (Science Daily, 2008)
- Description of recent research on the characteristics of boys with Klinefelter syndrome (Ross & others, 2008)
- Updated and expanded coverage of fragile X syndrome, including a new photograph of a boy with fragile X syndrome (One, Farzin, & Hagerman, 2008)
- Inclusion of recent research on cognitive deficits in boys with fragile X syndrome (Hooper & others, 2008)
- New coverage of the underutilization of the only drug (hydroxyurea) approved to treat sickle-cell anemia in adolescents and adults, and current research that is under way to determine if the drug is effective in treating babies
- New section on the extensive recent research on the potential for using noninvasive prenatal diagnosis (NIPD) as an alternative to chorionic villus sampling and amniocentesis (Avent & others, 2008; Finning & Chitty, 2008)

- New coverage of the increasing use of fetal MRI for detecting fetal malformations (Laifer-Narin & others, 2007; Muhler & others, 2007)
- New Figure 2.12 showing a fetal fMRI
- Description of recent large-scale study that found no difference in pregnancy loss between chronic villus sampling and amniocentesis (Caughey, Hopkins, & Norton, 2006).
- New information about the success rates of in vitro fertilization at different ages, including new Figure 2.9 (Centers for Disease Control and Prevention, 2006)
- New coverage of recent large-scale study on adoption and learning disabilities (Altarac & Saroha, 2007)
- Coverage of recent study of the antisocial behavior of adopted and nonadopted young adults (Grotevant & others, 2006)
- Description of recent research review on the self-esteem of adopted and nonadopted children, and transracial and same-race adoptees (Juffer & IJzendoorn, 2007)
- Updated and expanded discussion of the epigenetic view (Gottlieb, 2007)
- Description of recent study on prenatal marijuana exposure and lower intelligence in childhood (Goldschmidt & others, 2008)
- Coverage of recent analysis proposing that fetal programming from an overweight pregnant woman is likely linked to the offspring being overweight in childhood and adolescence (McMillen & others, 2008)
- Inclusion of recent research on a link between folic acid and a reduction in preterm birth (Bukowski & others, 2008).
- Updated research on fetal mercury exposure and developmental outcomes (Triche & Hossain, 2007; Xue & others, 2007)
- Description of a recent research review on maternal stress during pregnancy and negative developmental outcomes in offspring (Talge & others, 2007)
- Coverage of recent study showing that a decline in stress during pregnancy was linked to a lower incidence of preterm birth (Glynn & others, 2008)
- New *Applications in Life-Span Development* interlude, From Waterbirth to Music Therapy (Field, 2007)



### CHAPTER 3

#### PRENATAL DEVELOPMENT AND BIRTH

- Extensive editing and updating of chapter based on recommendations by expert consultant Maria Hernandez-Reif
- Important new section on the development of the brain in the prenatal period, including a photo of the tubular appearance of the human nervous system six weeks after conception (Moulson & Nelson, 2008; Nelson, 2009)
- New discussion of neural tube defects and what characterizes anencephaly and spina bifida
- Inclusion of information from a recent research review of aspirin and reproductive outcomes (James, Brancazio, & Price, 2008)
- Coverage of recent study on caffeine intake during pregnancy and risk for miscarriage (Weng, Odouli, & Li, 2008)
- Change of label from FAS to FASD (fetal alcohol spectrum disorders) in keeping with recently developed terminology and expanded coverage of FASD (Olson, King, & Jirikowic, 2008)
- Description of recent research on environmental tobacco smoke and risk of low birth weight (Leonardi-Bee & others, 2008)
- Coverage of recent research on the harmful effects of cocaine use during pregnancy on growth, language development, and attention (Acconero & others, 2007; Lewis & others, 2008; Richardson, Goldschmidt, & Willford, 2008)
- Inclusion of information about a recent study that revealed negative neonatal outcomes following exposure to methamphetamine in the prenatal period (Smith & others, 2008)
- Updated and revised conclusions about the effects of marijuana use by pregnant women on offspring (Williams & Ross, 2007)
- Description of recent studies on the benefits of massage and acupuncture during labor (Beckmann & Garrett, 2006; Gaudernack, Forbord, & Hole, 2006)
- Expanded and updated coverage of why cesarean delivery has increased in the United States and recent data on trends in cesarean delivery (National Center for Health Statistics, 2007)
- Updated coverage of trends in cesarean delivery (National Center for Health Statistics, 2007)
- Description of recent study linking preterm birth with dropping out of school, including new research figure (Geeta & others, 2008)
- Description of recent MRI study of brain deficiencies in children born very preterm (Narberhus & others, 2008)
- Coverage of the factors involved in why poverty continues to contribute to preterm birth in the United States (Goldenberg & Nagahawatte, 2008)
- Considerably expanded and updated material on the consequences of preterm birth (Minde & Zekowitz, 2008)
- New coverage of a recent survey on techniques used in the NICU (Field & others, 2006)
- Description of recent national study on the incidence of depressive symptoms in mothers and fathers in the postpartum period (Paulson, Dauber, & Leiferman, 2006)
- Updated research about the use of progestin in reducing the risk of preterm birth (Fonseca & others, 2007; Lamant & Jaggat, 2007)
- Coverage of a recent study that revealed a substantial reduction in preterm birth when women took folic acid for one year prior to delivering (Bukowski & others, 2008)
- Description of two recent experimental studies revealing the benefits of kangaroo care (Gathwala, Singh, & Balhara, 2008; Suman, Udani, & Nanavati, 2008)

- Updated coverage of the *Research in Life-Span Development* interlude on Tiffany Field's massage therapy research, including recent research on the effects of massage therapy on preterm infants' stress behaviors with new Figure 3.10 illustrating the results (Field, Diego, & Hernandez-Reif, 2008; Hernandez-Reif, Diego, & Field, 2007)
- New coverage of the sleep deprivation experienced by postpartum women, including new research Figure 3. (Gunderson & others, 2008; National Sleep Foundation, 2007)
- Expanded and updated description of postpartum mothers' patterns of interaction with their infants (Teti & Towe-Goodman, 2008)
- Coverage of recent study on mothers' postpartum depression, preterm/full-term infants, and maternal synchrony (Feldman & Eidelman, 2007)
- Description of the unsettled issue of the optimal course of therapy for the depressed, breast feeding mother, and breast fed infant (Field, 2008)
- Inclusion of material from a recent research review by the American Academy of Pediatrics indicating no link between breast feeding and children's allergies (Greer & others, 2008)
- Extensive updating, revision, and expansion of material on breast feeding based on a recent large-scale research review (Agency for Healthcare Quality and Research, 2007)
- Description of recent research linking longer breast feeding with a lower incidence of metabolic syndrome in midlife women (Ram & others, 2008)
- Discussion of an important issue related to the correlational nature of breast versus bottle feeding studies (Agency for Healthcare Research and Quality, 2007)
- Description of recent research on infants' walking patterns and their occasional large steps (Badaly & Adolph, 2008)
- Updated coverage of cultural variation in infant motor development (Adolph, 2008)
- Updated information about the development of visual acuity in young infants (Aslin & Lathrop, 2008)
- New discussion of recent research on face perception in young infants (Kelly & others, 2007a, b; Slater, Field, & Hernandez-Reif, 2007)



#### **CHAPTER 4 PHYSICAL DEVELOPMENT IN INFANCY**

- Extensive rewriting and editing of chapter for improved student understanding, including a number of changes based on input from expert consultant Maria Hernandez-Reif
- Updated coverage of the development of the brain (Fischer & Immordino-Yang, 2008; Nelson, 2009)
- Expanded description of the function of myelination (Haynes & others, 2006)
- Expanded and updated discussion of links between spurts in brain growth and cognitive functioning (Immordino-Yang & Fischer, 2007)
- Description of recent research on factors related to infant night waking (DeLeon & Karraker, 2007)
- Expanded discussion of REM sleep in infancy and question raised about whether we can know for sure whether infants dream
- Updated and expanded discussion of the shared sleeping and SIDS controversy (Bajanowoski & others, 2007; Mitchell, 2007)
- Expanded and updated research on SIDS, including recent information about the role of the neurotransmitter serotonin in the brain stem (Shani, Fifer, & Myers, 2007)
- New discussion of a recent research on the percentage of overweight babies in the United States, including new Figure 4.11 (Kim & others, 2006)
- Expanded and updated material on developmental changes in infants' eating patterns (Black & Hurley, 2007; Black & Lozoff, 2008; Chatoor & Macoay, 2008)
- Coverage of recent information about breast feeding and type 2 diabetes (Villegas & others, 2008)



#### **CHAPTER 5 COGNITIVE DEVELOPMENT IN INFANCY**

- Extensive editing and rewriting of Piagetian material for improved student understanding
- Recent revised interpretation of A-not-B error (Clearfield & others, 2006)
- Updated and expanded evaluation of Piaget's view of infant cognitive development (Slater, Field, & Hernandez-Reif, 2007)
- Expanded analysis of object permanence, including Andrew Meltzoff's (2008; Meltzoff & Moore, 1998) criticisms of the violation of expectations method as an accurate measure of object permanence
- Expanded and updated coverage of attention, including developmental changes in orienting/investigative and sustained attention (Courage & Richards, 2008)
- New description of the main region of the brain involved in infant attention
- Expanded and updated discussion of habituation and its importance in infant development (Slater, Field, & Hernandez-Reif, 2007)
- New coverage of joint attention and its role in infants' language development (Tomasello & Carpenter, 2007)
- Coverage of recent research on the emergence of gaze following in infants, including new Figure 5.5 showing the research setting and sequence involved in the study (Brooks & Meltzoff, 2005)
- Updated and expanded information on Meltzoff's (2007) view of infant imitation

- Description of recent research on deferred imitation as a predictor of communicative gestures (Heimann & others, 2006)
- New discussion of connections between development of the brain and development of memory in infancy, including new figure
- Expanded and updated coverage of concept formation and categorization in infancy (Booth, 2006; Quinn, Bhatt, & Hayden, 2008)
- New description of the Bayley-III, including its two new scales—socioemotional and adaptive, that are assessed by questionnaires given to the infant’s primary caregiver (Lennon & others, 2008)
- Inclusion of two recent studies on the prediction of language skills at 24 months of age by joint attention as early as 10 to 12 months (Brooks & Meltzoff, 2007; Mundy & others, 2007)
- Description of recent research on the early development of intense interests in particular categories, including strong gender differences, including new Figure 5.9 (DeLoache, Simcock, & Macari, 2007)
- Revised, updated, and expanded coverage of early language development based on leading expert Beverly Goldfield’s (Goldfield & Snow, 2009) recommendations
- Movement of recognizing speech sounds before babbling in the section on early development of language in infancy
- New section on gestures to indicate their importance in early language development and expansion of this topic
- Expanded discussion of infant understanding of words before speaking first word
- Description of recent research review on swaddling (van Sleuwen & others, 2007)
- New discussion of developmental changes in temperament characteristics (Rothbart & Gartstein, 2008)
- Description of recent research on factors that benefited children with a difficult temperament (Bradley & Corwyn, 2008)
- Important new major section, Social Orientation/Understanding, that includes coverage of infants’ developing social interest, locomotion, joint attention, and social referencing (Laible & Thompson, 2007; Thompson, 2006, 2008)
- New discussion of recent research on becoming a social partner with a peer in 1- and 2-year-olds, including a photograph of the research setting and task (Figure 6.6) (Brownell, Ramani, & Zerwas, 2006)
- Description of recent study on links between joint attention in infancy and social competence at 30 months of age (Vaughn Van Hecke & others, 2007)
- New description of Bowlby’s internal working model of attachment based on expert consultant Ross Thompson’s recommendation
- Expanded discussion of cultural variations in attachment (Saami & others, 2006)
- Connection of turn-taking and games like peek-a-boo to the development of joint attention (Chapter 6) (Tomasello & Carpenter, 2007)
- Expanded coverage of the role of locomotion in social orientation and motivation (Thompson, 2008).
- New summary section, Infants’ Social Sophistication and Insight (Thompson, 2008)
- New commentary about how recent findings regarding infants’ earlier social understanding may be linked to understanding goals and intentions in Bowlby’s phase 3 of attachment rather than phase 4 (Thompson, 2008)
- New coverage of John Gottman and his colleagues (2004) Bringing Home Baby project
- Description of recent research on parent-infant synchrony and children’s self-regulation (Feldman, 2007)
- Coverage of recent longitudinal study on infant attachment and cognitive development in the elementary school years (O’Connor & McCartney, 2007)
- New Figure 6.10 on the dramatic increase in the percentage of U.S. fathers staying at home full-time with their children and the results of a recent study of stay-at-home fathers (Rochlen & others, 2008)
- New Figure 6.11 on the primary care arrangements for children under 5 years of age with employed mothers (Clarke-Stewart & Miner, 2008)
- Updated and expanded coverage of family leave policies around the world related to childbirth in the *Diversity in Life-Span Development* interlude (Tolani & Brooks-Gunn, 2008)



## CHAPTER 6 SOCIOEMOTIONAL DEVELOPMENT IN INFANCY

- Extensive rewriting of chapter for improved student understanding, including addition of numerous concrete examples of concepts and more descriptions of infants’ behaviors and emotions
- Expanded and updated coverage of the controversy regarding the onset of early emotions (Lewis, 2007)
- Description of cultural variations in infant emotion (Cole & Tan, 2007)
- Inclusion of new material on links between infant fear and guilt, empathy, and low aggression in childhood (Rothbart, 2007)
- New discussion of why studying the self in infancy is difficult based on the view of leading expert Ross Thompson (2007)
- Updated and expanded description of separation protest in infants (Kagan, 2008)
- Expanded and updated coverage of infant smiling, including new Figure 6.3 on showing the characteristics of an intense smile by a 6-month-old (Messinger, 2008)
- New description of cultural variations in how parents handle infant emotions (Cole & Tan, 2007)

- Inclusion of recent research on the positive outcomes that develop when low-income parents select higher-quality child care (McCartney & others, 2007)
- Description of recent research on quality of child care and children's vocabulary development (Belsky & others, 2007)



## CHAPTER 7 PHYSICAL AND COGNITIVE DEVELOPMENT IN EARLY CHILDHOOD

- New Figure 7.1 that shows an electron microscope image of myelination
- Inclusion of information about three recent studies focused on increasing young children's physical activity (Beets & Foley, 2008; Bower & others, 2008; Trost, Fees, & Dziewaltowski, 2008)
- New *Research in Life-Span Development* interlude, Physical Activity in Young Children Attending Preschools
- New description of the recent trend in reducing physical activity opportunities in preschool and kindergarten programs (American Academy of Pediatrics, 2006)
- Added description of what body mass index is and how it is used to categorize a child as being obese, overweight, or at risk for being overweight (Centers for Disease Control and Prevention, 2008)
- Coverage of recent large-scale U.S. study on the percentage of children 2 to 19 years of age who have weight problems and the recent leveling off in overweight categories (Odgen, Carroll, & Flegal, 2008)
- Discussion of recent research linking being overweight at age 3 with being overweight at age 12 (Nader & others, 2006)
- Coverage of recent study of ethnic variations in being overweight in 3-year-old children (Kimbrow, Brooks-Gunn, & McLanahan, 2006)
- New discussion of the role of caregiver feeding behavior and styles in young children's eating behavior (Black & Hurley, 2007; Black & Lozoff, 2008)
- Recent research on iron deficiency anemia in children and their affective behavior (Lozoff & others, 2007)
- Expanded and updated coverage of young children's nutrition in low-income families (Sausenthaler & others, 2007)
- Revised, improved Figure 7.4 on Piaget's three mountains task that provides students with a better understanding of the concept of egocentrism
- Expanded description of criticisms of Vygotsky (Gauvain, 2008)
- New coverage of advances in executive attention and sustained attention in early childhood (Rothbart & Gartstein, 2008)
- New description of exercises used in some European kindergartens to improve young children's attention (Mills & Mills, 2000; Posner & Rothbart, 2007)
- Much expanded and updated coverage of the young child's theory of mind with considerable input from leading expert Candice Mills
- Description of recent study linking infant attention to 4-year-olds' theory of mind (Wellman & others, 2008)
- Coverage of recent study linking young children's theory of mind competence with later metamemory skills (Lockl & Schneider, 2007)
- New discussion of reasons to question false-belief understanding as a pivotal point in the development of a theory of mind
- Two new figures that show stimuli used in theory of mind research
- New section, Theory of Mind and Autism
- New *Careers in Life-Span Development* profile, Helen Schwe, Developmental Psychologist and Toy Designer
- Updated description of 3-year-olds' phonological advances (Menn & Stoel-Gammon, 2009)
- Expanded and updated coverage of young children's improvements in pragmatics (Aktar & Herold, 2008)
- Description of how not all developmentally appropriate programs show significant benefits for children and recent changes in the concept of developmentally appropriate education (Hyson, 2007)
- Updated material on Project Head Start, including information about it being the largest federally funded program for U.S. children (Hagen & Lamb-Parker, 2008)



## CHAPTER 8 SOCIOEMOTIONAL DEVELOPMENT IN EARLY CHILDHOOD

- Expanded explanation of why young children have unrealistically positive self-descriptions (Thompson, 2008)
- New description of young children's use of psychological traits in their self-descriptions at about 4 to 5 years of age (Thompson, 2006)
- Expansion of section on Self-Understanding to Self-Understanding and Understanding Others, including new introduction on how young children are more psychologically sophisticated than used to be thought (Labile & Thompson, 2007)
- Coverage of research on how even 4-year-olds understand that people will sometimes make statements that aren't true to get what they want or to avoid trouble (Gee & Heyman, 2007; Lee & others, 2002)
- Description of recent research on the age at which young children take into account the relative frequency of errors informants make in deciding whether to trust the person (Pasquini & others, 2007)

- Reorganization of emotion regulation coverage with a new introductory paragraph on its importance in children's development.
- Coverage of recent research on emotion-dismissing parents and children's poor emotion regulation (Lunkenheimer, Shields, & Cortina, 2007)
- New section on young children's development of a conscience (Kochanska & Aksan, 2007)
- Important new section, Parenting and Young Children's Moral Development, that focuses on the quality of parent-child relationships, parents' use of proactive strategies, and conversational dialogue about moral issues (Laible & Thompson, 2007; Thompson, 2006)
- Coverage of recent study linking an early mutually responsive orientation between parents and their infant, a decrease in power assertive discipline in early childhood, and an increase in the young child's internalization and self-regulation (Kochanska & others, 2008)
- New description of recent research review of mothers' and fathers' socialization strategies (Bronstein, 2006)
- Discussion of the increasing number of recent research studies that have found negative developmental outcomes for children who have been physically punished by their parents (Bender & others, 2007; Mulvaney & Mebert, 2007)
- New coverage of data indicating that child neglect occurs up to three times as often as child abuse (Benoit, Coolbear, & Crawford, 2008)
- New information about abnormal stress hormone levels in children who have been maltreated (Gunnar & Fisher, 2006), including new Figure 8.4
- New description of three main characteristics of sibling relationships (Dunn, 2007)
- Inclusion of recent research on mediating training for parents and positive sibling outcomes (Smith & Ross, 2007)
- Updated coverage of birth order based on a recent review (Paulhus, 2008)
- Coverage of Ann Crouter's (2006) recent research on how parents' poor conditions at work can be brought home to negatively influence parenting behavior and child outcomes
- New description of a link between working mothers and a reduction in children's (especially girls') gender stereotyping (Goldberg & Lucas-Thompson, 2008)
- Added commentary that the problems children from divorced families experience often stem from active marital conflict in the predivorce period (Thompson, 2008)
- Description of Paul Amato's (2006) longitudinal research on adult outcomes of individuals who experienced their parents' divorce in childhood and adolescence
- New description of low-income families having less resources than higher-income families (Conger & Dogan, 2007; Patterson & Hastings, 2007)

- Expanded coverage of pretend play, including Catherine Garvey's and Angeline Lillard's views



## **CHAPTER 9**

### **PHYSICAL AND COGNITIVE DEVELOPMENT IN MIDDLE AND LATE CHILDHOOD**

- Important new section, The Brain, including recent research on changes in the prefrontal cortex and diffuse/focused activation in the brain, as well as the connection of these changes to cognitive functioning in areas such as cognitive control (Durstun & Casey, 2006; Durstun & others, 2006)
- Discussion of cortical thickening in children 5 to 11 years of age (Toga, Thompson, & Sowell, 2006)
- Inclusion of recent data regarding the incidence and treatment of childhood cancer in the United States (National Cancer Institute, 2008a, b)
- Description of recent study of significant underdiagnosis of high blood pressure in a large percentage of children with the disease (Hansen, Gunn, & Kaelber, 2007)
- Coverage of recent study in four developing countries linking caregiver depression with child injuries (Howe, Hutley, & Abramsky, 2006)
- Description of recent research on factors linked with whether children will be physically active when they have free time (Heitzler & others, 2006)
- Discussion of recent research linking TV viewing in childhood with exercising less and eating fewer servings of fruit per day (Salmon, Campbell, & Crawford, 2006)
- Description of large-scale U.S. study showing recent leveling off in child obesity (Ogden, Carroll, & Flegal, 2008)
- Coverage of recent research on the benefits of an intensive resistance training program on reducing children's body fat and increasing their muscle strength (Benson, Torodes, & Fiatarone Singh, 2008)
- Inclusion of recent research indicating the amount of daily physical activity that is associated with lower odds of childhood obesity (Wittmeier, Mollard, & Kriellaars, 2008)
- Description of recent study linking aerobic exercise to an increase in planning skills in overweight children (Davis & others, 2007)
- Updated material on the increase in overweight children in many countries around the world (Fogelholm, 2008; Liu & others, 2008)
- Expanded and updated coverage of the developmental outcomes of children who are overweight
- Coverage of recent study indicating a link between body mass index and waist circumference in childhood and metabolic syndrome in adulthood (Sun & others, 2008)
- Description of recent study on how peers perceived obese children (Zeller, Reiter-Purtill, & Ramey, 2008)

- Description of recent study of parental monitoring of Latino children's eating habits (Arrendondo & others, 2006)
- Considerable editing of material on children with disabilities based on expert consultant Karen Harris' recommendations
- Updated description of the percentage of students with disabilities receiving special Services (National Center for Education Statistics, 2007)
- Revised definition of learning disabilities to more closely approximate the U.S. government's definition
- Coverage of trends in the percentage of students with learning disabilities who receive special services (National Center for Education Statistics, 2007)
- New discussion of the brain pathways that are involved in reading disabilities based on recent MRI brain scans (Shaywitz, Lyon, & Lyon, 2006)
- New Figure 9.5 of a 9-year-old boy with dyslexia going through an MRI scanner in a research study focused on learning disabilities
- New description of variation that occur across states and school systems in how learning disabilities are defined and diagnosed (Bender, 2008)
- Description of recent intensive 16-week instruction program that increased the reading skills of first-grade students with severe reading problems who had not responded to adequately to reading instruction (Simos & others, 2007)
- New material documenting a three-year delay in the thickening of the cerebral cortex in children with ADHD, including new Figure 9.6
- Updated coverage of new stimulant and nonstimulant drugs that are being evaluated in the treatment of ADHD (Bhatara & Aparasu, 2007; Faraone, 2007)
- New section, Autism Spectrum Disorders, including research linking autism spectrum disorders to genetic mutations on chromosome 16 in approximately 1 out of 100 cases of these disorders (Weiss & others, 2008)
- New Figure 9.7 showing the percentage of U.S. students with disabilities who spend time in the regular classroom in a recent school year (National Center for Education Statistics, 2007)
- Inclusion of new strategies parents and teachers can use to encourage students' creativity: (1) build students' self-confidence, (2) encourage students to take intellectual risks, and (3) guide students to be persistent and delay gratification
- Expanded and updated coverage of children's scientific thinking, including educational issues in teaching science to children (Gallagher, 2007; Moyer, Hackett, & Everett, 2007)
- Description of recent research on more than 107,000 students in 41 countries linking family, economic, and cultural influences to science achievement (Chiu, 2007)
- Expansion of discussion on what intelligence is, including variations of what Sternberg and Vygotsky might include in their views of what intelligence involves
- Updated discussion of the Wechsler scales to include recently introduced composite indexes such as the Verbal Comprehension Index, the Working Memory Index, and the Processing Speed Index
- Considerable editing and updating of the discussion of intelligence based on feedback from expert consultant Robert J. Sternberg
- Expanded and updated coverage of evaluating general tests of intelligence and the concept of general intelligence in comparison to the concept of multiple intelligences, including Sternberg's (2008) most recent position on these topics
- New description of Sternberg and his colleagues (Sternberg & Grigorenko, 2008; Zhang & Sternberg, 2008) that there are no culture-fair tests, only culture-reduced tests
- Expanded and updated coverage of gifted education, including recent concerns that the No Child Left Behind Policy may be harming students who are gifted (Clark, 2008; Cloud, 2007)
- Extensively revised and updated discussion of sensitive periods in learning a second language (Thomas & Johnson, 2008)



## **CHAPTER 10**

### **SOCIOEMOTIONAL DEVELOPMENT IN MIDDLE AND LATE CHILDHOOD**

- Updated coverage of developmental changes in self-descriptions during middle and late childhood (Harter, 2006)
- New section, Understanding Others, including information about perspective taking and recent research on children's increasing psychological sophistication in understanding others, especially showing more skepticism of others' self-reports of value-laden terms (Heyman, Fu, & Lee, 2007)
- New section, Self-Regulation, describing the increased capacity for self-regulation in middle and late childhood, including its link to advances in managing one's own behavior, emotions, and thoughts that lead to increased social competence and achievement (Laible & Thompson, 2007)
- Connection of increased self-regulation to the discussion of developmental advances in the brain's prefrontal cortex in Chapter 9, "Physical and Cognitive Development in Middle and Late Childhood" (Durstun & others, 2006)
- Description of recent research on the downside of high self-esteem in aggressive children (Menon & others, 2007)
- Coverage of recent research review of cross-cultural studies of Kohlberg's moral judgment stages, including the role of perspective taking (Gibbs & others, 2007)
- Updated summary of experts' conclusions about gender and Gilligan's approach to moral thinking (Hyde, 2005, 2007a, b; Walker, 2006)
- Description of recent research on an increase in gender stereotyping from preschool through the fifth grade (Miller & others, 2007)

- Description of recent research review on gender and visuo-spatial skills (Halpern & others, 2007)
- Coverage of the substantial gender difference in literacy skills of boys and girls in the most recent National Assessment of Educational Progress (2007)
- Updating of discussion of relational aggression, including research that indicates relational aggression comprises a greater percentage of girls' total aggression than is the case for boys (Putallaz & others, 2007; Young, Boye, & Nelson, 2006)
- New coverage of the importance of parenting in middle and late childhood as gatekeepers for children's behavior as children spend less time with parents (Huston & Ripke, 2006)
- New section, Parents as Managers, describing the important roles that parents play as managers of children's opportunities, monitors of their behavior, and social initiators and arrangers (Eccles, 2007; Parke & Buriel, 2006)
- Discussion of Hetherington's (2006) recent conclusions about which type of stepfamily arrangement is linked to better adjustment in children and adolescents
- New discussion of two longitudinal studies linking peer competence in middle and late childhood with competence at work and in close relationships in adulthood (Collins & van Dulmen, 2006; Huesmann & others, 2006)
- New description of two promising bullying intervention programs (Frey & others, 2005; Olweus, 2003)
- New coverage of recent conclusions by experts in educational psychology that the most effective teachers often use both constructivist and direct instruction approaches (Bransford & others, 2006)
- New *Diversity in Life-Span Development* interlude, Improving Resources for Schools and Families in Impoverished Areas, including recent research by Aletha Huston and her colleagues (Huston & others, 2006) on intervening in impoverished families
- Updated discussion of accountability and the No Child Left Behind legislation, including recent research on how many states actually have lowered rather than raised standards because of NCLB and NCLB's failure to meet its goal of reducing the ethnic achievement gap (Birman & others, 2007; Darling-Hammond, 2007)
- New description of Carol Dweck's (2006) recent concept of mindset
- New coverage of Marva Collin's work with children from impoverished areas



## CHAPTER 11 PHYSICAL AND COGNITIVE DEVELOPMENT IN ADOLESCENCE

- New *Images of Life-Span Development*, Latisha, Arnie, and Katie
- Coverage of recent research studies on body image and body dissatisfaction during adolescence that focus on appearance, physical and mental health problems, and the best and worst aspects of being a boy or a girl (Dyl & others, 2006; Gillen, Lefkowitz, & Shearer, 2006; Neumark-Sztainer & others, 2006; Zittleman, 2006)
- New section, Body Art, describing the increased use of tattooing and body piercing by adolescents and college students (Armstrong, Caliendo, & Roberts, 2006; Deschesnes, Fines, & Demers, 2006; Suris & others, 2007)
- Inclusion of information about recent study on early-maturing girls and their trying cigarettes and alcohol without their parents' knowledge (Westling & others, 2008)
- Updating and expansion of changes in the brain's development in adolescence, including new Figure 11.4
- New discussion of the implications of recent research on brain development in adolescence for the legal system, including whether this research can be used to decide whether an adolescent should be given the death penalty (Ash, 2006)
- Coverage of recent research on changes in the brain in adolescence and resistance to peer pressure (Paus & others, 2008)
- Description of recent research on patterns of TV viewing by high school students and links to their sexual experience (Ward & Friedman, 2006)
- Updated data on developmental changes in adolescents' sexual activities, including new Figure 11.5, illustrating these changes (MMWR, 2006)
- New discussion of the dramatic increase in oral sex by U.S. adolescents (Bersamin & others, 2006)
- Description of longitudinal study from 10 to 12 years of age to 25 years of age indicating a link between early sexual intercourse and problems in emerging adulthood (Cornelius & others, 2007)
- Coverage of recent research on a link between various risk factors and early sexual intercourse (Hyde & Price, 2007)
- Description of recent research review on factors linked to having early sexual intercourse (Zimmer-Gembeck & Helfand, 2008)
- Discussion of large-scale U.S. study on the increase in the use of a contraceptive during the last time high school students had sexual intercourse (Centers for Disease Control and Prevention, 2008).
- Inclusion of recent research on factors involved in inconsistent contraceptive use by female adolescents living in low-income circumstances (Davies & others, 2006)
- Coverage of recent research reviews indicating that abstinence-only education is not effective in delaying sexual intercourse in adolescence and is not effective in reducing HIV risk behaviors (Kirby, Laris, & Rolleur, 2007; Underhill, Montgomery, & Operario, 2007)
- Description of recent study that revealed that adolescents who experienced comprehensive sex education reported fewer pregnancies than adolescents who were given abstinence-only or no sex education (Kohler, Manhart, & Lafferty, 2008)

- Coverage of recent study indicating a gender difference in adolescents in meeting U.S. guidelines for physical activity (Butcher & others, 2008)
- Description of recent study indicating the percent of overweight male and female adolescents who become obese adults (Wang & others, 2008)
- Description of recent research on adolescents eating dinner with their families and lower incidences of drug abuse (CASA, 2007)
- Coverage of the National Youth Risk Survey, indicating that U.S. high school students are decreasing their intake of fruits and vegetables (MMWR, 2006)
- Description of recent data on the increase in the percentage of adolescents who are overweight (Eaton & others, 2006)
- Discussion of recent data from the National Youth Risk Survey (2005) on adolescents' exercise patterns with a special focus on gender and ethnic variations, including new Figure 11.7 (MMWR, 2006)
- Coverage of recent study indicating that higher physical activity at 9 and 11 years of age predicted higher self-esteem at 11 and 13 years of age (Schmalz & others, 2007)
- Description of results from the recent National Sleep Foundation (2006) survey on adolescent sleep patterns and new research photo of an adolescent being assessed in Mary Carskadon's sleep laboratory
- Coverage of recent research study that linked sleep deprivation in adolescence to health-compromising behaviors (Fuligni & Hardway, 2006)
- Description of recent study on factors linked to adolescents' negative body images (Ata, Ludden, & Lally, 2007)
- Updated results from the Monitoring the Future Study regarding adolescent substance use and abuse (Johnston & others, 2008)
- Coverage of recent research on the protective role of educational success in reducing adolescents' drug use (Bachman & others, 2008)
- Recent research on the increasing recognition of the importance of family functioning in anorexia nervosa and its treatment (Benninghoven & others, 2007; Bulik & others, 2007)
- Much expanded and updated discussion of adolescent decision making, including recent research and views (Gerrard & others, 2008; Reyna & Rivers, 2008)
- Inclusion of new material about the importance of social contexts, especially peers and how their presence activates the brain's reward pathways, in adolescent decision-making (Steinberg, 2008)
- Description of how graduated driver licensing (GDL) reduces adolescent crashes and fatalities (Keating, 2007)
- Updated coverage of the continuing decline in school dropout rates for different ethnic groups (National Center for Education Statistics, 2007)
- Description of recent initiative by the Bill and Melina Gates Foundation (2008) to reduce the dropout rate in schools with high dropout rates by keeping high-risk students with the same teachers across the high school years
- New *Diversity in Life-Span Development* interlude, the "I Have a Dream" Program to reduce dropping out of school ("I Have a Dream" Foundation, 2008)
- New material on two conditions that improve the likelihood that service learning will generate positive outcomes (Nucci, 2006)
- Updated and expanded coverage of service learning outcomes, including recent research on different outcomes for adolescents, depending on the type of service learning (Schmidt, Shumow, & Kackar, 2007)
- Inclusion of recent study of gender differences in service learning (Webster & Worrell, 2008)



## CHAPTER 12 SOCIOEMOTIONAL DEVELOPMENT IN ADOLESCENCE

- Description of longitudinal study linking low self-esteem with a number of problems in adulthood (Trzesniewski & others, 2006)
- New coverage of James Cote's (2006) view on identity development in emerging adulthood
- Description of recent study on the bicultural identity of Mexican American and Asian American college students (Devos, 2006)
- Inclusion of recent research on ethnic identity in Navajo adolescents (Jones & Galliher, 2007)
- New major section, Religious and Spiritual Development
- New section on religion and identity development in adolescence and emerging adulthood (Kroger, 2007; Templeton & Eccles, 2006)
- Discussion of recent study of changes in religiousness and attending religious services from 14 to 24 years of age, including new Figure 12.2 (Koenig, McGue, & Iacono, 2008)
- Coverage of recent study of Indonesian Muslim 13-year-olds' religious involvement and social competence (French & others, 2008)
- Coverage of recent research on the positive role of religion in adolescent development (Cotton & others, 2006)
- Description of recent large-scale random sample connecting religiosity in adolescents to lower levels of problem behaviors (Sinha, Cnaan, & Gelles, 2007)
- Coverage of recent World Values Survey (Lippman & Keith, 2006)
- Description of recent research on secure attachment in adolescence and capacity for romantic intimacy in emerging adulthood (Mayseless & Scharf, 2007)

- Discussion of recent research on age differences in resistance to peer influence (Steinberg & Monahan, 2007)
- Description of recent research on girls and friendships with older boys (Poulin & Pedersen, 2007)
- Coverage of recent research indicating the importance of friends' grade-point average in adolescent development (Cook, Deng, & Morgano, 2007)
- Discussion of two recent studies of adolescent girls' romantic involvement and its link to co-rumination, depressive symptoms, and emotionally unavailable parents (Starr & Davila, 2008; Steinberg & Davila, 2008)
- Inclusion of recent studies linking discrimination of African American and Latino adolescents to more problems and lower-level academic achievement, including new Figure 12.5, showing the types of racial hassles African American adolescents experience (DeGarmo & Martinez, 2006; Sellers & others, 2006)
- New discussion of early-onset and late-onset antisocial behavior and their links with outcomes in emerging adulthood (Loeber & others, 2007; Schulenberg & Zarrett, 2006)
- Description of recent research on maternal monitoring and a lower incidence of delinquency in Latino girls (Loukas, Suizzo, & Prelow, 2007)
- Inclusion of recent research on the role of deviant peers in predicting delinquency in African American males (Bowman, Prelow, & Weaver, 2007)
- Updated and expanded coverage of early onset of depression in adolescence and developmental changes in depression during emerging adulthood (Schulenberg & Zarrett, 2006)
- Coverage of recent study linking adolescent depression to parent-adolescent conflict and low parental support (Sheeber & others, 2007)
- Description of recent studies on protective factors linked with a lower incidence of depressed mood in adolescence (Costello & others, 2008)
- Coverage of recent research that examined variations in therapies to reduce adolescent depression (The TADS Team, 2007)
- Updated description of suicide rates in adolescence and new information about the increase in suicide in emerging adulthood (Minino, Heron, & Smith, 2006; Park & others, 2006)
- New Figure 12.6 on the percentage of adolescents who say they have seriously considered suicide or attempted it unsuccessfully (Eaton & others, 2006)
- New discussion of the cultural contexts of suicide attempts, including new Figure 12.7 on ethnic variations in suicide attempts by U.S. adolescents (Goldston & others, 2007)
- Coverage of recent study on the influence of suicide attempts by members of an adolescent's social groups on the adolescent's probability of attempting suicide (de Leo & Heller, 2008)
- Inclusion of recent research linking thwarted belongingness and perception of being a burden to others with suicidal thoughts (Van Orden & others, 2008)
- Description of recent study on preteen alcohol use and suicide attempts in adolescence (Swahn, Bossarte, & Sullivent, 2008)
- Coverage of recent research linking suicidal thoughts to eating disorders in adolescence (Whetstone, Morrissey, & Cummings, 2007)
- Extensively updated discussion of juvenile delinquency, including research on cognitive factors such as IQ, self-control, and sustained attention (Koolhof & others, 2007; Loeber & others, 2007), physical abuse (Lansford & others, 2007), peer rejection and deviant friends (Vitaro, Pedersen, & Brengden, 2007)
- New *Research in Life-Span Development* interlude, Fast Track, providing very recent information about an extensive intervention with high-risk kindergarten children and outcomes of the intervention in adolescence (The Conduct Problems Prevention Research Group, 2007; Dodge & the Conduct Problems Prevention Research Group, 2007)



### CHAPTER 13 PHYSICAL AND COGNITIVE DEVELOPMENT IN EARLY ADULTHOOD

- New material on the fascinating life of Dr. Michael Madaus, who turned his life around as an emerging adult
- Description of recent research on the criteria that parents and college students perceive to be important in determining when an individual should be considered an adult (Nelson & others, 2007)
- Coverage of longitudinal study on the characteristics of emerging adults who became competent after experiencing difficulties while growing up (Masten, Obradovic, & Burt, 2006)
- New description of research on college students' mental health problems, including new Figure 13.1 (American College Health Association, 2008)
- Updated description of the percentage of college freshmen who experience stress and depression (Pryor & others, 2007)
- New discussion of emerging adults' mortality rate, including new Figure 13.2 (Park & others, 2006)
- Coverage of longitudinal study indicating that bad health habits engaged in during adolescence tend to increase in emerging adulthood (Harris & others, 2006)
- Updated material on obesity in emerging and early adulthood, including longitudinal data and new Figure 13.3 (Centers for Disease Control and Prevention, 2006)
- Description of recent large-scale study of overweight and obesity in more than 168,000 adults in 63 countries (Balkau & others, 2007)
- Updated description of the prevalence of smoking in the United States (Centers for Disease Control and Prevention, 2006)



- Expanded and updated information about factors that affect cholesterol and aging (Masley & others, 2008)
- Coverage of recent national survey on the percentage of U.S. middle-aged individuals classified as obese (Centers for Disease Control and Prevention, 2006)
- Description of recent large-scale longitudinal study linking obesity in middle age with an increased risk of dying (Adams & others, 2006)
- Coverage of recent study that revealed a link between emotional stress and anger at work and the occurrence of acute coronary syndrome (Lipovetsky & others, 2007)
- Discussion of recent research and the increasing study of metabolic syndrome (Hong & others, 2007; You & others, 2008)
- Description of recent research review indicating that reducing risk factors such as smoking and high blood pressure saves as many lives as high-tech surgical treatments (Ford & others, 2007)
- New Figure 15.3 showing NK cells destroying a tumor and coverage of recent study revealing higher NK cells levels in persistently unemployed young and middle-aged adults compared with their previously unemployed counterparts who became reemployed (Cohen & others, 2007)
- Expanded and updated coverage of menopause, including factors that contribute to its onset and whether, like menarche, menopause has been coming earlier, as well as alternatives to hormone replacement therapy (Gosden, 2007; Zaborowska & others, 2007)
- Description of recent research on exercise, smoking, and menopausal onset and menopausal symptoms (Gosden, 2007; Nelson & others, 2008; Santoro & others, 2007)
- Description of recent study of menopausal transition on the quality of women's quality of life in Taiwan (Cheng & others, 2008)
- Coverage of recent study on factors that increase menopausal symptoms (Sabia & others, 2008)
- New discussion of the likely protective effect of estrogen on cognitive aging in women when initiated soon after menopause begins (Sherwin, 2007)
- Updated description of recent studies documenting the effectiveness and sexual satisfaction of men with erectile dysfunction after taking Viagra (Abdo & others, 2008)
- Description of recent national study of the percentage of U.S. men 40 years of age and older who say they have erectile dysfunction (Laumann & others, 2007)
- Expanded and updated coverage of sexual attitudes and behaviors in middle-aged adults, including gender similarities and differences (Stones & Stones, 2007)
- Inclusion of new data from K. Warner Schaie's (2007) Seattle Longitudinal Study on generational differences in parents and their offspring at 60 to 67 years of age
- Coverage of the increasing trend for midlife couples to have to plan for two retirements, his and hers (Moen & Altobelli, 2007; Moen, Kelly, & Magennis, 2008)
- Description of recent research documenting links between religious attendance and a reduction in hypertension, as well as an increase in longevity (Gillum & Ingram, 2007; Oman & Thoresen, 2006)



## **CHAPTER 16**

### **SOCIOEMOTIONAL DEVELOPMENT IN MIDDLE ADULTHOOD**

- Description of recent study linking parental generativity with young adult offsprings' conscientiousness and agreeableness (Peterson, 2006)
- New Figure 16.5 added to illustrate the increase in environmental mastery, positive relations, and autonomy in middle age
- Coverage of recent study on psychological and physical reactions to daily stressors in young, middle-aged, and older adults (Neupert, Almeida, & Charles, 2007)
- Expanded discussion of information about why midlife is not characterized by a crisis for most people
- Coverage of recent study on development comparisons of older, middle-aged, and younger adults on the Big Five factors of personality (Allemand, Zimprich, & Hendriks, 2008)
- Substantial updating and expansion of a conclusions about stability and change in personality development based on recent review by Brent Roberts and Daniel Mroczek (2008)
- Description of recent study on support between adult siblings (Voorpostel & Blieszner, 2008)
- New discussion of the potential negative influence on the economic circumstances of middle-aged women who become divorced (Mitchell, 2007)
- Coverage of recent research on children's relationship with their father following a divorce and how this affects the children's relationship with their paternal grandparents (Ahrons, 2007)
- Inclusion of recent research on why the grandparent role is important in midlife (Thiele & Whelan, 2008)
- Description of recent research on the influence of caring for grandchildren on grandparents' health (Hughes & others, 2007)
- Updated coverage of the number of grandchildren living with their grandparents (U.S. Census Bureau, 2006)
- Inclusion of information about two recent studies that document how various characteristics influence the degree to which individuals have intergenerational contact (Bucx & others, 2008; Sarkisian & Gerstel, 2008)
- Description of recent large-scale study in 21 countries on intergenerational ties and family responsibility (HSBC Insurance, 2007)

- Discussion of recent study on the intergenerational transmission of conduct disorder (D'Onofrio & others, 2007)
- Coverage of recent study documenting the stronger role of mothers in intergenerational connections than fathers (Monserud, 2008)



## **CHAPTER 17**

### **PHYSICAL DEVELOPMENT IN LATE ADULTHOOD**

- New coverage of a surprising gender difference in centenarians' physical and cognitive functioning that favors men (Perls, 2007; Terry & others, 2008)
- New description of the percentage of individuals in the New England Centenarian Study who are living independently, with family or in assisted living, and in nursing homes (Perls, 2007)
- Updated and expanded discussion of the role that telomerase inhibition might play in reducing cancerous cells (Chen, Yang, & Zhang, 2008; Fakhoury, Nimmo, & Autexier, 2007)
- Coverage of recent study linking smoking with higher concentrations of free radicals (Reddy Thavanati & others, 2008)
- New illustration of mitochondria to accompany the mitochondrial theory of aging (Figure 17.4)
- New description of falls as the leading cause of injury death among adults 65 years and older (National Center for Health Statistics, 2008)
- Coverage of recent neuroimaging study on the slowing of activity in the prefrontal cortex of older adults during retrieval of information on a cognitive task (Rypma, Eldreth, & Rebbelchi, 2007)
- Considerable expansion and updating of research and current knowledge about various aspects of the aging brain (Chen & others, 2007; Gould, 2007; Mora & others, 2007; Sun & Bartke, 2007)
- Updated description of the current status of knowledge about the limitations of neurogenesis in humans to the hippocampus and olfactory bulb, as well as what is known about neurogenesis and the functioning of neurons (Nelson, 2006)
- New material on individual differences in brain lateralization and aging, including new Figure 17.7 showing an fMRI scan of 80-year-old T. Boone Pickens' brain (Helman, 2008)
- Coverage of eight-year longitudinal study of 70-plus-year-olds that revealed the greatest functional decline occurred in mobility (Holstein & others, 2007)
- Coverage of recent experimental study of physical activity in older adults at risk for mobility disability (Rejeski & others, 2008)
- Inclusion of recent study on mobility restrictions in older adults predicted by a lower level of physical activity and a higher level of adiposity (Koster & others, 2008)
- New information about the decline in the amount of light the retina receives at 60 years of age compared with 20 years of age (Scialfa & Kline, 2007)
- Expanded coverage of hearing problems in older adults (Fowler & Leigh-Paffenroth, 2007)
- New material on the use of stem cells as an alternative to cochlear implants in neurosensory hearing loss (Pauley & others, 2008)
- New coverage of information about older adults showing a greater decline in their sense of smell than taste (Schiffman, 2007)
- Description of recent study indicating a decline in the detection of smells in older adults but an increase in perceived pleasantness of a smell (Markovic & others, 2007)
- New coverage of the benefits of exercise in older adults with arthritis (Bulthuis & others, 2007; Metsios & others, 2008)
- Description of the percentage of women and men in their eighties who have hypertension and who have experienced a stroke (Aronow, 2007)
- Inclusion of recent research linking regular exercise at 72 years of age with a nearly 30 percent increase in the probability of still being alive at 90 years of age (Yates & others, 2008)
- Coverage of recent study on exercise and brain volume in older adults (Colcombe & others, 2006)
- Discussion of how exercise benefits in older adults may not always be independent of other lifestyle factors such as diet and engagement in social activities (Kramer & Erickson, 2007)
- Description of recent longitudinal study on physical fitness, weight, and longevity across a 12-year period (Sui & others, 2007)
- New material on the positive role of exercise in older adults' cellular functioning, including recent study on exercise and telomere length (Cherkas & others, 2008)
- Coverage of recent national study revealing that older adults have only slightly increased their level of exercise in recent years, including new Figure 17.19 (Centers for Disease Control and Prevention, 2008)
- New Figure 17.14 showing the percentage of U.S. individuals 65 and older who have chronic conditions
- Description of recent large-scale research study on the sexual activity of older adults, including new Figure 17.13 (Lindau & others, 2007)
- Coverage of two recent research studies that found a protective effect of moderate drinking on the health and longevity of older adults (Rozinni, Ranhoff, & Trabucchi, 2007; Stranberg & others, 2007)

- New discussion of the role that resveratrol plays in increasing longevity through moderate drinking and description of its link to a key enzyme, SIRT1 (Pallas & others, 2008; Putics & others, 2008)
- New commentary about the increasing demand for home health-care workers because of the increase in the population of older adults and their preference to stay out of nursing homes (Moos, 2007)
- Expanded coverage of the importance of different types of exercise, including flexibility and balance exercise (Der Ananian & Prohaska, 2007)
- Expanded description of the evolutionary perspective on why calorie restriction might increase longevity over the long haul (Chen & Guarente, 2007)
- Inclusion of information about recent study linking higher level intake of antioxidants and less cognitive decline in older adults (Wengreen & others, 2007)
- Discussion of cross-sectional study that supported the distinction between fluid mechanics and crystallized pragmatics, including new Figure 18.2, which illustrates the findings (Li & others, 2004; Lovden & Lindenberger, 2007)
- Description of Sherry Willis and her colleagues' (2006) extensive cognitive aging intervention study with older adults
- Inclusion of recent ideas about the engagement model of cognitive optimization in older adults and recent research on the Senior Odyssey program, which implements the model (Stine-Morrow & others, 2007)
- Coverage of recent processing speed training study that resulted in improvement in daily living activities, including safer driving performance (Ball, Edwards, & Ross, 2007)
- Expanded and updated coverage of cognitive neuroscience and aging, including activity increases in older adults' frontal and parietal regions while they are engaging in tasks that require cognitive control processes, such as attention (Grady, 2008)
- Coverage of recent research involving data from the Victoria Longitudinal Study that supports the "use it or lose it" concept (Bielak & others, 2007)
- Inclusion of research in men in their seventies, indicating that reading daily reduced their mortality (Jacobs & others, 2008)
- New photo and description of the Young@Heart Chorus to illustrate the "use it" side of "use it or lose it"
- New coverage of Sternberg's (2003, 2008) balance theory of wisdom
- Coverage of recent study linking years of education and cognitive ability in 79-year-olds (Gow & others, 2008)
- Description of age-related cognitive decline in adults with mood disorders, such as depression (Chodosh & others, 2007; Gualtieri & Johnson, 2008)
- Description of recent large-scale study that assessed the incidence of depression in older adult women (McGuire & others, 2008)
- Coverage of recent research documenting how important cohort effects are in cognitive aging (Zelinski & Kennison, 2007)
- Expanded and updated coverage of language development in older adults, including new material on understanding speech, phonological skills, and discourse (Clark-Cotton, Williams, & Goral, 2007)
- New material on the projection of an increase in the number of workers when the largest of the baby-boom cohorts reaches 70 in 2034 (Manton & others, 2007)
- Updated and expanded coverage of the complexity of life paths older adults follow when they reach retirement age, as well as the varied reasons some older adults continue to work when they reach retirement age, based on expert consultant Phyllis Moen's (2007) ideas
- Description of baby boomers' delayed retirement plans (Frey, 2007)



## CHAPTER 18 COGNITIVE DEVELOPMENT IN LATE ADULTHOOD

- Introduction of new combined terms to illustrate the similarity of fluid and crystallized intelligence and cognitive mechanics and cognitive pragmatics: fluid mechanics and crystallized pragmatics (Lovden & Lindenberger, 2007)
- Description of three factors most likely to contribute to the decline in fluid mechanics in late adulthood (Lovden & Lindenberger, 2007)
- New discussion of the concept of terminal decline in understanding changes in cognitive functioning in older adults (Lovden & Lindenberger, 2007)
- Description of recent research indicating that trial-to-trial variability on perceptual speed tasks signals impending decline in the cognitive performance of older adults (Lovden & others, 2007)
- Coverage of recent research on decline in processing speed as a leading indicator of subsequent decline in memory and spatial ability (Finkel & others, 2007)
- Inclusion of results from a study of episodic memory in 18- to 94-year-olds (Siedlecki, 2007)
- Description of recent study on the role of sustained attention in older adults' decision making (Isella & others, 2008)
- New coverage of the reminiscence bump in autobiographical memory, including recent research on the role of perceived control and influence on later development in such memories (Gluck & Bluck, 2007)
- Expanded coverage of semantic memory, including examples of the measures used to assess semantic memory and the tip-of-the-tongue (TOT) phenomenon (Bucur & Madden, 2007)
- Revised conclusion about age differences in sustained attention and vigilance (Bucur & Madden, 2007)

- New *Diversity in Life-Span Development* interlude, *Work and Retirement Around the World*, describing a recent large-scale study of 21,000 40- to 79-year-old adults in 21 countries (HSBC Insurance, 2007)
- Coverage of 2007 U.S. retirement survey indicating how workers have some misconceptions about retirement and the income and long-term care they will receive (Helman, VanDerhei, & Copeland, 2007)
- Description of how important planning is for adjustment in retirement, especially for women, who are more likely to live longer than men and more likely to be alone (Moen, 2007)
- Inclusion of new information that the number of older adults with depression will likely increase as the current large cohort of baby boomers moves through late adulthood (Parmelee, 2007)
- Description of recent research on the positive role of exercise in alleviating or reducing depression in older adults (Kostka & Praczko, 2007; Mavandadi & others, 2007)
- Added commentary about the global nature of the term *dementia* and the importance of narrowing the diagnosis to a more specific disorder (Whitehouse, 2007a)
- Inclusion of recent research on the *apoE* gene and onset of Alzheimer disease (Sando & others, 2008)
- Coverage of recent research on the use of deep brain stimulation in treating Parkinson disease (Ellrichmann, Harati, & Müller, 2008)
- Description of information about ibuprofen and coffee being linked to a lower risk of developing Parkinson disease (Chand & Litvan, 2007)
- New information about the incidence of elder abuse (Cooper, Selwood, & Livingston, 2008)
- New coverage of institutional abuse in elder maltreatment (MacDonald, 2007)
- Inclusion of recent research on a link between on regular religious attendance and a lower risk of mortality (Gillum & others, 2008)
- Description of recent research comparing aspects of religion in African American, Caribbean Black, and non-Latino White older adults (Taylor, Chatters, & Jackson, 2007)
- Inclusion of information about recent study linking higher spirituality/religiousness with a lower incidence of depression (Yoon & Lee, 2007)
- a more complex, mature self-understanding (King & Hicks, 2007)
- Description of five characteristics in late adulthood that are linked to low self-esteem, (Giarrusso & Bengtson, 2007)
- Coverage of recent large-scale study comparing older and middle-aged adults' perceived control over their lives (HSBC Insurance, 2007)
- Inclusion of study on conscientiousness as a predictor of mortality risk from childhood through late adulthood (Martin, Friedman, & Schwartz, 2007)
- Coverage of 12-year longitudinal study of older men linking aspects of neuroticism to a lower level of survival (Mroczek & Spiro, 2007)
- New section, Possible Selves, including recent research on the possible selves of older adults (Hoppmann & others, 2007)
- Discussion of recent study on the type of emotions experienced with new and established friends in younger adults and older adults, including new Figure 19.7 (Charles & Piazza, 2007)
- Coverage of recent study on aging stereotypes by older adults and hearing decline (Levy, Slade, & Gill, 2006)
- Description of recent research revealing that older adults are clearly capable of being trained to learn new technologies (Hickman, Rogers, & Fisk, 2007)
- Coverage of recent study focused on marital satisfaction in older adults and middle-aged adults (Henry & others, 2007)
- Description of recent study of the sexual activities of older adults in Greece (Papaharitou & others, 2008)
- Inclusion of recent study on relationships between aging parents and their children (Fingerman & others, 2007)
- Coverage of recent study on the importance for unmarried older adults of being embedded in a friendship network (Fiori, Smith, & Antonucci, 2007)
- New description of three factors most often associated with living the "good life" as an older adult in most cultures (Fry, 2007)
- Updated coverage of the importance of social support and social integration in late adulthood, including cultural variations in social support (Antonucci, Akiyama, & Sherman, 2007; Loucks & others, 2006; Rook & others, 2007)
- Description of recent research on older adults' volunteerism in 21 countries (HSBC Insurance, 2007)



## CHAPTER 19 SOCIOEMOTIONAL DEVELOPMENT IN LATE ADULTHOOD

- Inclusion of recent commentary by leading expert Robert Butler (2007) on the nature of the life review
- Coverage of recent ideas about the importance of including regrets as part of a life review that may lead to developing



## CHAPTER 20 DEATH, DYING, AND GRIEVING

- New chapter title: Death, Dying and Grieving
- New section on Kastenbaum's (2004, 2007) view of the death system, including its components, functions, and cultural variations; this new section is now the opening section in the chapter and provides a framing for the chapter
- New Figure 20.1, focusing on how the death system was involved in Hurricane Katrina (Kastenbaum, 2007)

- Recently proposed ideas about what might characterize a “good death” (Brink & Smith, 2008)
- New description of the contexts of hospice care (Hayslip & Hansson, 2007)
- Coverage of recent research on hospices (Harrison & Ford, 2007)
- 2006 update of the Oregon euthanasia law
- Discussion of recent study of the factors that predicted whether older adults had engaged in end-of-life planning activities (Carr & Khodyakov, 2007)
- Coverage of recent study of terminally ill cancer patients’ views on physician-assisted suicide (Wilson & others, 2007)
- Description of recent research on the concerns of dying patients (Terry & others, 2006)
- New section, Coping and Type of Death (Murphy & others, 2003; Wortman & Boerner, 2007)
- Description of recent research indicating that yearning and acceptance are more common responses than depression following the death of a loved one (Maciejewski & others, 2007)
- New coverage of the increasingly used term of prolonged grief by Holly Prigerson and others (Maciejewski & others, 2007)
- New inclusion of the concept of disenfranchised grief (Read & Elliott, 2007)
- Description of recent therapy that was effective in reducing complicated grief (Zuckoff & others, 2006)
- Discussion of research on sense making and grief (Currier, Holland, & Neimeyer, 2006)
- Description of recent research on risk of death in Mexican American widows following a spouse’s death (Stimpson & others, 2007)
- Inclusion of information about recent study on chronic grief in bereaved spouses (Ott & others, 2007)
- Discussion of recent study on the benefits of volunteering for widows following the death of a spouse (Li, 2007)
- Description of recent study indicating that when older adults engaged in helping behavior following a spouse’s death, they experienced an accelerated decline in depressive symptoms (Brown & others, 2008)
- Coverage of the outpouring of support and forgiveness to the widow of Charles Roberts by the Amish following his murder of five Amish schoolgirls in October 2006

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## REVIEWERS

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

### Expert Consultants

I already listed the expert consultants earlier in the preface. Their photographs and biographies appear on pages xv through xix. Life-span 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 life-span development. This tradition continues in the twelfth edition. The experts have provided me with detailed recommendations of new research to include in every period of the life span. The panel of experts is literally a who’s who in the field of life-span development.

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