

Second Edition

A Topical Approach To

Life-Span Development



JOHN W. SANTROCK

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Higher Education

A TOPICAL APPROACH TO LIFE-SPAN DEVELOPMENT

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*With special appreciation to my wife
Mary Jo*

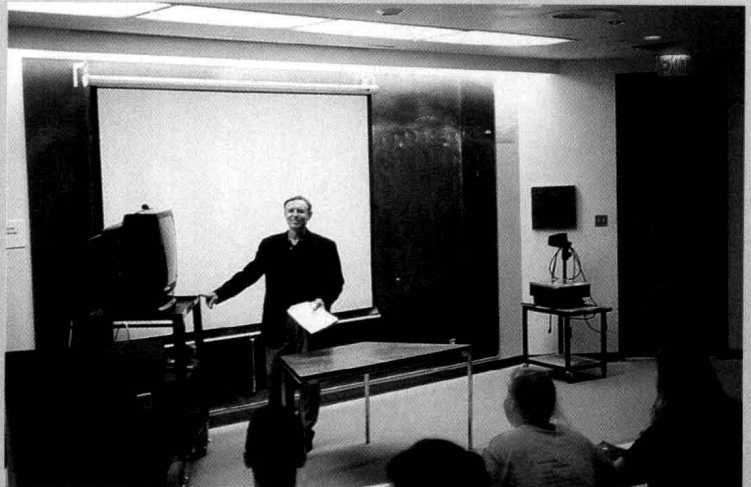
About the Author

John W. Santrock

John Santrock received his Ph.D. from the University of Minnesota in 1973. He taught at the University of Charleston and the University of Georgia before joining the Program in Psychology and Human Development at the University of Texas at Dallas, where he currently teaches a number of undergraduate courses. In 1982, John created the life-span development course at UT-Dallas and has taught it every year since then.

John has been a member of the editorial boards of *Child Development* and *Development Psychology*. His research on father custody is widely cited and used in expert witness testimony to promote flexibility and alternative considerations in custody disputes. John also has authored these exceptional McGraw-Hill texts: *Psychology* (7th edition), *Child Development* (10th edition), *Children* (7th edition), *Adolescence* (10th edition), *Life-Span Development*, (9th edition), and *Educational Psychology* (2nd edition).

For many years, John was involved in tennis as a player, teaching professional, and coach of professional tennis players. He has been married for more than 35 years to his wife, Mary Jo, who is a Realtor. He has two daughters—Tracy, who is a technology specialist at Nortel in Raleigh, North Carolina, and Jennifer, who is a medical sales specialist for Medtronic in San Antonio. He has one granddaughter, Jordan, age 12. Tracy recently completed the Boston Marathon, and Jennifer was in the top 100 ranked players on the Women's Professional Tennis Tour. In the last decade, John also has spent time painting expressionist art.



Preface

It is gratifying that the first edition of *A Topical Approach to Life-Span Development* was so well received. This is reflected in the positive comments of instructors who have adopted the book, reviewers, and students who have used the book.

Most textbooks on life-span development are chronologically organized. Why present life-span development topically? In a topical approach, students can see the processes involved in a particular aspect of development in a single chapter and often in a particular part of a chapter. In contrast, in a chronologically organized textbook, a topic such as the development of the brain appears in a number of chapters—typically early in the book in an infancy chapter, later in a childhood chapter, and then again toward the end of the book in an aging chapter. Examining life-span development topically allows developmental changes through the life span to be described in close proximity to one another, which let students make better connections between them.

A Topical Approach to Life-Span Development, second edition, is not just an age-stage chronological-within-a-topical-organization text. Where key chronological, sequential changes take place, they are emphasized. The focus, though, is mainly on the processes of development, how these processes function, and how they change developmentally throughout the life span.

In the first edition of the book, three main themes were emphasized: research, applications, and contexts. I believe it is important for students to have a firm grasp of the research foundation of the field. I also think that students benefit from knowing how information can be applied to people's lives. Further, I believe students benefit from learning about contextual variations in life-span development, especially those that involve culture, ethnicity, and gender. These themes are woven throughout the book and each chapter has three interludes that focus on an aspect of research, applications, and contexts related to a chapter topic. These three themes—research, applications, and contexts—continue as important themes in the second edition of *A Topical Approach to Life-Span Development*.

What is new in the second edition of the book? The revision focuses on these main areas that reviewers and adopters told me to emphasize more:

- Research and content
- Applications and contexts
- Accessibility and interest

First, I will describe the thrust of these changes in general terms and then provide a list of detailed chapter-by-chapter changes.

RESEARCH AND CONTENT

Above all, a topical life-span development text must have a solid research foundation. This new edition has a more extensive research orientation than the first edition and includes the latest, most contemporary research.

Research Citations

A Topical Approach to Life-Span Development, second edition, has more than 1,200 citations from 2000–2004, making it truly a twenty-first century rendition of the field of life-span development.

Research Presentation, Depth, and Figures

Reviewers recommended that I include more depth in research descriptions and more graphs of data to show how researchers visually present their data. I took this recommendation to heart. A number of research studies are described in greater depth to show students how research is conducted. The second edition has more than 60 new research figures, many of which illustrate the results of research studies. Special care was taken to make sure these illustrations were clearly designed so that students can interpret and understand them. An example of the increased emphasis on depth of research description and visual presentation of data is Alan Slater's research on habituation and dishabituation in chapter 7, "Information Processing." Another example is the research of Carol Ryff on age and well-being in chapter 11, "The Self, Identity, and Personality."

Content

Many new content areas have been added and many others updated and expanded. Among the content improvements are new material on evolutionary developmental psychology (Bjorklund & Pellegrini, 2002) (chapter 2), the collaborative gene (Gottlieb, 2002) (chapter 2), brain lateralization in older adults (chapter 3), developmental changes in attention (chapter 7), emotions in adolescence (Rosenblum & Lewis, 2003) (chapter 10), personal control (Heckhausen, 2002) (chapter 11), meaning in life (Baumeister & Voh, 2002) (chapter 13), step-families (Hetherington & Stanley-Hagan, 2002) (chapter 14), gender and peer relations (Maccoby, 2002) (chapter 15), and work during adolescence (chapter 16).

Research in Life-Span Development Interludes

A Research in Life-Span Development interlude appears in each chapter. The research interludes provide an in-depth look at research on a topic related to the chapter's content. Among the new, revised, and updated Research in Life-Span Development interludes are Studying the Newborn's Perception (chapter 5), Object Permanence and Causality (chapter 6), and Family Environment and Young Children's Language Development (chapter 9).

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 have 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) in their area(s) of expertise. The expert research consultants for *A Topical Approach to Life-Span Development, second edition* are:

Pamela Balls Organista

University of San Francisco

Ethnicity and culture throughout the text

Gilbert Gottlieb

University of North Carolina—

Chapel Hill

Chapter 2: Biological Beginnings

Linda Mayes

Yale University

Chapter 2: Biological Beginnings

James Birren

UCLA

Chapter 3: Physical Development and Biological Aging and

Chapter 4: Health

Rachel Keen

University of Massachusetts

Chapter 5: Motor, Sensory, and Perceptual Development

Jonathan Tudge

University of North Carolina at Greensboro

Chapter 6: Cognitive Developmental Approaches

William Hoyer

Syracuse University

Chapter 7: Information Processing; and Chapter 8: Intelligence

Elena Grigorenko

Yale University

Chapter 8: Intelligence

Jay Belsky

University of London

Chapter 10: Emotional Development; and Chapter 14:

Families, Lifestyles, and Parenting

Daniel Mroczek

Fordham University

Chapter 10: Emotional Development

James Marcia

Simon Fraser University

Chapter 11: The Self, Identity, and Personality

Janet Shibley Hyde

University of Wisconsin

Chapter 12: Gender and Sexuality

James Garbarino

Boston College

Chapter 13: Moral Development, Values, and Religion

Linda George

Duke University

Chapter 15: Peers and the Sociocultural World

Allan Wigfield

University of Maryland

Chapter 16: Schools, Achievement, and Work

Robert Kastenbaum

Arizona State University

Chapter 17: Death and Grieving

The photographs and biographies of the expert consultants appear later in the Preface.

APPLICATIONS AND CONTEXTS

It is not only important to present the scientific foundations of life-span development to students, but also to describe real-world applications and the contexts of development.

Applications

There is increasing interest in the real-world applications of research and these are highlighted in this text. Every effort has been made to give applied examples of concepts and to give students a sense that the field of life-span development has personal meaning for them. Applications are woven throughout each of the book's chapters and also are emphasized in an Applications in Life-Span Development interlude that appears once in each chapter. The new material on applications includes research related to family policy (Gennetian & Miller, 2003) (chapter 1), groundbreaking research on the reduction of preterm births by administering progesterone to pregnant women (Meis, 2003) (chapter 2), physical fitness and mortality (chapter 4), training the attention and memory of older adults (chapter 6), intervention in improving children's intelligence (Brooks-Gunn, 2003) (chapter 7), latest results from the National Institute of Child Health and Development's longitudinal study of child care (NICHD, 2002, 2003) (chapter 10), Vaillant's (2002) longitudinal study which identifies the factors in the

fifties that are linked with health, happiness, and mortality in the seventies (chapter 11), acquaintance rape (chapter 12), Fast Track intervention for preventing conduct problems (The Conduct Problems Prevention Research Group, 2002) (chapter 13), punishment and discipline (Gershoff, 2002) (chapter 14), bullying (chapter 15), and high school dropouts (chapter 16).

In addition to giving special attention to applications throughout the text, a Careers in Life-Span Development appendix appears at the end of the book. It describes a number of careers in education/research, clinical/counseling, medical/nursing/physical, and families/relationship categories. Numerous Web links provide students with opportunities to read about these careers in greater depth.

Contexts

Contextual variations in development are discussed throughout the text and in the Contexts of Life-Span Development interludes, which especially highlight cultural and ethnic aspects of development. The new material on contexts includes a new Contexts in Life-Span Development interlude, Living Longer in Okinawa (Wilcox, Wilcox, & Suzuki, 2002) (chapter 3), cross-cultural comparisons of intelligence (Grigorenko & others, 2001) (chapter 8), stereotype threat (Aronson, Fried, & Good, 2002) (chapter 8), a new Contexts in Life-Span Development interlude, Bilingual Education (chapter 9), gender, culture, and temperament (chapter 10), generation status and identity development in immigrants (Phinney, 2003) (chapter 11), ethnic variation in timing of sexual behaviors in U.S. adolescents (chapter 12), cross-cultural comparisons of punishment (chapter 14), socioeconomic status and parenting (Hoff, Laursen, & Tardiff, 2002) (chapter 15), acculturation and ethnic minority parenting (Coll & Pachter, 2002) (chapter 15), home environments of families from different ethnic groups (Bradley & others, 2001) (chapter 15), and cross-cultural comparisons of work in adolescence (chapter 16).

IMPROVED ACCESSIBILITY AND INTEREST

This new edition of this text should be more accessible to students because of the extensive rewriting, better organization, and improved learning system.

Writing and Organization

Every sentence, paragraph, section, and chapter of this book was carefully examined and when appropriate revised and rewritten. The result is a much clearer, better organized presentation of material in this new edition. Many new introductions to sections were written, numerous sections were moved, and a number of new examples of concepts were introduced—all in the interest of providing students with a more understandable, integrated book.

The Learning System

I strongly believe that students should not only be challenged to study hard and think more deeply and productively about life-span development, but should also be provided with an effective learning system. Instructors and students commented about how student-friendly the first edition was. However, I strive to keep making the learning system better and I am excited about the substantial improvements for this new edition.

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 new 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 side-by-side in the chapter-opening spread. At the end of each main section of a chapter, the learning goal is repeated in a feature called “Review and Reflect,” which prompts students to review the key topics in the section and poses a question to encourage them to think critically about what they have read. At the end of the chapter, under the heading, “Reach Your Learning Goals,” the learning goals guide students through the bulleted chapter review.

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

CHAPTER-BY-CHAPTER CHANGES

Numerous changes were made in each of the 17 chapters in *A Topical Approach to Life-Span Development, second edition*.



CHAPTER 1 Introduction

Extensively revised and improved discussion of issues in development (nature/nurture, stability/change, and continuity/discontinuity)

New research data presented in figure 1.5 on age and happiness
Revised, easier-to-understand presentation of Vygotsky's theory
Updated, revised Applications in Life-Span Development interlude, Family Policy, including recent research (Gennetian & Miller, 2003)

Revised, expanded Contexts in Life-Span Development interlude on individual, family, and extrafamilial contexts, including recent research on ethnicity, socioeconomic status, and families (Bradley & others, 2001)

Reorganization of main section on research into four parts: Methods for Collecting Data; Research Designs; Time Span of Research; and Ethics

New Research Designs section that focuses on descriptive, correlational, and experimental research

New discussion of naturalistic observational research study on parents' explanations of science to sons and daughters at a science museum, including new figure 1.14 that illustrates results of the study (Crowley & others, 2001)

New discussion of Erikson's case study analysis of Mahatma Ghandi's life

Expanded discussion of ethics in research



CHAPTER 2 **Biological Beginnings**

New section on evolutionary developmental psychology (Bjorklund & Pellegrini, 2002)

New section on genetic imprinting

Updated, very contemporary coverage of the Human Genome Project (Klug & Cummings, 2003)

New high interest figure 2.10, Your Genetic Future

Important new section on the collaborative gene, which describes the views of David Moore, Gilbert Gottlieb, and Barry Commoner, who believe there has been too much emphasis on genetic determinism

New section on the epigenetic view, including new figure 2.12

New coverage of phenylketonuria (PKU) in terms of the nature-nurture issue

New discussion of teratogens in terms of dose, time of exposure, and genetic susceptibility

Added recent review of research on prenatal exposure to cocaine (Frank & others, 2001; Lester & others, 2002)

Recent research on marijuana's effects during pregnancy (Richardson & others, 2002)

New section on incompatible blood types

Added recent research on age of mother and low birth weight delivery (Tough & others, 2002)

New discussion of labor and delivery across cultures

New coverage of low birth weight infants in terms of distinguishing low and very low birth weight; also new discussion of small for date infants

New discussion of cross-cultural comparisons of low birth weight infants and new figure 2.16 that illustrates low birth weight rates by country

Recent research showing outcomes for low birth weight infants in childhood and adolescence (Ment & others, 2003)

New research figure 2.17, showing the results of one of Tiffany Field's studies on massaged preterm infants

New coverage of recent groundbreaking study on the reduction of preterm births by administering progesterone to pregnant women (Meis, 2003)



CHAPTER 3 **Physical Development and Biological Aging**

Expanded, updated coverage of puberty, especially in terms of adrenarche, gonadarche, and hormonal changes (Susman, Dorn, & Schiefelbein, 2003)

New discussion of the role of leptin in weight and body weight during puberty

New discussion of recent research on parent-adolescent relationships and links between hormones and adolescent behavior (Booth & others, 2003)

New section on physiological changes in lung capacity during middle age and new figure 3.5 showing the relation of lung capacity to age and cigarette smoking

New figure 3.6 on changes in body composition of bone, muscle, and fat from 25 to 75 years of age

Substantially revised organization of the discussion of the brain with a much improved introduction of basic aspects of brain physiology to set the stage for improved understanding of developmental changes in the brain through the life span

Expanded coverage of early deprivation and brain activity, including new figure 3.11 of the brain scan of a Romanian orphan and a normal child

New discussion of the fascinating story of Michael Rehbein, who had the left hemisphere of his brain removed when he was 7 years old, including new figure 3.12 of brain scans showing how his right hemisphere took over some of the functioning previously carried out by his left hemisphere.

New research on brain changes during adolescence (Baird & others, 1999)

New section on neurotransmitters and aging, including recent research (Leventhal & others, 2003)

Expanded coverage of changes in neurons and aging, including new figure 3.16 that shows new nerve cells generated in adult mice (Kempermann, van Praag, & Gage, 2000)

Important new brain research on decreased brain lateralization in older adults, including new figure 3.17 showing brain scans that illustrate this concept

Updated research coverage of SIDS, including the reasons why sleeping in a prone position is linked with SIDS (Horne & others, 2002; Kahn & others, 2002)

New Contexts of Life-Span Development Interlude, Living Longer in Okinawa, with emphasis on diet, low-stress lifestyle, a caring community, activity, and spirituality; includes new figure 3.21 on the risks of dying from cancer in Okinawa, Japan, and the United States

Coverage of new theory of aging—the mitochondrial theory—that is receiving increased attention (Dillin & others, 2002; Pierson, 2003)

New discussion of increased myelination of neural pathways that connect the limbic system and the prefrontal cortex in the forties and fifties, which is likely linked with increased reflection in middle-aged adults (Fischer & Pruyne, 2003)

New section on the decrease in brain weight and volume with aging (O'Connor & Kaplan, 2003)

New analysis by Baltes and Smith showing the significant problems faced by individuals 85 and over and the increase in successful aging for those in their sixties and seventies



CHAPTER 4 Health

Added recent research on the failure of many adult males to adequately use the health-care system (Courtenay, McCreary, & Merighi, 2002)

New data on the percentage of older adults of different ages with a disability, including new figure 4.2

New data on the percentage of older adults of different ages in nursing homes, including new figure 4.4

New research figure 4.5 on the link between perceived control and mortality

Moved section on leading causes of death across the life span to chapter 17, "Death and Grieving," at the request of reviewers

At the request of reviewers, deleted section on stress and coping, especially because this research has lacked a developmental focus; the chapter now focuses more clearly on physical health, with a better-integrated presentation, reducing length and number of topics in chapter

Significant research updating of breastfeeding versus bottle-feeding (Oddy, 2002; Ryan, Wenjun, & Acosta, 2002), including new figure 4.6 on trends in breastfeeding; also new research on link between breastfeeding and lower risk of obesity (Dewey, 2003)

Significant updating of research on childhood obesity (Guo & others, 2002; Wisotsky & Swenoinis, 2003)

Very recent research on childhood obesity including new figure 4.7 on the percentage of overweight children who become overweight adults (Guo & others, 2002; Maynard & others, 2003)

New discussion of obesity and eating disorders in adolescence, including new figure 4.8 on the increase in obesity from 1968 to 2000 (National Center for Health Statistics, 2003)

Recent update on calorie restriction and longevity (Johannes, 2002)

New discussion of decrease in PE programs in U.S. schools (Health Management Resources, 2001)

New research figure 4.11 on the link between physical fitness and mortality

Addition of new review of research on aging and exercise (Slade & others, 2002)

Research update of trends in adolescent drug use (Johnston, O'Malley, & Bachman, 2003)

Recent research on binge drinking in college students (Wechsler & others, 2002)

New figure 4.13 on fatal lung cancer and years since quitting smoking

Recent longitudinal research on developmental change in drinking patterns from late adolescence to the early thirties (Bachman & others, 2002), including new figure 4.14

New section on substance abuse in older adults including recent national data on the decline in alcohol use in middle and late adulthood (National Center for Health Statistics, 2002), including new figure 4.15



CHAPTER 5 Motor, Sensory, and Perceptual Development

Many new examples of concepts, especially challenging concepts such as the dynamic systems view and the ecological view of perceptual development

Expanded and improved discussion of Karen Adolph's research on the role of experience in learning a new motor behavior, including new figure 5.2

New coverage of movement and aging, including new figure 5.3

Expanded coverage of fine motor development in older adults, including two explanations of the slowing of this activity: neural noise and strategy

Extensively revised and updated coverage of handedness

Much expanded and more detailed discussion of research techniques for studying infant perception in the Research in Life-Span Development interlude, including the visual preference method, habituation, and tracking; includes new figure 5.6 on Alan Slater's research on habituation

New figure 5.7 showing visual acuity during the first months of life

New figure 5.8 showing how 1- and 2-month-old infants scan the human face

Expanded coverage of perceptual constancy in infancy

New discussion of binocular vision and its emergence at 3 to 4 months of age, providing a powerful cue to depth

New figure 5.10 from Bruce Hood's laboratory showing a research study being conducted on toddlers' perception of ball being dropped in a tube and where they will search for it

New research on the importance of age of older adults in determining the degree of their decline in visual perception (Brabyn & others, 2001), including new figure 5.11

New discussion of the decline in depth perception in older adults

New discussion of speech perception and when infants become "native listeners" (Jusczyk, 2002)

Expanded coverage of hearing in infancy to include changes in the perception of loudness, pitch, and sound localization



CHAPTER 6

Cognitive Developmental Approaches

- Revised and expanded coverage of Piaget's concept of schemes
- New figure 6.1 that summarizes the main characteristics of Piaget's four stages
- Expanded coverage in the Research on Life-Span Development interlude with discussion of the violations of expectations method and new figure 6.4 to show the procedures used in the study of object permanence
- Provided extensive example of the concept of zone of proximal development
- Expanded material on description of private speech with examples and research
- Updated coverage of Barbara Rogoff's ideas on cognitive apprenticeship
- New entry in figure comparing Piaget and Vygotsky on socio-cultural contexts
- Added criticisms of Vygotsky's approach



CHAPTER 7

Information Processing

- Expanded coverage of the role of computers in the information-processing approach and new figure 7.1 showing the computer metaphor for human information processing
- New figure 7.2 showing a simplified version of information processing to improve students' understanding of this approach
- New coverage of the explanations for increased information-processing speed in childhood and decreased processing speed in aging adults
- New figure 7.3, The Relation of Age to Reaction Time
- Completely revised, updated coverage of developmental changes in attention in adulthood in terms of selective attention, divided attention, and sustained attention
- Discussion of recent research by Pickrell & Loftus (2001) on implanted false memories at Disneyland
- New figure 7.7 on developmental changes in memory span
- Expanded coverage of working memory and new figure 7.8 showing Baddeley's working memory model
- New discussion of research on imagery and memory of verbal information, including new research figure 7.9 on this topic
- New research figure 7.10 on the role of expertise in memory
- New section on memory reconstruction and schema theory
- New section on memory development in adolescence and movement of memory and study strategies from main text to a new figure
- New research figure 7.13 on memory for Spanish as function of age since Spanish was learned
- New section on prospective memory
- New coverage of source memory and aging (Hasher, 2003)

- Expanded discussion of "use it or lose it" with recent research studies
- New figure 7.14 on recent research involving training of attention and memory in older adults (Levy, Jennings, & Langer, 2001)
- Expanded, updated research coverage of scientific thinking in children
- Revised, updated, easier-to-understand coverage of theory of mind, including new figure 7.17 involving developmental changes in theory of mind
- New discussion of research on time of day effects on the memory of younger and older adults (Hasher & others, 2002)
- New discussion of research on the role of expectancy in the memory of older adults (Hess & others, 2002)



CHAPTER 8

Intelligence

- Extensive rewriting and reorganization of the chapter for better student understanding
- Brief discussion and definition of factor analysis added to help students understand the factor analytic approach to intelligence
- New discussion of the Key School as reflective of Gardner's multiple intelligence theory
- New section on the Sternberg Triarchic Abilities Test (STAT)
- New section on emotional intelligence, including very recent material on the development of a measure to assess emotional intelligence (Mayer, Salovey, & Caruso, 2002)
- New figure 8.3 that compares Gardner's, Sternberg's, and Salovey/Mayer's approaches
- New discussion of whether people have a general intelligence with links between general intelligence and job success, as well as John Carroll's (1993) extensive examination of intellectual abilities
- New figure 8.4 on the correlation between intelligence test scores and twin status (Grigorenko, 2000)
- Much expanded coverage of the influence of heredity and environment on intelligence
- New discussion of heritability
- New figure 8.5 on the Flynn effect
- New coverage of a leading expert's conclusions on what research indicates about the role of intervention in improving children's intelligence (Brooks-Gunn, 2003)
- New section on controversies and group comparisons in intelligence, which includes new material on gender comparisons
- Much expanded coverage of cross-cultural comparisons of intelligence, including recent research (Grigorenko & others, 2001; Sternberg & others, 2001)
- New coverage of the concept of stereotype threat and the intelligence of ethnic minority individuals (Aronson, Fried, & Good, 2002; Steele & Aronson, 1995)
- New figure 8.10 on classification of mental retardation based on IQ
- New figure 8.11 on classification of mental retardation based on levels of support needed

- New discussion of the role of practice in giftedness
- New photo of Mihaly Csikszentmihalyi in the setting where he gets his most creative thoughts
- Expanded discussion of Baltes' research on wisdom (Baltes & Kunzmann, 2003; Kunzmann & Baltes, 2003)



CHAPTER 9 Language Development

- Extensive rewriting and reorganization of the chapter with the development of language now preceding the section on biological and environmental influences
- New figure 9.1 on the rule systems of language with numerous examples
- Updated material on change in language in early childhood and middle and late childhood
- Considerable expansion and reorganization of material on the development of language in infancy with subsections on babbling and other vocalizations, recognizing language sounds, first words, two-word utterances, and language production and language comprehension
- New figure 9.2 showing the research setting in Patricia Kuhl's studies of infants changing from being universal linguists to specializing in the speech of their native language
- Deletion of the discussion of MLU at the request of reviewers and adopters
- New Research in Life-Span Development interlude, Family Environment and Young Children's Language Development, including new figure 9.7
- Considerably updated coverage of the best way to teach children to read, including the recommendations of the prestigious National Reading Panel (2000)
- New figure 9.9 showing the results of a national assessment of reading achievement and its relation to how much children read daily
- New section on preparing for literacy in early childhood (Pressley, 2003)
- Expanded coverage of children's writing with new material on the importance of planning, drafting, and revising (Pressley, 2003)
- New Contexts in Life-Span Development interlude on bilingual education that includes Kenji Hakuta and his colleagues' (2000) research on how long it takes to develop proficiency in a second language



CHAPTER 10 Emotional Development

- New discussion of biological foundations of emotions and experience in emotions, including early development in the brain and cultural influences (Thompson, 2003)

- New section on early developmental changes in emotions, including new figures 10.1 and 10.2 with a focus on the distinction between primary and self-conscious emotions (Lewis, 2002)
- New section on infant fear, including new discussion of separation protest and new research figure 10.3 on separation protest in four cultures
- New section on emotional regulation and coping in infancy (Kopp & Neufeld, 2002)
- Expanded, revised, and updated discussion of emotion in adolescence (Rosenblum & Lewis, 2003)
- New figure 10.6 on differences in the emotions of adolescents and their parents
- Expanded coverage of developmental changes in positive and negative emotions across the adult years, including new figure 10.7 (Mroczek, 2001)
- Based on recommendations of reviewers, moved material on suicide to chapter 17, "Death and Grieving," and deleted material on depression from this chapter to provide a more cohesive, integrated chapter
- New discussion of Kagan's ideas on inhibition to the unfamiliar as an important temperament category and recent research showing that a substantial number of toddlers who are inhibited become less inhibited at 7 years of age (Pfeifer & others, 2002)
- New section in temperament on the roles of biological foundations and experience
- Expanded coverage of positive affect and approach, and effortful control, as temperament categories
- New section in temperament on developmental contexts
- New discussion of gender, culture, and temperament
- New research figure 10.10 showing the dramatic effects of Harlow's contact comfort study
- Expanded coverage of attachment and culture, including new figure 10.12 comparing the attachment patterns of U.S., German, and Japanese babies
- Extensively updated coverage of the National Institute of Child Health and Human Development's longitudinal study of child care (NICHD Early Child Care Research Network, 2001, 2002, 2003) in the Research in Life-Span Development interlude
- Expanded, updated material on adolescent dating and romantic relationships, including new research figure 10.13 on age patterns (Buhrmester, 2001)



CHAPTER 11 The Self, Identity, and Personality

- New figure 11.1 illustrating the development of self-recognition in infancy
- More streamlined, focused coverage of changes in self-understanding in adolescence
- New figure 11.3 on changes in global self-esteem across the human life span (Robins & others, 2002)

New section on personal control that focuses on Jutta Heckhausen's (1997, 2001, 2002) views on primary control striving and secondary control striving, including new figure 11.6

New discussion of the increase in identity certainty from the thirties through the fifties, including new figures 11.7 and 11.8

New discussion of Jean Phinney's (2003) recent ideas about generational status and identity in immigrants

Revision of material on the big five factors of personality, using the OCEAN acronym to help students to remember the big five

New figure 11.12 on emotional instability and age

New figure 11.13 on age and well-being

New section on generativity including recent research and new figures 11.15 and 11.16 (Stewart, Ostrove, & Helson, 2001)

New figure 11.17 showing age changes in openness to experience in early and middle adulthood

New section on George Vaillant's (2002) longitudinal studies, including new figure 11.18 on links between characteristics at age 50 and health and happiness at ages 75 to 80

Revised, updated discussion of conclusions about stability and change based on Avshalom Caspi and Brent Robert's (2001) views

Added Jean Phinney's (2003) recent views on generation status and identity development in immigrants



CHAPTER 12 **Gender and Sexuality**

Extensive revision, updating of discussion of hormonal influences and gender (Lippa, 2002)

Expanded, updated coverage of peer group influences on gender (Maccoby, 2002; Martin & Fabes, 2001)

New figures 12.1 and 12.2, summarizing different gender theories

Updated, expanded discussion of differences in the brains of males and females

New coverage of William Pollack's (1999) view on what he calls the "boy code" of showing little if any emotion as boys grow up

Updated coverage of AIDS (Centers for Disease Control and Prevention, 2002b)

Expanded, updated coverage of acquaintance rape, including new figure 12.7 (Fisher, Cullen, & Turner, 2000)

New discussion of research on ethnic variations in the timing of sexual behaviors in U.S. adolescents, including new figure 12.8

Expanded, updated coverage of developmental pathways in a sexual identity development in gay and lesbian individuals (Diamond, 2003)

Updated coverage of risk factors for sexual behavior, including recent research (Buhrmester, 2001; Miller, Benson, & Galbraith, 2001)

Recent research on cross-cultural comparisons of adolescent pregnancy, including figure 12.9

Change in labeling from sexually transmitted diseases (STDs) to sexually transmitted infections (STIs) in line with current terminology



CHAPTER 13 **Moral Development, Values, and Religion**

Substantial revision of organization of chapter with main headings now domains of moral development; contexts of moral development; prosocial and antisocial behavior; and values, religion, spirituality, and meaning in life

Added figure 13.2 showing typical responses of individuals at each of Kohlberg's stages to the Heinz and the Druggist story

Substantial updating of the social cognitive theory of moral development based on Bandura's (1999, 2002) recent views

New discussion of Kohlberg's contemplation of adding a seventh stage to his theory

Added material on Rest's Defining Issues Test and criticism of Kohlberg's approach to assessing moral reasoning, including new figure 13.4 on the moral dilemmas of interest to adolescents

Expanded discussion of how moral thoughts can be used to justify immoral behavior with examples from 9/11/01 and the war on terrorism (Bandura, 2002)

New discussion of research on guilt (Kochanska & others, 2002)

New research on the link between maternal warmth and children's empathy (Zhou & others, 2002)

New discussions of gender differences in altruism and volunteering (Eisenberg & Morris, 2004)

Added discussion of study of caring and prosocial behavior in a highly impoverished group of adolescents

Addition of new research showing a link between altruism and longevity (Brown, in press)

New coverage of the Pittsburgh Youth Study, a longitudinal study of the development of delinquency (Loeber & others, 2002; Stouthamer-Loeber & others, 2002)

New research on the role of siblings in delinquency

Expansion of material on the antecedents of delinquency to include cognitive distortions, authority conflict, and other factors

New discussion of Fast Track, an extensive delinquency prevention study (The Conduct Problems Prevention Research Group, 2002)

Recent research linking early problems in aggression with later delinquency for boys but not girls (Broidy & others, 2003)

Research update on the values of college students (Sax & others, 2002)

Reorganization of section on religion and adolescents, including new material on parenting/attachment and religious interest in adolescents (Ream & Savin-Williams, 2003)

New section on the positive role of religion in adolescents' lives

Discussion of link between happiness and having a meaningful faith (Diener, Lucas, & Oishi, 2002)

Coverage of recent study showing an increase in spirituality between late middle adulthood (mid-fifties/early sixties) and late adulthood (late sixties/mid-seventies) (Wink & Dillon, 2002), including new research figure 13.8

Much expanded coverage of meaning in life with description of Baumeister's (1991; Baumeister & Vohs, 2002) views on the four needs that guide how people try to make sense of their lives

Inclusion of recent research on the link between finding meaning in religion and life satisfaction in older adults (Krause, 2003)

Recent study of church attendance in older adults (Idler, Kasl, & Hays, 2001)



CHAPTER 14 Families, Lifestyles, and Parenting

Revised, new chapter title: Families, Lifestyles, and Parenting

Reorganization of chapter's main section for better flow

Added critique of family life cycle concept

New section on family processes that focuses on reciprocal socialization, the family system, and sociocultural and historical influences

At beginning of section on family processes, connection with Bronfenbrenner's ecological theory; connections with Bronfenbrenner's theory several other times in chapter as well

New figure 14.2 on Belsky's concept of direct and indirect effects in family processes

New discussion of research on links between marital relations and parenting (Grych, 2002)

Expanded coverage of cohabitation, including explanations of why cohabiting is linked with greater vulnerability to divorce

New coverage of Hetherington's six pathways that divorced adults follow (Hetherington & Kelly, 2002)

New discussion of recommended strategies for divorced adults

New discussion of anxiety that many childless highly successful women have (Hewlett, 2002)

Updated research on stepfamilies (Hetherington & Stanley-Hagan, 2002)

New section on the transition to parenting

Expanded, updated coverage of parenting styles including new material on why authoritative parenting is linked with positive developmental outcomes (Steinberg & Silk, 2002)

New section on punishment and discipline, including new figure 14.8 on attitudes toward corporal punishment in different countries, as well as recent theory and research on punishment (Gershoff, 2002)

Recent research on child maltreatment and problems in regulating emotion (Maughan & Cicchetti, 2002)

New section on coparenting, including recent research (McHale & others, 2002)

Updated, extensively revised discussion of working parents based on recent research (Gottfried, Gottfried, & Bathurst, 2002; Hill & others, 2001)

New figure 14.11 on the percentage of children with problems in intact and divorced families (Hetherington & Kelly, 2002)

Added comments about marital conflict having negative consequences in the contexts of marriage or divorce (Cummings, Braungart-Rieker, & Du Rocher-Schudlich, 2003)

New research on child-rearing antecedents of intergenerational relations (Belsky & others, 2001)



CHAPTER 15 Peers and the Sociocultural World

Reorganization of chapter with this order of topics: peer relations in childhood and adolescence, friendship, play and leisure, aging and the social world, and sociocultural influences

Reordering of "B" headings/sections under peer relations in childhood and adolescence to put peer statuses, bullying, and gender and peer relations in sequence

New figure 15.1, illustrating the development of communication skills and perspective taking

Recent research on rejected children (Buhs & Ladd, 2002)

Updated coverage of bullying and new figure 15.2 on bullying behaviors by U.S. youth based on a recent national study (Nansel & others, 2001)

New section on gender and peer relations, including new figure 15.3 (Maccoby, 1998, 2002)

Updated coverage of peer statuses to include average children

Extensive revision of section on cliques and crowds with improved distinctions between these two types of adolescent groups

New Contexts in Life-Span Development interlude on cross-cultural comparisons of peer relations

New figure 15.6 on developmental changes in self-disclosing conversations

New discussion of why friendship in adulthood may contribute more to psychological well-being than family relationships (Pruchno & Rosenbaum, 2003)

New sections on leisure in adolescence and in adulthood

Research updates on activity and social networks in late adulthood (Menec, 2003; Zunzunegui & others, 2003)

New description of research on how self-conceptions are linked to culture, including research study and new figure 15.9 comparing U.S. and Chinese college students

Updated, expanded coverage of socioeconomic status and parenting (Hoff, Laursen, & Tardif, 2002; Magnuson & Duncan, 2002)

Updated coverage of poverty rates in the United States, which have declined recently (Children's Defense Fund, 2001) and cross-cultural comparisons of poverty rates

New figure 15.10 on the percentages of youth under 18 who are living in distressed neighborhoods

Extensive updating on families and poverty with recent research (Gennetian & Miller, 2002; Huston & others, 2001; Mistry & others, 2002)

New figure 15.11 on the actual number of adolescents from different ethnic groups in the United States and the number projected in 2100

New Applications in Life-Span Development interlude, Acculturation and Ethnic Minority Parenting, based on the views of Cynthia Garcia Coll and Lee Pachter (2002)

Recent research on similarities and differences in the home environments of families from different ethnic groups, including new figure 15.12 (Bradley & others, 2001)



CHAPTER 16 **Schools, Achievement,** **and Work**

New section on accountability and testing in education

New discussion of updated *Turning Points 2000* (Jackson & Davis, 2002) recommendations for improving U.S. middle schools

New section on high schools that focuses on school dropouts and what needs to be done to improve U.S. high schools (National Commission on the High School Senior Year, 2001)

Updated coverage of the transition to college (Sax & others, 2002)

Much expanded and updated discussion of learning disabilities (Siegel, 2003)

Updated research on intervention with ADHD children (Swanson & others, 2001; Swanson & Volkow, 2002)

Extensively expanded, updated, and revised coverage of achievement

Expanded discussion of intrinsic and extrinsic motivation with new subsection on extrinsic rewards and intrinsic motivation (Cameron, 2001)

New section on mastery motivation

New figure 16.6 on mothers' beliefs about the factors responsible for children's math achievement in three countries

Updated coverage of the occupational outlook for various fields (*The Occupational Outlook Handbook, 2002–2003*)

Revised organization of section on work to give it a stronger developmental focus

New section on work in adolescence

New coverage of cross-cultural comparisons of work in adolescence

Updated, revised coverage of dual-career couples, including new figure 16.8 on historical changes in the percentage of traditional and dual-career couples in the United States (Barnett, 2001)

New figure 16.9 on developmental changes in job satisfaction

New research study on morale of individuals depending on how long they had been retired (Kim & Moen, 2001)



CHAPTER 17 **Death and Grieving**

New discussion of palliative care (Chochinov, 2002; Williams and Wheeler, 2001)

Update on Oregon's active euthanasia law through 2001

Increased coverage of end-of-life issues (Wilson & Truman, 2002)

New section on suicide, including recent U.S. data on suicide rates through the life span and new figure 17.2 (National Center for Health Statistics, 2002)

Recent research on meaning and purpose in life, as well as spirituality, in helping dying individuals to cope (McClain, Rosenfeld, & Breitbart, 2003; Smith, McCullough, & Poll, in press)

New coverage of three aspects of meaning-making coping: (1) personal, (2) family, and (3) community (Hayslip & Hansson, 2003)

Addition of new information about recent study on the economic consequences of widowhood on older women in the United States and Germany (Hungerford, 2001)

New discussion of recent study on the role of psychological and religious factors in the well-being of older adults following the loss of a spouse (Fry, 2001)

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SUPPLEMENTS

This second edition of *A Topical Approach to Life-Span Development* is accompanied by a comprehensive and fully integrated array of supplemental materials that are written specifically for the instructors and students of life-span development. Please contact your McGraw-Hill representative for details concerning policies, prices, and availability. To locate your McGraw-Hill representative, please go to www.mhhe.com and select Rep Locator.

FOR THE INSTRUCTOR

Instructor's Manual

Prepared by Sue A. Kelley of Lycoming College, this thorough Instructor's Manual is a great resource for instructors. Its Total Teaching Package Outline in each chapter provides a detailed outline of the chapter with corresponding references and resources that will assist you in preparing lectures and assignments. The Instructor's Manual provides the following tools, all of which are tied to the Learning Goals as appropriate: key terms and people, lecture suggestions, classroom activities, personal applications, research projects, film and video lists, and website suggestions. The Instructor's Manual is available electronically on the Instructor's Resource CD-ROM and on the password-protected Instructor's Online Learning Center.

Test Bank

Prepared by Rita Zimmerman, this complete Test Bank includes a wide range of conceptual multiple-choice and essay questions.

Each question references the Learning Goal it covers. The Test Bank is available only on the Instructor's Resource CD-ROM as a Computerized Test Bank (Mac/IBM) and also in Word and Rich Text formats.

Online Learning Center

This site includes a secured Instructor Edition that stores your essential course materials to save you prep time before class. With just a couple clicks you can access the Instructor's Manual and presentation materials. The Instructor Edition also contains the text's PowerPoint presentation, selected video clips from the McGraw-Hill Visual Asset Database, and Taking it to the Net Exercises. You will also find PowerWeb content within the OLC to give you faster access to real-world material specific to your discipline. These resources and more can be found by logging on to the website at www.mhhe.com/santrockldt2.

McGraw-Hill's Visual Assets Database (VAD) for Lifespan Development

Jasna Jovanovic, University of Illinois, Urbana-Champaign McGraw-Hill's Visual Assets Database is a password protected online database of hundreds of multimedia resources for use in classroom presentations, including original video clips, audio clips, photographs, and illustrations—all designed to bring to life concepts in developmental psychology. In addition to offering ready-made multimedia presentations for every stage of the life span, the VAD's search engine and unique "My Modules" program allows instructors to select from the database's resources to create their own customized presentations, or "modules." These customized presentations are saved in an instructor's folder on the McGraw-Hill site, and the presentation is then run directly from the VAD to the internet-equipped classroom.

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FOR THE STUDENT

Multimedia Courseware for Life-Span Development CD-ROM

Packaged with your text is a set of interactive CD-ROMs created by Charlotte Patterson of the University of Virginia. These CDs cover the central phenomena and classic experiments in Child Development. Following Charlotte Patterson's model, Carolyn

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These CDs include video footage of classic and contemporary experiments, detailed viewing guides, challenging previews, follow up and interactive feedback, graphics, graduated developmental charts, a variety of hands-on projects, related websites and navigation aids. Programmed in a modular format, the content focuses on integrating digital media to better ex-

plain physical, cognitive, social, and emotional development from early childhood through adult development.

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Expert Consultants



Pamela Balls Organista

Pamela Balls Organista, Professor of Psychology at the University of San Francisco, is one of the world's leading experts on ethnicity. She completed her bachelor's degree in Psychology and Black Studies at Washington University in St. Louis, doctorate in clinical psychology at Arizona State University, and clinical psychology post-doctorate in the Department of Psychiatry at the University of California—San Francisco. Prior to joining the faculty at USF, she was an Assistant Clinical Professor providing psychotherapy, consultation, and supervision in the Department of General Internal Medicine

at UCSF. Her research interests include prevention interventions and ethnic minority health issues. Dr. Organista's publications include *Readings in Ethnic Psychology: African Americans, American Indians, Asian Americans, and Hispanics/Latinos* (1998), and *Acculturation: Advances in Theory, Measurement, and Applied Research* (2003), which she co-edited with Kevin Chun and Gerardo Marín. She also has published articles on migrant laborers and AIDS and on stress and coping in primary care patients. She is the founding and present faculty coordinator of the Ethnic Studies Program at the University of San Francisco and from 1998–2000 served as the Director of Academic Advising in the College of Arts and Sciences at the University of San Francisco.



Gilbert Gottlieb

Gilbert Gottlieb is one of the world's leading experts on early biological and environmental influences on development. He has been a Research Professor of Psychology in the Center for Developmental Science at the University of North Carolina at Chapel Hill since 1995. He served as an Excellence Foundation Professor of Psychology at UNC-Greensboro from 1982–1995, and as a Research Scientist at Dorothea Dix Hospital in Raleigh, NC, from 1961–1982. He received his Ph.D. from Duke University, where he participated in both the clinical and experimental psychology programs and was the first graduate from the joint Psychology-Zoology graduate training program in animal behavior. In 1973, he helped to revive interest in the field of behavioral embryology by editing a volume by that name, along with contributing theoretical reviews of the field to the *Quarterly Review of Biology* (1968) and the *Psychological Review* (1976). His interest in the developmental basis of evolution re-

sulted in a 1992 book, *Individual Development and Evolution*. More recently, Professor Gottlieb summarized his career-long research and theoretical efforts in *Synthesizing Nature-Nurture* (1997), which won the 1998 Eleanor Maccoby Award of the Developmental Psychology Division of the American Psychological Association. In 1999 Clark University Press published his monograph, *Probabilistic Epigenesis and Evolution*, which is based upon the Heinz Werner Lectures he gave there. From 1962 through 2003, Professor Gottlieb has been a recipient of research grants from the National Institutes of Mental Health and from Child Health and Human Development, as well as from the National Science Foundation. He has been a guest of the Czechoslovak Academy of Science in Prague and the USSR Academy of Sciences in Moscow, and advisor to the German National Science Foundation. He is a past president of the International Society for Developmental Psychobiology and a recipient of the Distinguished Scientific Contributions to Child Development Award from the Society for Research in Child Development.



Linda Mayes

Linda Mayes is one of the world's leading experts on prenatal and infant development. Dr. Mayes is the Arnold Gesell Professor of Child Psychiatry, Pediatrics, and Psychology in the Yale Child Study Center, where she coordinates the early childhood programs. Trained as both a child and adult psychoanalyst and as a pediatrician, neonatologist, and child developmentalist, her work integrates perspectives from developmental psychology, neuroscience, and child psychiatry. Dr. Mayes' scien-

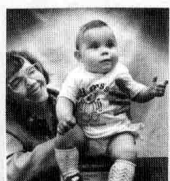
tific papers and chapters are published in child psychiatric, developmental psychology, pediatric, and psychoanalytic journals. Her recent book for parents (written with Dr. Donald Cohen) is entitled *The Yale Child Study Center Guide to Understanding Your Child's Development* and is dedicated to helping parents understand the many ways children develop, to learn to observe their children's individual personality, and to reflect on their own development as a parent. Dr. Mayes's work at the Center is bringing the most informed and contemporary understanding of children's development into practical applications for families.



James E. Birren

James E. Birren is a pioneering figure in the field of life-span development and continues to be one of the world's leading experts on adult development and aging. He currently is Associate Director of the UCLA Center on Aging and is also Professor Emeritus of Gerontology and Psychology at the University of Southern California. Birren received his M.A. and Ph.D. from Northwestern University, and has been a Visiting Scientist at the University of Cambridge, England, and a Fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford University. Birren's career includes serving as founding Executive Director and Dean of the Gerontology Center at the University of Southern California, as well as

Past President of the Gerontological Society of America, the Western Gerontological Society, and the Division on Adult Development and Aging of the American Psychological Association. In addition, he has served as Chief of the Section on Aging of the National Institutes of Mental Health. His awards include the Brookdale Foundation Award for Gerontological Research; honorary doctorates from the University of Gothenberg, Sweden, Northwestern University, and St. Thomas University, Canada; the Gerontological Society Award for Meritorious Research; the Sandoz Prize for Gerontological Research; and the Canadian Association of Gerontology Award for Outstanding Contribution to Gerontology. Birren is Series Editor of the internationally recognized *Handbooks on Aging* and has published more than 250 academic journal articles and books.



Rachel Keen

Rachel Keen (formerly Rachel Keen Clifton) is one of the world's leading experts on perceptual-motor and cognitive development in infants. She received her doctorate from the Institute of Child Development at the University of Minnesota. After a postdoctoral fellowship at the University of Wisconsin and University of Iowa, she came to the University of Massachusetts-Amherst in 1968 where she is now a professor. Her research has been supported by the National Institutes of Health, the National Science Foundation, and the March of Dimes. She held a Research Scientist Award from the National Institute of Mental Health from 1981–2001, and currently has a MERIT award from the National Institute of Child Health and Human Development. She has served

terms on three research review panels at these institutes and has been on the editorial board of *Developmental Psychology*, *Infant Behavior and Development*, and *Journal of Experimental Child Psychology*. Dr. Keen has served as Associate Editor of *Child Development* (1977–1997) and *Psychophysiology* (1972–1975), and as Editor of *SCRD Monographs* (1993–1999). She is a fellow of the American Psychological Association, the American Association for the Advancement of Science, the Acoustical Society of America, and the American Psychological Society. She was President of the International Society on Infant Studies in 1998–2000, received a Distinguished Alumna Award from her undergraduate college, Berea College in 1994, and was given the Distinguished Faculty Award in 1988 and the Samuel F. Conti Faculty Fellowship Award in 2002 from the University of Massachusetts.



Jonathan Tudge

Jonathan Tudge is an expert on children's social cognitive development and education, especially related to Vygotsky's sociocultural cognitive theory. He is currently a professor in the Department of Human Development and Family Studies at the University of North Carolina at Greensboro. He studies developmental issues that stress the mutual influences of the individual, relationships, culture, and history. His multidisciplinary background includes an undergraduate degree in history (Lancaster University, England), a master's degree in sociology (Oxford University, England), two diplo-

mas in early childhood education (both from the University of London, England), a Ph.D. from the Department of Human Development and Family Sciences (Cornell University), and a postdoctorate in developmental psychology (University of Utah). Before becoming a professor, he taught young children in England, Russia, and the United States. Dr. Tudge's primary area of research examines the types of everyday activities and social relationships in which young children become involved in different parts of the world (the United States, Russia, Estonia, Finland, Korea, Kenya, and Brazil), and how these activities and relationships influence their transition to school.