

LAURA E. BERK

FOURTH EDITION

INFANTS, CHILDREN, AND ADOLESCENTS



*I*nfants, *C*hildren, and *A*dolescents

FOURTH EDITION

LAURA E. BERK

ILLINOIS STATE UNIVERSITY

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IN LOVING MEMORY OF MY COUSINS,
ESTHER AND WALTER LENTSCHNER

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ABOUT THE AUTHOR

Laura E. Berk is a distinguished professor of psychology at Illinois State University, where she teaches child development to both undergraduate and graduate students. She received her bachelor's degree in psychology from the University of California, Berkeley, and her master's and doctoral degrees in early childhood development and education from the University of Chicago. She has been a visiting scholar at Cornell University, UCLA, Stanford University, and the University of South Australia. Berk has published widely on the effects of school environments on children's development and, more recently, on the development of private speech in typically developing children and in children with learning and behavior problems. Her research has been funded by the U.S. Office of Education and the National Institute of Child Health and Development. It has appeared in many prominent journals, including *Child Development*, *Developmental Psychology*, *Merrill-Palmer Quarterly*, *Journal of Abnormal Child Psychology*, *Development and Psychopathology*, and *Early Childhood Research Quarterly*. Her empirical studies have attracted the attention of the general public, leading to contributions to *Psychology Today* and *Scientific American*. Berk has served as research editor for *Young Children* and consulting editor for *Early Childhood Research Quarterly*. She is the author of the chapter on the extracurriculum for the *Handbook of Research on Curriculum* and of the chapter on development for *The Many Faces of Psychological Research in the Twenty-First Century*. Her books include *Private Speech: From Social Interaction to Self-Regulation*, *Scaffolding Children's Learning: Vygotsky and Early Childhood Education*, and *Landscapes of Development: An Anthology of Readings*. In addition to *Infants, Children, and Adolescents*, she is author of the two best-selling texts *Child Development* and *Development Through the Lifespan*. Her recently released book for parents and teachers is titled *Awakening Children's Minds: How Parents and Teachers Can Make a Difference*.



Laura Berk with sons Peter and David

Preface for Instructors

My decision to write *Infants, Children, and Adolescents* was inspired by a wealth of professional and personal experiences. First and foremost were the interests and needs of hundreds of students of child development with whom I have worked in thirty years of college teaching. I aimed for a text that is intellectually stimulating, that provides depth as well as breadth of coverage, that portrays the complexities of child development with clarity and excitement, and that is relevant and useful in building a bridge from theory and research to children's everyday lives. Instructor and student enthusiasm for the book not only has been among my greatest sources of pride and satisfaction, but also has inspired me to rethink and improve each edition.

The decade since *Infants, Children, and Adolescents* first appeared has been a period of unprecedented expansion and change in theory and research. This fourth edition ushers in the new millennium with a wealth of new content and teaching tools:

- *Increased attention is granted to multiple levels of the environment in which the child develops.* The contemporary move toward viewing the child's thoughts, feelings, and behavior as an integrated whole, affected by a wide array of influences in biology, social context, and culture, has motivated developmental researchers to strengthen their links with other fields of psychology and other disciplines. Topics and findings included in the text increasingly reflect the contributions of educational psychology, social psychology, health psychology, clinical psychology, neuropsychology, biology, pediatrics, sociology, anthropology, and other fields.
- *Diverse pathways of change are highlighted.* Investigators have reached broad consensus that variations in biological makeup, everyday tasks, and the people who support children in mastery of those tasks lead to wide individual differences in children's skills. This edition pays more attention to variability in development and recent theories, including ecological, sociocultural, and dynamic systems, that attempt to explain it.
- *The complex, bidirectional relationship between biology and environment is given greater emphasis.* Accumulating evidence on development of the brain, motor skills, cognitive competencies, temperament, and developmental problems underscores the way biological factors share power with

experience. The interconnection between biology and environment is revisited throughout the text narrative and in a Biology and Environment feature with new and updated topics.

- *The link between theory, research, and applications—a theme of this book since its inception—is strengthened.* As researchers intensify their efforts to generate findings that can be applied to real-life situations, I have placed greater weight on social policy issues and sound theory- and research-based practices.
- *The educational context of development becomes a stronger focus.* The home, school, and community are featured as vital educational contexts in which the child develops. Research on effective teaching practices appears in many chapters and in the new Educational Concerns tables and Social Issues: Education boxes.
- *The role of active student learning is made more explicit.* “Ask Yourself” questions at the end of each major section have been expanded to promote four approaches to engaging actively with the subject matter—Review, Apply, Connect, and Reflect. This feature assists students in reflecting on what they have read from multiple vantage points.

TEXT PHILOSOPHY

The basic approach of this book has been shaped by my own professional and personal history as a teacher, researcher, and parent. It consists of seven philosophical ingredients that I regard as essential for students to emerge from a course with a thorough understanding of child development:

1. An understanding of major theories and the strengths and shortcomings of each. The first chapter begins by emphasizing that only knowledge of multiple theories can do justice to the richness of child development. As I take up each age sector and domain of development, I present a variety of theoretical perspectives, indicate how each highlights previously overlooked contributions to development, and discuss research that has been used to evaluate them. Consideration of contrasting theories also serves as the context for an even-handed analysis of many controversial issues throughout the text.

2. An appreciation of research strategies for investigating child development. To evaluate theories, students must

have a firm grounding in research methods and designs. In addition to a special section in Chapter 1 covering research strategies, throughout the book numerous studies are discussed in sufficient detail for students to use what they have learned to critically assess the findings, conclusions, and implications of research.

3. Knowledge of both the sequence of child development and the processes that underlie it. Students are provided with a description of the organized sequence of development, along with a discussion of processes of change. An understanding of process—how complex interactions of biological and environmental events produce development—has been the focus of most recent research. Accordingly, the text reflects this emphasis. But new information about the timetable of change has also emerged. In many ways, children have proven far more competent than they were believed to be in the past. Current evidence on the timing and sequence of development, along with its implications for process, is presented throughout the book.

4. An appreciation of the impact of context and culture on child development. A wealth of research indicates that children live in rich physical and social contexts that affect all aspects of development. In each chapter, the student travels to distant parts of the world as I review a growing body of cross-cultural evidence. The text narrative also discusses many findings on socioeconomically and ethnically diverse children, and children with varying abilities and disabilities. Besides highlighting the role of immediate settings, such as family, neighborhood, and school, I make a concerted effort to underscore the impact of larger social structures—societal values, laws, and government programs—on children's well-being.

5. An understanding of the joint contributions of biology and environment to development. The field recognizes more powerfully than ever before the interaction of hereditary/constitutional and environmental factors—that these contributions to development combine in complex ways and cannot be separated in a simple manner. Numerous examples of how biological dispositions can be maintained as well as transformed by social contexts are presented throughout the book.

6. A sense of the interdependency of all domains of development—physical, cognitive, emotional, and social. Every chapter takes an integrated approach to understanding children. I show how physical, cognitive, emotional, and social development are interwoven. Within the text narrative and in the “Ask Yourself . . . Connect” questions, students are referred to other sections of the book to deepen their grasp of relationships between various aspects of change.

7. An appreciation of the interrelatedness of theory, research, and applications. Throughout this book, I emphasize that theories of child development and the research stimulated by them provide the foundation for sound, effective practices with children. The link between theory, research, and applications is reinforced by an organizational

format in which theory and research are presented first, followed by implications for practice. In addition, a current focus in the field—harnessing child development knowledge to shape social policies that support children's needs—is reflected in every chapter. The text addresses the current condition of children in the United States and around the world and shows how theory and research have sparked successful interventions.

TEXT ORGANIZATION

I have chosen a chronological organization for this text. The chronological approach has the advantage of enabling students to get to know children of a given age period very well. It also eases the task of integrating the various aspects of development. At the same time, a chronologically organized book requires that theories covering several age periods be presented piecemeal. This creates a challenge for students, who must link the various parts together. To assist with this task, I remind students of important earlier achievements before discussing new developments. Also, chapters devoted to the same topic (for example, Cognitive Development in Early Childhood, Cognitive Development in Middle Childhood) follow similarly organized patterns, making it easier for students to draw connections across age periods and construct a continuous vision of developmental change.

NEW COVERAGE IN THE FOURTH EDITION

In this edition, I continue to represent a rapidly transforming contemporary literature with theory and research from more than 1,500 new citations. To make room for new coverage, I have condensed and reorganized some topics and eliminated others that are no longer as crucial in view of new evidence. The following is a sampling of major content changes, organized by chapter (a more complete description of changes can be found in the Instructor's Resource Manual that accompanies the text):

■ CHAPTER 1

■ New sections describing major periods and domains of development at the beginning of the chapter. ■ Revised section on basic issues on which major theories take a stand. ■ Expanded discussion of applications of information-processing research. ■ Enhanced section on development as a dynamic system. ■ New sections on psychophysiological methods as well as methods for studying culture, illustrated in a new Cultural Influences box on immigrant youth.

■ CHAPTER 2

■ Increased attention to the complexity of genetic influences, including a revised and updated Biology and Environment box on the Human Genome Project. ■ New section on environmental influences on gene expression,

including discussion of epigenesis. ■ Updated section on environmental contexts for development, with special attention to family and neighborhood influences. ■ New Biology and Environment box on uncoupling genetic–environmental correlations for mental illness and antisocial behavior.

■ CHAPTER 3

■ Updated research on the relationship of family size to development. ■ Enhanced and updated discussion of teratogens, with special attention to the consequences of illegal drugs, alcohol, radiation, environmental pollutants, and infectious disease for brain development. ■ New Social Issues: Health box on the prenatal environment and health in later life.

■ CHAPTER 4

■ Expanded and updated sections on social support, interventions, and complications during labor and delivery; maternal bonding; and capacities of the newborn. ■ New Biology and Environment box on factors that control the timing of birth. ■ Updated Social Issues: Health box, including current international data on infant mortality and paid maternity and paternity leave policies.

■ CHAPTER 5

■ New case examples, including the story of Grace, a 16-month-old toddler born in Cambodia and adopted by American parents. ■ Enhanced discussion of brain development, including synaptic pruning, lateralization, plasticity, and sensitive periods, with implications for appropriate infant and toddler stimulation. ■ New research on development of vision, including pattern and face perception and perception of object unity. ■ New Biology and Environment box on development of infants with severe visual impairments.

■ CHAPTER 6

■ New research on infants' reasoning about the physical world, including object permanence and physical causality. ■ New research on development of vision, including pattern and face perception and perception of object unity. ■ Updated findings on development of representation, memory, and categorization. ■ Expanded treatment of the social context of early cognitive development. ■ Updated research on specialization of brain areas for language, with emphasis on the role of language-learning experiences in lateralization. ■ New section on a sensitive period for language development. ■ New Biology and Environment box on parent–child interaction and cognitive development of deaf children.

■ CHAPTER 7

■ Application of the dynamic systems perspective to early emotional development. ■ Cross-cultural evidence on

development of stranger anxiety. ■ Enhanced consideration of the development of emotional self-regulation, including cultural variations. ■ Expanded discussion of dimensions of temperament, stability of temperament, and cultural influences on the development of temperament. ■ Updated consideration of the role of infant temperament and caregiving in attachment security. ■ New findings on disorganized/disoriented attachment. ■ Updated Social Issues box on child care and attachment security, including findings from the NICHD Study of Early Child Care.

■ CHAPTER 8

■ New evidence on lateralization and handedness. ■ Revised and updated Biology and Environment box on treating short children with growth hormone. ■ Expanded discussion of environmental influences on preschoolers' eating behaviors. ■ Updated statistics on child health indicators, including nutrition, immunization, and infectious disease. ■ New Social Issues: Health box on otitis media and development. ■ Expanded discussion of prevention strategies of unintentional injuries. ■ Updated consideration of development of drawing and writing.

■ CHAPTER 9

■ Revised section on preschoolers' understanding of symbol–real world relations. ■ New research on reasoning by analogy, causal reasoning, and categorization. ■ Revised section evaluating Vygotsky's theory. ■ New section on problem solving, covering overlapping-waves theory of strategy development. ■ New Cultural Influences box on young children's daily life in a Yucatec Mayan village, illustrating diversity in preschool cognitive development. ■ Updated discussion of the young child's theory of mind. ■ Updated discussion of literacy and mathematical development. ■ New evidence on outcomes associated with child-centered versus academic preschools. ■ New evidence on language development, including vocabulary, grammar, and conversational skills.

■ CHAPTER 10

■ New Cultural Influences box on implications of cultural variations in personal storytelling for preschoolers' self-concepts. ■ New evidence on understanding of intentions and emotions, emotional self-regulation, and self-conscious emotions. ■ Updated section on empathy, including the distinction between empathy and sympathy. ■ New findings on cultural variations in peer sociability and on friendships as social supports during the transition to school. ■ New section on social problem solving. ■ Revised and updated section on television and aggression. ■ New research on morality, with special attention to distinctions between moral imperatives, social conventions, and matters of personal choice. ■

Expanded discussion of cultural variations in child-rearing styles. ■ Updated section on child maltreatment.

■ CHAPTER 11

■ Current findings on development of myopia. ■ Updated and expanded discussion of childhood obesity. ■ Updated Social Issues: Education box on children's understanding of health and illness. ■ Expanded consideration of sex differences in motor skills and adult-organized youth sports.

■ CHAPTER 12

■ Updated research on cognitive inhibition, planning, and early reading development. ■ Enhanced consideration of culture, language styles, and mental test performance. ■ Updated research on dynamic testing. ■ Expanded consideration of gains in communication skills. ■ Revised and updated sections on bilingual development and bilingual education. ■ New Social Issues: Education box on school readiness, academic redshirting, and early retention. ■ Enhanced discussion of school grouping practices, cooperative learning, and inclusion. ■ Updated section on gifted children, with special attention to the distinction between talent and creativity.

■ CHAPTER 13

Enhanced consideration of self-concept and self-esteem, including cultural variations. ■ Expanded treatment of self-conscious emotions, emotional understanding, and emotional self-regulation. ■ Updated consideration of school-age children's grasp of linkages between moral rules and social conventions. ■ Expanded discussion of peer groups. ■ New evidence on peer acceptance, including two subtypes of popular children. ■ Updated Biology and Environment box on bullies and their victims. ■ Updated discussion of development of gender stereotypes, including girls' tendency to discount their academic talent. ■ New section on never-married, single-parent families. ■ Updated section on divorce, with special attention to long-term consequences. ■ Enhanced attention to age differences in children's adjustment to blended families. ■ Updated section on child care for school-age children. ■ Inclusion of findings on school-based violence prevention programs.

■ CHAPTER 14

■ New findings on the link between the emotional quality of childhood experiences and timing of puberty. ■ New section on implications of adolescents' tendency to stay up late for their learning, mood, and behavior. ■ Updated research on parent-child relationships and anorexia nervosa and bulimia nervosa. ■ New evidence on sexual activity, adolescent parenthood, and pregnancy prevention. ■ Updated findings on substance use and abuse. ■ New Biology and Environment box on intergenerational continuity in adolescent parenthood.

■ CHAPTER 15

■ New evidence on the development of propositional thought and scientific reasoning. ■ Updated coverage of sex differences in mathematical and spatial abilities. ■ New research on language development, including understanding of figurative language. ■ Current research on school transitions, family and peer influences on academic achievement, and drop-out prevention strategies. ■ New Social Issues: Education box on highly achieving, optimistic African American high school students. ■ Updated research on the school-to-work transition.

■ CHAPTER 16

■ Updated research on self-concept and self-esteem, including profiles of separate self-esteems. ■ Enhanced discussion of identity development, including a new section on the role of close friends. ■ Updated Cultural Influences box on ethnic identity. ■ Expanded treatment of sex differences in moral reasoning, including cross-cultural research. ■ Enhanced discussion of influences on moral reasoning, including a new section on the role of personality and a revised section on the impact of culture. ■ New Social Issues: Education box on development of civic responsibility. ■ Expanded treatment of adolescent sibling relationships. ■ Enhanced discussion of adolescent friendships, including stability of friendships and significance of other-sex friends. ■ Special emphasis on personal and contextual factors that contribute to adolescent problem behavior, as illustrated by depression, suicide, and delinquency.

INSTRUCTOR'S SUPPLEMENTS

A variety of teaching tools are available to assist instructors in organizing lectures, planning demonstrations and examinations, and ensuring student comprehension.

■ INSTRUCTOR'S RESOURCE MANUAL (IRM)

Prepared by Sara Harris and Laura E. Berk, Illinois State University, this thoroughly revised IRM contains additional material to enrich your class presentations. For each chapter, the IRM provides a Chapter-at-a-Glance grid, Brief Chapter Summary, Learning Objectives, detailed Lecture Outline, Lecture Extensions, Learning Activities, "Ask Yourself" questions with answers, Suggested Readings, Transparencies listing, and Media Materials.

■ TEST BANK

Prepared by Gabrielle Principe, Cornell University, and Karla Gingerich, Colorado State University, the test bank contains over 2,000 multiple-choice questions, each of which is cross-referenced to a Learning Objective, page-referenced to chapter content, and classified by type (factual, applied, or conceptual); essay questions; and premade tests.

■ COMPUTERIZED TEST BANK

This computerized version of the test bank is available in Windows and Macintosh formats using ESATEST III, the best-selling test generation software.

■ TRANSPARENCIES

Over 200 full-color new transparencies taken from the text and other sources are available on adoption of the text.

■ SEASONS OF LIFE VIDEO SERIES

Illustrating the text's interdisciplinary focus, this five-video series explores a multitude of biological, psychological, and social influences on development. Nearly 75 psychologists, biologists, sociologists, and anthropologists present theory, methods, and research. Student Activities are provided in the IRM to help you integrate *Seasons of Life* into your course. Your publisher's representative can provide you with details on class enrollment restrictions.

■ FILMS FOR THE HUMANITIES & SCIENCES: CHILD DEVELOPMENT VIDEO

Complementing the text's linkage of theory and research to application, this revised video features high-interest segments on topics such as genetic counseling, fetal alcohol syndrome, the child's theory of mind, and adolescent depression. The IRM provides synopses and Discussion Questions for each segment.

■ "INFANTS, CHILDREN, AND ADOLESCENTS IN ACTION" OBSERVATION PROGRAM

I have revised and expanded this real-life videotape, containing a wealth of observation segments that illustrate the many theories, concepts, and milestones of child development. An Observation Guide helps students use the video in conjunction with the textbook, deepening their understanding of the material and applying what they have learned to everyday life. The videotape and Observation Guide are free to instructors who adopt the text and are available to students at a discount when packaged with the text.

■ POWERPOINT™ CD-ROM

A PowerPoint™ CD-ROM contains outlines of key points and illustrations from each chapter, as well as an electronic version of the Instructor's Resource Manual, making it easy to customize content.

■ WEBSITE

www.ablongman.com/berk

Designed for students and faculty of child and human development classes, this website includes current links and information about development, Online Practice Tests, a Teaching Aids section, Websketches (extensions of the stories illustrating development in the text), and a variety of additional features. With the purchase of a new text, your students

will receive a PIN code that provides them with access to a robust Interactive Companion site that encourages interactive learning by providing many activities that have been specially created for this edition and access to Content Select, which provides online access to journal articles from most major journals.

■ COURSE MANAGEMENT

CourseCompass™ is a dynamic, interactive online course management tool powered by Blackboard.™ This exciting product allows you to teach with text-specific content in an easy-to-use customizable format.

ACKNOWLEDGMENTS

The dedicated contributions of a great many individuals helped make this book a reality and contributed to refinements and improvements in this fourth edition. An impressive cast of reviewers provided many helpful suggestions, constructive criticisms, and encouragement and enthusiasm for the organization and content of the text. I am grateful to each one of them.

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The supplement package also benefited from the talents and diligence of several other individuals. Gabrielle Principe of Cornell University and Karla Gingerich of Colorado State University revised the Test Bank with great concern for clarity and accuracy. Many thanks, also, to Elizabeth Kenny for a superb job in coordinating the preparation of the supplement package and to Kelly Perkins for her wonderful coordination of filming for the Observation Video.

I have been fortunate to work with an exceptionally capable editorial team at Allyn and Bacon. It has been a privilege to author this book under the sponsorship of Executive Editor Carolyn Merrill. When I first met Carolyn, she told me that she was a "woman of action," and she has been true to her word. Her enthusiasm, organizational skills, and fielding of potential difficulties contributed to a smooth and timely

revision process. Her genuine interest in child development sparked many fruitful discussions that influenced my approach to preparing sections of the book as well as its pedagogical features. Carolyn graciously took time to provide life histories of Caitlin, Grace, and Timmy, the three new characters whose experiences and development illustrate Infancy and Toddlerhood, Chapters 5–7.

I would like to express a heartfelt thank you to Joyce Nilsen, Director of Marketing, and Caroline Croley, Marketing Manager of Psychology, for the outstanding work they have done in marketing my texts. Each has made sure that accurate and clear information about my books and their ancillaries reached Allyn and Bacon's sales force and that the needs of prospective and current adopters were met. Marcie Melia, Field Marketing Specialist, has also devoted much time and energy to marketing activities, and I greatly appreciate the lovely social occasions she has planned and the kind greetings she sends from time to time, despite her very busy schedule.

Susan Messer undertook the development activities for the book. It is difficult to find words that do justice to her contributions. Susan worked closely with me as I wrote each chapter, making sure that every thought and concept would be precisely expressed and well developed. Her keen writing and editing skills and prompt and patient responses to my concerns and queries have enhanced every aspect of this edi-

tion. It has been a pleasure to get to know Susan during the past year.

Liz Napolitano managed the complex production tasks that resulted in a beautiful fourth edition. I am grateful for her competence, flexibility, efficiency, and thoughtfulness, and I look forward to a continuing partnership with her in future editions of my texts. I thank Sarah Evertson for obtaining the exceptional photographs that so aptly illustrate the text narrative. Lara Zeises and Jonathan Bender, Editorial Assistants, arranged for manuscript reviews and attended to a wide variety of pressing, last-minute details.

A final word of gratitude goes to my family, whose love, patience, and understanding have enabled me to be wife, mother, teacher, researcher, and text author at the same time. My sons, David and Peter, grew up with my child development texts, passing from childhood to adolescence and then to young adulthood as successive editions were written. David has a special connection with the books' subject matter as an elementary school teacher. Peter is embarking on a career in law as the book goes to press. Both continue to enrich my understanding through reflections on events and progress in their own lives. My husband, Ken, willingly made room for yet another time-consuming endeavor in our life together and communicated his belief in its importance in a great many unspoken, caring ways.

—Laura E. Berk



ABOUT THE CHAPTER OPENING ART

I would like to extend grateful acknowledgments to the International Museum of Children's Art, Oslo, Norway; Queensland University of Technology; and the International Child Art Foundation, Washington, DC; for the exceptional chapter opening artwork. A new participant to this edition, the International Child Art Foundation provided the opening artwork for Chapters 1, 3, 5, 11, 12, 13, 14, 15, and 16. To celebrate the year 2000, the International Child Art Foundation sponsored an international art contest, ChildArt 2000. Children from around the world submitted drawings based on the theme, "My World in the Year 2000." The artwork for the openers was created by ChildArt 2000 contest finalists. In June, 1999, the winners traveled to Washington, DC, to collaborate on the beautiful mural shown in Chapter 1.

A Personal Note to Students

My thirty years of teaching child development have brought me in contact with thousands of students like you—students with diverse college majors, future goals, interests, and needs. Some are affiliated with my own department, psychology, but many come from other child-related fields—education, sociology, anthropology, family studies, and biology, to name just a few. Each semester, my students' aspirations are as varied as their fields of study. Many look toward careers in applied work with children—teaching, caregiving, nursing, counseling, social work, school psychology, and program administration. Some plan to teach child development, and a few want to do research. Most hope someday to have children, whereas others are already parents who come with a desire to better understand and rear their own youngsters. And almost all arrive with a deep curiosity about how they themselves developed from tiny infants into the complex human beings they are today.

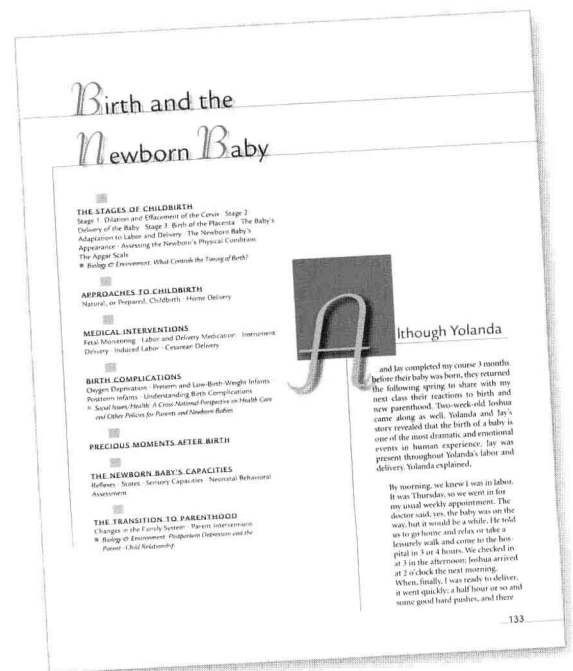
My goal in preparing this fourth edition of *Infants, Children, and Adolescents* is to provide a textbook that meets the instructional goals of your course as well as your personal needs. To achieve these objectives, I have grounded this book in a carefully selected body of classic and current research

brought to life with stories and vignettes about children and families, many of whom I have known personally. In addition, the text highlights the interactive contributions biology and environment make to the developing child, explains how the research process helps solve real-world problems, emphasizes the broader social and educational contexts in which the child develops, and pays special attention to policy issues that are crucial for safeguarding children's well-being in today's world. I have also provided a unique pedagogical program that will assist you in mastering information, integrating various aspects of development, critically examining controversial issues, reflecting on your own childhood experiences, and applying what you have learned.

PEDAGOGICAL FEATURES

Maintaining a highly accessible writing style—one that is lucid and engaging without being simplistic—continues to be one of this text's goals. I will frequently speak directly to you and encourage you to relate what you read to your own life. In doing so, I hope to make the study of child development involving and pleasurable.

- **Stories and Vignettes About Children.** To help you construct a clear image of development and to enliven the text narrative, each chronological age division is unified by case examples woven throughout that set of chapters. For example, within the infancy and toddlerhood section, we'll look in on three children, observe dramatic changes and striking individual differences, and address the impact of family background, child-rearing practices, and parents' and children's life experiences on development. Besides a set of main characters, many additional vignettes offer vivid examples of development and diversity among children. Student response to this feature has been so positive that I have enhanced it. Caitlin, Grace, and Timmy, whom you'll meet in Chapters 5 to 7, are new to this edition.



- **Chapter Introductions and End-of-Chapter Summaries.** To provide a helpful preview of what you are about to read, I include an outline and overview of chapter content in each chapter introduction. Especially comprehensive end-of-chapter summaries, organized according to the major divisions of each chapter and highlighting important terms, will remind you of key points in the text discussion. Review questions are included in the summaries to encourage active study.



- **Ask Yourself ...** Active engagement with the subject matter is supported by study questions at the end of each major section. Four types of questions prompt you to think about the subject matter in diverse ways: **Review** questions help you recall and comprehend information you have just read; **Apply** questions encourage you to apply your knowledge to controversial issues and problems faced by parents, teachers, and children; **Connect** questions help you build an image of the whole child by integrating what you have learned across age periods and domains of development; and **Reflect** questions make the study of child development personally meaningful by asking you to reflect on your own development and that of others you know well.

■ **Boxes.** Four types of boxes accentuate the philosophical themes of this book:

■ **Cultural Influences** boxes underscore the impact of culture on all aspects of development. They include *Immigrant Youth: Amazing Adaptation*; *Young Children's Daily Life in a Yucatec Mayan Village*; *Cultural Variations in Personal Storytelling: Implications for Early Self-Concept*; and *Identity Development Among Ethnic Minority Adolescents*.

Biology & Environment

TEMPERAMENT IN THE WOMB

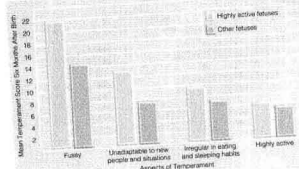
A Yolanda, in her seventh month of pregnancy, read the book *Temperament in the Womb*. After she gave birth, she found out that her baby was a "highly active" child. Yolanda was surprised, as she had not expected her baby to be so active. She had read in the book that babies who are highly active in the womb are more likely to become difficult, unpredictable babies. Yolanda was especially concerned because her baby was also a "highly active" child. She had read in the book that babies who are highly active in the womb are more likely to become difficult, unpredictable babies. Yolanda was especially concerned because her baby was also a "highly active" child.

In the most extensive study to date, 31 volunteer women, whose newborns were monitored intensively during the prenatal period from 28 weeks to just before birth (Lahiri et al., 1998b). During each session, the mothers lay quietly while a variety of fetal movements, including heart rate and activity level, were recorded. Then, at 3 and 6 months after birth, the mothers were asked to rate various aspects of their baby's temperament, including fussiness, adaptability to new persons and situations, activity level, and regularity of eating and sleeping.

Findings revealed that the pattern of fetal activity in the last few weeks of pregnancy was the best predictor of infant temperament. Infants whose mothers had high levels of activity in the womb were more likely to become difficult, unpredictable babies. Yolanda was especially concerned because her baby was also a "highly active" child.

FIGURE 3.6

Temperament scores 6 months after birth of highly active fetus versus other fetuses. Infants who were very active in the last weeks of pregnancy (highly active fetuses) were more likely to be highly active at 6 months of age than infants who were less active in the last weeks of pregnancy (other fetuses).



■ **Social Issues** boxes discuss the condition of children around the world and emphasize the need for sensitive social policies and interventions to ensure their well-being. This edition includes two types: **Social Issues: Health** boxes address values and practices relevant to children's physical and mental health. Examples include *The Prenatal Environment and Health in Later Life*; *Otitis Media and Development*; *Children's Eyewitness Testimony*; and *Like Mother, Like Child: Intergenerational Continuity in Adolescent Parenthood*. **Social Issues: Education** boxes focus on home, school, and community influences on children's learning. They include: *When Are Children Ready for School? Academic Redshirting and Early Retention*; *Dispositions Toward Collective Struggle: Highly Achieving, Optimistic African-American High School Students*; and *Development of Civic Responsibility*.

Cultural Influences

THE AFRICAN-AMERICAN EXTENDED FAMILY

The African-American extended family can be traced to the African heritage of most Black Americans. In many African societies, family members, including grandparents, aunts, and uncles, live with or near the nuclear family. This tradition of extended family living is a key feature of African-American culture. The extended family provides a strong support system for its members, especially in times of need. It also plays a crucial role in the socialization of children, passing on cultural values and traditions.

For single mothers who were very young at the time of their child's birth, extended family living continues to be an important source of support. The extended family provides a strong support system for its members, especially in times of need. It also plays a crucial role in the socialization of children, passing on cultural values and traditions.



Strong bonds with extended family members provide the development of many African-American children growing up in conditions of poverty and to their parents. The family gathering in this photograph is a typical African-American family. The family members are gathered around a table, sharing a meal and conversation. The atmosphere is warm and supportive.

Although many Americans value independence and privacy, cooperative family structures can be found in the United States. In large industrialized nations like ours, not all citizens share the same values. Subcultures exist—groups of people with beliefs and customs that differ from those of the larger culture. The values and practices of some ethnic minority groups help protect their members from the harmful effects of poverty. A case in point is the African-American family. As the Cultural Influences box above indicates, the Black cultural tradition of extended family households, in which parent and child live with one or more

only parents and their children, extended family arrangements place emphasis on cooperation and mutual support. The family members are gathered around a table, sharing a meal and conversation. The atmosphere is warm and supportive.

■ **Biology and Environment** boxes present a balanced, interconnected view of key biological and environmental influences on development. Examples include *Uncoupling Genetic-Environmental Correlations for Mental Illness and Antisocial Behavior*; *Factors that Control the Timing of Birth*; *Development of Infants with Severe Visual Impairments*; *Parent-Child Interaction and Cognitive Development of Deaf Children*; and *Intergenerational Continuity in Adolescent Parenthood*.

Social Issues: Health

THE MYSTERIOUS TRAGEDY OF SUDDEN INFANT DEATH SYNDROME

The mystery about the cause of SIDS is that problems in brain function during the first year of life may be responsible for the sudden death of an infant. Researchers are working to understand the factors that contribute to SIDS, such as genetic predisposition, environmental factors, and parental practices. The goal is to identify ways to prevent SIDS and ensure the safety of infants.

One hypothesis about the cause of SIDS is that problems in brain function during the first year of life may be responsible for the sudden death of an infant. Researchers are working to understand the factors that contribute to SIDS, such as genetic predisposition, environmental factors, and parental practices. The goal is to identify ways to prevent SIDS and ensure the safety of infants.

back and are often wrapped very tightly in clothing and blankets. Researchers think that smothering, disordered breathing, or a combination of these factors may lead to SIDS. The goal is to identify ways to prevent SIDS and ensure the safety of infants.

Social Issues: Education

REGULATING CHILDREN'S TELEVISION

Exposure to television is almost universal in the United States. Children watch TV for an average of 2.5 hours a day. This exposure can have both positive and negative effects on children's development. While TV can provide educational content, it can also expose children to violence and inappropriate material. Regulating children's television viewing is a complex task that requires the involvement of parents, educators, and policymakers.

right to free speech has made the task of government regulation to place limits on television content. Consequently, parents and educators are often faced with the challenge of monitoring their children's TV viewing. The goal is to ensure that children are exposed to appropriate and educational content.

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Violent programming creates both short- and long-term difficulties in parent and peer relationships. Longitudinal research reveals that highly aggressive children have a greater appetite for violent TV. As they reach middle childhood, they become increasingly likely to resist hostile ways of solving problems. A spiraling pattern of learning that contributes to antisocial behavior is also evident in children and young adolescents (Hawthorn & Miller, 1991). Television violence also "teaches" children to be aggressive, making them more willing to tolerate it in others (Dornheim, Saly, & Fenn, 1994).

The case with which television can manipulate the beliefs and behaviors of children has been well-documented in strong public opinion polls. The case with which television can manipulate the beliefs and behaviors of children has been well-documented in strong public opinion polls. The case with which television can manipulate the beliefs and behaviors of children has been well-documented in strong public opinion polls.

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Caregiving Concerns and Educational Concerns Tables.

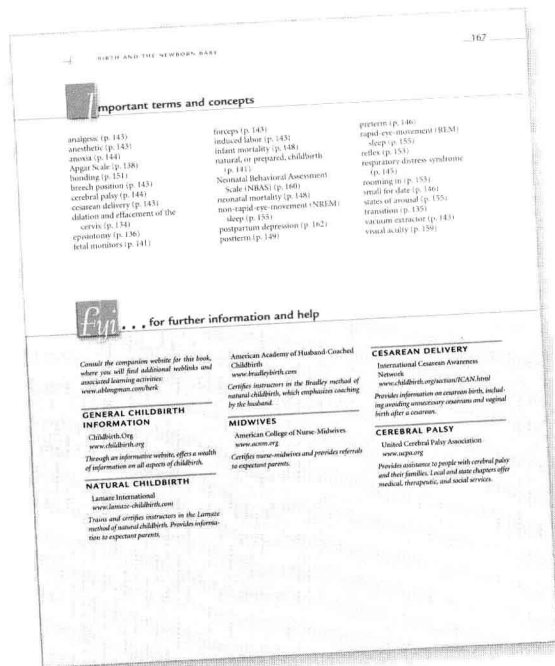
To accentuate the relationship of theory and research to practice, two types of tables provide easily accessible practical advice. **Caregiving Concerns** tables emphasize caring for, protecting, and supporting children's physical, emotional, and social well-being. They include Ways Couples Can Ease the Transition to Parenthood, Keeping Infants and Toddlers Safe, and Adult Practices that Support Healthy Identity Development. **Educational Concerns** tables focus on effective teaching strategies. Examples include Signs of Developmentally Appropriate Child Care, Enhancing Make-Believe Play in Early Childhood, Signs of High-Quality Education in Elementary School, and Factors that Support High Achievement During Adolescence.

■ **Milestones Tables.** A Milestones table appears at the end of each chronological age division of the text. These tables summarize major physical, cognitive, language, and emotional and social developments of each age span. Entries in the Milestones tables are page-referenced to the text narrative to facilitate study and review.

Milestones of development in infancy and toddlerhood					
AGE	PHYSICAL	COGNITIVE	LANGUAGE	EMOTIONAL/SOCIAL	
Birth-6 months	<ul style="list-style-type: none"> • Rapid height and weight gain. (170) • Reflexes decline. (154) • Sleep organized into a day-night schedule. (178) • Holds head up, rolls over, and reaches for objects. (190) • Can be classically and operantly conditioned. (185-187) • Habituates to unchanging stimuli; dishabituates to novel stimuli. (187) • Hearing will develop, by the end of this period, displays greater sensitivity to speech sounds of own language. (196) • Sensitive to motion and binocular depth cues. (197-198) • Perceives stimuli as organized patterns; recognizes and prefers pattern of human face. (199-202) 	<ul style="list-style-type: none"> • Engages in deferred imitation of adults; facial expressions. (219) • Repeats chance behaviors leading to pleasurable and aversive results. (214) • Aware of object permanence and other objects' presence in solution of experiment studies. (217) • Attention becomes more efficient and flexible. (225) • Recognition memory for people, places, and objects improves. (226) • Turns preferences into action; based on objects' similar features. (228) 	<ul style="list-style-type: none"> • Engages in cooing and, by the end of this period, babbling. (241) • Establishes joint attention with caregivers; who labels objects and events. (242) • Emotional expression becomes better organized and directly tied to social events. (259-260) • Self-empowerment. (283) 	<ul style="list-style-type: none"> • Social smile and laughter emerge. (258) • Negative adults' emotional expressions during face-to-face interaction. (258) • Emotional expression becomes better organized and directly tied to social events. (259-260) • Self-empowerment. (283) 	<ul style="list-style-type: none"> • Joins in play with familiar adults; siblings, and peers. (280) • Meets self-empowerment; emerges image of self in mirror and on videotape. (284) • Begins to realize others' emotional reactions may differ from one's own. (280) • Shows signs of empathy. (284) • Complies with simple directions. (283)
7-12 months	<ul style="list-style-type: none"> • Sex alone, crawls, walks. (198) • Shows refined grasp grasp. (194) • Perceives larger speech units crucial to understanding meaning. (196) • Sensitive to pictorial depth cues. (197) • Organizes many stimuli into meaningful patterns. (199-200) • Relies on shape, color, and feature to distinguish objects from their surroundings. (204) 	<ul style="list-style-type: none"> • Combines sensorimotor schemes. (215) • Engages in intentional, or goal-directed, behavior. (215) • Finds objects hidden in one place. (215) • Understanding of object permanence and physical causality emerges. (217-219) • Engages in deferred imitation of adult actions with objects. (219-220) • Recall memory for people, places, and objects improves. (226) • Solves simple problems by analogy. (220) • Corrupts stimuli into a more meaningful range of meaningful categories. (228) 	<ul style="list-style-type: none"> • Babbles regardless to include sounds of spoken languages and the child's language constraints. (241, 242) • Uses prepositional phrases to show meaning to caregivers. (242) • Uses language as a secure base for exploration. (271) • Engages in social exploration. (259) • Shows "I can do it" at achievement to familiar caregivers. (264) 	<ul style="list-style-type: none"> • Joins in play with familiar adults; siblings, and peers. (280) • Meets self-empowerment; emerges image of self in mirror and on videotape. (284) • Begins to realize others' emotional reactions may differ from one's own. (280) • Shows signs of empathy. (284) • Complies with simple directions. (283) 	
13-18 months	<ul style="list-style-type: none"> • Height and weight gain rapid but not as great as in first year. (155) • Walking behavior coordinated. (190) • Manipulates small objects with improved coordination. (194) 	<ul style="list-style-type: none"> • Engages in deferred imitation of actions with objects. (215) • Finds objects hidden in more than one place. (216) • Sorts objects into categories. (228) • Initiates actions aimed at changing in response to requests from child care to home. (221) • Understands prepositional phrases. (225) • Memory becomes less dependent on context. (226) 	<ul style="list-style-type: none"> • Solves sensorimotor problems through repetitions. (216) • Finds objects moved while out of sight. (216) • Engages in deferred imitation of actions an adult tries to produce, even if not fully realized. (219-220) • Engages in make believe play. (216) • Sorts objects into categories more effectively. (228) • Recall memory for people, places, and objects improves further. (226) 	<ul style="list-style-type: none"> • Joins in play with familiar adults; siblings, and peers. (280) • Meets self-empowerment; emerges image of self in mirror and on videotape. (284) • Begins to realize others' emotional reactions may differ from one's own. (280) • Shows signs of empathy. (284) • Complies with simple directions. (283) 	
19-24 months	<ul style="list-style-type: none"> • Jumps, runs, and climbs. (191) • Manipulates small objects with good coordination. (194) 	<ul style="list-style-type: none"> • Solves sensorimotor problems through repetitions. (216) • Finds objects moved while out of sight. (216) • Engages in deferred imitation of actions an adult tries to produce, even if not fully realized. (219-220) • Engages in make believe play. (216) • Sorts objects into categories more effectively. (228) • Recall memory for people, places, and objects improves further. (226) 	<ul style="list-style-type: none"> • Solves sensorimotor problems through repetitions. (216) • Finds objects moved while out of sight. (216) • Engages in deferred imitation of actions an adult tries to produce, even if not fully realized. (219-220) • Engages in make believe play. (216) • Sorts objects into categories more effectively. (228) • Recall memory for people, places, and objects improves further. (226) 	<ul style="list-style-type: none"> • Self-conscious emotions (shame, embarrassment, guilt, and pride) emerge. (260) • Acquires a vocabulary of emotional terms. (261) • Begins using language to assist with emotional self-regulation. (261) • Begins to tolerate caregiver's absence more easily. (273) • Starts to use words to influence a playmate's behavior. (271) • Uses own name or personal pronouns to label image of self. (271) • Categorizes the self and others on the basis of age, sex, physical characteristics, goals and behaviors, and competencies. (285) • Shows gender appropriateness choices. (285) • Self-control approaches. (285) 	

Note: Numbers in parentheses indicate the page on which each milestone is discussed.

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STUDY AIDS

Beyond the study aids found in the textbook, Allyn and Bacon offers a number of supplements for students. Ask your instructor or your bookstore about their availability.

- **Study Guide.** Prepared by JoDe Paladino and Laura E. Berk, Illinois State University, this helpful guide offers Chapter Summaries, Learning Objectives, Study Questions organized according to major headings in the text, “Ask Yourself” questions, Suggested Readings, Crossword Puzzles for mastering important terms, and multiple-choice Self-Tests.
- **Practice Tests.** Twenty multiple-choice items per chapter plus an answer key with justifications are drawn from the test bank to assist you in preparing for course exams.
- **Websites.** Visit <http://www.ablongman.com/berk>, a companion website that offers multiple-choice online practice tests. In addition, with the purchase of a new textbook, you gain access via a PIN code to a robust website that encourages interactive learning by providing a wealth of activities that have been specially created for this textbook. Also provided are many links to relevant sites and access to top journal articles to assist you with research.

- **Additional Tables, Illustrations, and Photographs.** Additional tables are liberally included to help you grasp essential points in the text discussion, extend information on a topic, and consider applications. The many full-color illustrations throughout the book depict important theories, methods, and research findings. In this edition, the photo program has been extended. Each photo has been carefully selected to portray the text discussion and to represent the diversity of children around the world.
- **Marginal Glossary, End-of-Chapter Term List, and End-of-Book Glossary.** Mastery of terms that make up the central vocabulary of the field is promoted through a marginal glossary, an end-of-chapter term list, and an end-of-book Glossary. Important terms and concepts also appear in boldface type in the text narrative.
- **FYI . . . For Further Information and Help.** Students in my classes frequently ask where they can go to find out more about high-interest topics or to seek help in areas related to their own lives. To meet this need, I have included an annotated section at the end of each chapter that provides the names, phone numbers, and website addresses of organizations that disseminate information about child development and offer special services.

I hope your experience learning about child development will be as rewarding as I have found it over the years. I would like to know what you think about both the field of child development and this book. I welcome your comments; please feel free to send them to me at Department of Psychology, Box 4620, Illinois State University, Normal, IL 61790, or in care of the publisher, who will forward them to me.

—*Laura E. Berk*

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