

DEVELOPMENT THROUGH THE
LIFESPAN

Seventh Edition



LAURA E. BERK



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Development Through the Lifespan



Laura E. Berk

Illinois State University

Dedication

To David, Peter, and Melissa, with love

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Proofreader: Julie Hotchkiss
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Supplements Project Manager: Stephanie Laird, Ohlinger Publishing Services, Inc.
Printer/Binder and Cover Printer: Courier, Corp., Kendallville, IN
Text Font: Times
Cover Art: Harold Gregor, “No Words for Where,” 2012

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Library of Congress Cataloging-in-Publication Data

Names: Berk, Laura E., author.

Title: Development through the lifespan / Laura E. Berk, Illinois State University.

Description: Seventh Edition. | Boston : Pearson, 2018. | Revised edition of the author's Development through the lifespan, [2014]

Identifiers: LCCN 2016038686 | ISBN 9780134419695 (Student edition) | ISBN 0134419693

Subjects: LCSH: Developmental psychology—Textbooks.

Classification: LCC BF713 .B465 2018 | DDC 155—dc23 LC record available at <https://lccn.loc.gov/2016038686>

Student Edition
ISBN 10: 0-13-441969-3
ISBN 13: 978-0-13-441969-5

Instructor's Review Edition
ISBN 10: 0-13-441991-X
ISBN 13: 978-0-13-441991-6

À la Carte Edition
ISBN 10: 0-13-441972-3
ISBN 13: 978-0-13-441972-5



About the Author

Laura E. Berk is a distinguished professor of psychology at Illinois State University, where she has taught child, adolescent, and lifespan development for more than three decades. She received her bachelor's degree in psychology from the University of California, Berkeley, and her master's and doctoral degrees in child development and educational psychology from the University of Chicago.

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Berk has published widely on the effects of school environments on children's development, the development of private speech, and the role of make-believe play in development. Her empirical studies have attracted the attention of the general public, leading to contributions to *Psychology Today* and *Scientific American*. She has also been featured on National Public Radio's *Morning Edition* and in *Parents Magazine*, *Wondertime*, and *Reader's Digest*.

Berk has served as a research editor of *Young Children*, a consulting editor for *Early Childhood Research Quarterly*, and as an associate editor of the *Journal of Cognitive Education and Psychology*. She is a frequent contributor to edited volumes, having written the article on social development for *The Child: An Encyclopedic Companion* and the article on Vygotsky for *The Encyclopedia of Cognitive Science*. She is coauthor of the chapter on make-believe play and self-regulation in the *Sage Handbook of Play in Early Childhood* and the chapter on psychologists writing textbooks in *Career Paths in Psychology: Where Your Degree Can Take You*, published by the American Psychological Association.

Berk's books include *Private Speech: From Social Interaction to Self-Regulation*; *Scaffolding Children's Learning: Vygotsky and Early Childhood Education*; *Landscapes of Development: An Anthology of Readings*; and *A Mandate for Playful Learning in Preschool: Presenting the Evidence*. In addition to *Development Through the Lifespan*, she is author of the best-selling texts *Child Development* and *Infants, Children, and Adolescents*, published by Pearson. Her book for parents and teachers is *Awakening Children's Minds: How Parents and Teachers Can Make a Difference*.

Berk is active in work for children's causes. She serves on the governing boards of the Illinois Network of Child Care Resource and Referral Agencies and of Artolution, an organization devoted to engaging children, youths, and families in collaborative public art projects around the world as a means of promoting resilience and relief from trauma. Berk has been designated a YWCA Woman of Distinction for service in education. She is a fellow of the American Psychological Association, Division 7: Developmental Psychology.



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A Personal Note to Students



My more than 30 years of teaching human 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 field, psychology, but many come from other related fields—education, sociology, anthropology, family studies, biology, social service, and nursing, to name just a few. Each semester, my students’ aspirations have proved to be as varied as their fields of study. Many look toward careers in applied work—counseling, caregiving, nursing, social work, school psychology, and program administration. Some plan to teach, and a few want to do research. Most hope someday to become parents, whereas others are already parents who come with a desire to better understand and rear their children. 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 seventh edition of *Development Through the Lifespan* is to provide a textbook that meets the instructional goals of your course as well as your personal interests and needs. To achieve these objectives, I have grounded this book in a carefully selected body of classic and current theory and research. In addition, the text highlights the lifespan perspective on development and the interwoven contributions of biology and environment to the developing person. It also illustrates commonalities and differences among ethnic groups and cultures and discusses the broader social contexts in which we develop. I have provided a unique pedagogical program that will assist you in mastering information, integrating various aspects of development, critically examining controversial issues, applying what you have learned, and relating the information to your own life.

I hope that learning about human development will be as rewarding for you as I have found it over the years. I would like to know what you think about both the field of human development and this book. I welcome your comments; please feel free to send them to me at berklifespandevelopment@gmail.com.

Laura E. Berk



Preface for Instructors

My decision to write *Development Through the Lifespan* was inspired by a wealth of professional and personal experiences. First and foremost were the interests and concerns of hundreds of students of human development with whom I have worked in over three decades of college teaching. Each semester, their insights and questions have revealed how an understanding of any single period of development is enriched by an appreciation of the entire lifespan. Second, as I moved through adult development myself, I began to think more intently about factors that have shaped and reshaped my own life course—family, friends, mentors, co-workers, community, and larger society. My career well-established, my marriage having stood the test of time, and my children launched into their adult lives, I felt that a deeper grasp of these multiple, interacting influences would help me better appreciate where I had been and where I would be going in the years ahead. I was also convinced that such knowledge could contribute to my becoming a better teacher, scholar, family member, and citizen. And because teaching has been so central and gratifying to my work life, I wanted to bring to others a personally meaningful understanding of lifespan development.

The years since *Development Through the Lifespan* first appeared have been a period of unprecedented expansion and change in theory and research. This seventh edition represents these rapidly transforming aspects of the field, with a wealth of new content and teaching tools:

- *Diverse pathways of change are highlighted.* Investigators have reached broad consensus that variations in biological makeup and everyday tasks lead to wide individual differences in paths of change and resulting competencies. This edition pays more attention to variability in development and to recent theories—including ecological, sociocultural, dynamic systems, and epigenesis—that attempt to explain it. Multicultural and cross-cultural findings, including international comparisons, are enhanced throughout the text. Biology and Environment and Cultural Influences boxes also accentuate the theme of diversity in development.
- *The lifespan perspective is emphasized.* As in previous editions, the lifespan perspective—development as lifelong, multidimensional, multidirectional, plastic, and embedded in multiple contexts—continues to serve as a unifying approach to understanding human change and is woven thoroughly into the text.
- *The complex bidirectional relationship between biology and environment is given greater attention.* Accumulating evidence on development of the brain, motor skills, cognitive and language competencies, temperament and personality, emotional and social understanding, and developmental problems underscores the way biological factors emerge in, are modified by, and share power with experience. The interconnection between biology and environment is integral to the lifespan perspective and is revisited throughout the text narrative and in the Biology and Environment boxes with new and updated topics.

- *Inclusion of interdisciplinary research is expanded.* The move toward viewing 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 ties with other fields of psychology and with other disciplines. Topics and findings included in this edition increasingly reflect the contributions of educational psychology, social psychology, health psychology, clinical psychology, neurobiology, pediatrics, geriatrics, sociology, anthropology, social service, and other fields.
- *Links among theory, research, and applications are strengthened.* As researchers intensify their efforts to generate findings relevant to real-life situations, I have placed greater weight on social policy issues and sound theory- and research-based applications. Further applications are provided in the Applying What We Know tables, which give students concrete ways of building bridges between their learning and the real world.
- *The role of active student learning is made more explicit.* Ask Yourself questions at the end of most major sections have been revised to promote three approaches to engaging with the subject matter—*Connect*, *Apply*, and *Reflect*. This feature assists students in thinking about what they have learned from multiple vantage points. The *Look and Listen* feature asks students to observe what real children, adolescents, and adults say and do; speak with them or with professionals invested in their well-being; and inquire into community programs and practices that influence lifespan development. In addition, highlighting of key terms within the text narrative reinforces student learning in context.

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 lifespan development. Each theme is woven into every chapter:

1. **An understanding of the diverse array of theories in the field 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 human development. As I take up each age period and domain of development, I present a variety of theoretical perspectives, indicate how each highlights previously overlooked aspects of development, and discuss research that evaluates it. Consideration of contrasting theories also serves as the context for an even-handed analysis of many controversial issues.
2. **A grasp of the lifespan perspective as an integrative approach to development.** I introduce the lifespan perspective

as an organizing framework in the first chapter and refer to and illustrate its assumptions throughout the text, in an effort to help students construct an overall vision of development from conception to death.

3. Knowledge of both the sequence of human development and the processes that underlie it. Students are provided with discussion of the organized sequence of development along with processes of change. An understanding of process—how complex combinations of biological, psychological, and environmental factors 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, the very young and the old have proved to be more competent than they were believed to be in the past. In addition, many milestones of adult development, such as finishing formal education, entering a career, getting married, having children, and retiring, have become far less predictable. Current evidence on the sequence and timing of development, along with its implications for process, is presented for all periods of the lifespan.

4. An appreciation of the impact of context and culture on human development. A wealth of research indicates that people live in rich physical and social contexts that affect all domains of development. Throughout the book, students travel 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 people within the United States. Furthermore, the impact of historical time period and cohort membership receives continuous attention. In this vein, gender issues—the distinctive but continually evolving experiences, roles, and life paths of males and females—are granted substantial emphasis. Besides highlighting the effects of immediate settings, such as family, neighborhood, and school, I make a concerted effort to underscore the influence of larger social structures—societal values, laws, and government policies and programs—on lifelong well-being.

5. An understanding of the joint contributions of biology and environment to development. The field recognizes more powerfully than ever before the joint roles 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 emphasizes an integrated approach to human development. I show how physical, cognitive, emotional, and social development are interwoven. Within the text narrative, and in the Ask Yourself questions at the end of major sections, students are referred to other sections of the book to deepen their grasp of relationships among various aspects of change.

7. An appreciation of the interrelatedness of theory, research, and applications. Throughout this book, I emphasize that theories of human development and the research stimulated by them provide the foundation for sound, effective practices with children, adolescents, and adults. The link among theory, research, and applications is reinforced by an organizational format in which theory and research are presented first, followed by practical implications. In addition, a current focus in the field—harnessing knowledge of human development to shape social policies that support human needs throughout the lifespan—is reflected in every chapter. The text addresses the current condition of children, adolescents, and adults in the United States and elsewhere in the world and shows how theory and research have combined with public interest to spark successful interventions. Many important applied topics are considered, such as family planning, infant mortality, parental employment and child care, adolescent pregnancy and parenthood, domestic violence, exercise and adult health, religiosity and well-being, lifelong learning, grandparents rearing grandchildren, caring for aging adults with dementia, adjustment to retirement, successful aging, and palliative care for the dying.

TEXT ORGANIZATION

I have chosen a chronological organization for *Development Through the Lifespan*. The book begins with an introductory chapter that describes the scientific history of the field, influential theories, and research strategies. It is followed by two chapters on foundations of development. Chapter 2 combines an overview of genetic and environmental contexts into a single integrated discussion of these multifaceted influences on development. Chapter 3 is devoted to prenatal development, birth, and the newborn baby. With these foundations, students are ready to look closely at seven major age periods: infancy and toddlerhood (Chapters 4, 5, and 6), early childhood (Chapters 7 and 8), middle childhood (Chapters 9 and 10), adolescence (Chapters 11 and 12), early adulthood (Chapters 13 and 14), middle adulthood (Chapters 15 and 16), and late adulthood (Chapters 17 and 18). Topical chapters within each chronological division cover physical development, cognitive development, and emotional and social development. The book concludes with a chapter on death, dying, and bereavement (Chapter 19).

The chronological approach assists students in thoroughly understanding each age period. It also eases the task of integrating the various domains of development because each is discussed in close proximity. 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 frequently remind students of important earlier achievements before discussing new developments, referring back to related sections with page references. Also, chapters or sections devoted to the same topic (for example, cognitive development) are similarly organized, making it easier for students to draw connections across age periods and construct an overall view of developmental change.

NEW COVERAGE IN THE SEVENTH EDITION

Lifespan development is a fascinating and ever-changing field of study, with constantly emerging new discoveries and refinements in existing knowledge. The seventh edition represents this burgeoning contemporary literature, with over 2,300 new citations. Cutting-edge topics throughout the text underscore the book's major themes. Here is a sampling:

CHAPTER 1: Introduction to the developmental systems approach, as illustrated by the lifespan perspective • Updated Cultural Influences box on baby boomers reshaping the life course • Updated Social Issues: Health box on the impact of family chaos on parents' and children's well-being • Revised section on developmental neuroscience, with special attention to developmental social neuroscience • Updated examples of research strategies, including naturalistic observation, case studies, and sequential design • Inclusion of children's assent as part of informed consent guidelines for protection of human subjects

CHAPTER 2: Updated discussion of gene–gene interactions, including the distinction between protein-coding genes and regulator genes, which greatly complicate genetic influences • New evidence on older paternal age and increased risk of DNA mutations contributing to psychological disorders, including autism and schizophrenia • Updated Social Issues: Health box on the pros and cons of reproductive technologies • Recent findings on neighborhood influences on physical and mental health • New section on contributions of schooling to development and life chances, with special attention to SES differences • Expanded attention to the role of ethnic minority extended families in promoting resilience in the face of prejudice and economic deprivation • Updated sections on public policies and development, including current statistics on the condition of children, adolescents, and older adults in the United States compared with other Western nations • Enhanced discussion of gene–environment interaction, with illustrative new research findings • Expanded section on epigenesis, including the role of methylation along with new examples of environmental influences on gene expression • New Biology and Environment box on epigenetic transmission of maternal stress to children

CHAPTER 3: Enhanced attention to development during the prenatal period, including brain growth, sensory capacities, and embryonic and fetal behavior • Expanded and updated consideration of a wide range of teratogens • New evidence on the long-term consequences of severe emotional stress during pregnancy • Updated Social Issues: Health box on the Nurse–Family Partnership—reducing maternal stress and enhancing child development through social support • New statistics and research on benefits and risks of medical interventions during childbirth • New findings on risks of late preterm birth—as little as 1 or 2 weeks early • Updated research on interventions for preterm and low-birth-weight infants, including kangaroo care and recordings of

the mother's voice and heartbeat • Expanded and updated Social Issues: Health box on health care and other policies for parents and newborn babies, including cross-national infant mortality rates and the importance of generous parental leave • Updated findings on hormonal changes in both mothers and fathers around the time of birth, and in foster and adoptive mothers, that facilitate effective caregiving • Revised Biology and Environment box on sudden infant death syndrome, including the importance of public education about safe sleep environments and other protective measures

CHAPTER 4: Updated discussion of advances in brain development, with special attention to the prefrontal cortex • Revised Biology and Environment box on early brain plasticity, based on research on brain-damaged children and adults • New evidence on infant sleep, including contributions of bedtime routines to sleep quality • Enhanced attention to cultural influences on infant sleep, including updated Cultural Influences box addressing parent–infant cosleeping and bedsharing • New findings on long-term consequences of malnutrition in infancy and toddlerhood • Updated discussion of the controversy surrounding newborns' capacity to imitate • Updated evidence on how environmental factors, including caregiving practices and the baby's physical surroundings, contribute to motor development • New findings on implications of infants' capacity to analyze the speech stream for later language progress • Enhanced discussion of the impact of crawling and walking experience on perceptual and cognitive development • Expanded and updated section on intermodal perception, including its contributions to diverse aspects of learning

CHAPTER 5: New research on analogical problem solving in infants and toddlers • Updated evidence on toddlers' grasp of pictures and videos as symbols, including experiences that enhance symbolic understanding • New research on infants' numerical knowledge • Revised and enhanced introduction to the concept of executive function • New evidence on the similarity of infant and toddler memory processing to that of older children and adults • New research on cultural variations in scaffolding infant and toddler learning • New evidence on the importance of sustained high-quality child care from infancy through the preschool years for cognitive, language, literacy, and math progress at kindergarten entry • Updated findings on infants' participation in imitative exchanges and joint attention, revealing their developing capacity to engage in cooperative processes necessary for effective communication • Enhanced attention to SES differences in early vocabulary development as a predictor of vocabulary size at kindergarten entry, with implications for literacy skills and school success • New evidence highlighting the importance of a responsive adult for early language development, in both real-life and video contexts

CHAPTER 6: New research on cultural variations in development of emotional self-regulation • New findings on factors influencing the low to moderate stability of temperament, including parenting and young children's developing capacity

for effortful control • Revised section on genetic and environmental influences on temperament, with special attention to ethnic and gender differences • New section on temperamental differences in susceptibility to the effects of good and poor parenting, highlighting evidence on the short 5-HTTLPR gene • Updated research on cultural variations in views of sensitive caregiving, with implications for attachment security • New findings on the joint contributions of infant genotype, temperament, and parenting to disorganized/disoriented attachment, with special attention to the short 5-HTTLPR and DRD4-7 repeat gene • New illustration of interventions that promote attachment security by teaching parents to interact sensitively with difficult-to-care-for babies • New evidence on contributions of fathers' involvement in caregiving to attachment security and to cognitive, emotional, and social competence • New research on the implications of infant-caregiver attachment for later development, with special emphasis on continuity of caregiving • Updated research on cultural variations in early self-development

CHAPTER 7: Updated consideration of advances in brain development in early childhood, with enhanced attention to the prefrontal cortex and executive function • Updated statistics and research on the health status of young children, including tooth decay and childhood immunizations • New evidence on parenting practices and young children's unintentional injuries • New Cultural Influences box addressing why children from Asian cultures are advanced in drawing progress and artistic creativity • Updated evidence on early childhood categorization, highlighting cultural differences • New section on development of executive function in early childhood, with evidence on the facilitating role of parental sensitivity and scaffolding • Updated discussion of development of memory in early childhood, including the distinction between episodic memory and semantic memory • New evidence on cognitive attainments and social experiences that contribute to young children's mastery of false belief • Updated Biology and Environment box on autism and theory of mind • Revised section on strengthening preschool intervention for economically disadvantaged children, including findings on Head Start REDI • Updated discussion of educational media, including effects on cognitive development and academic learning

CHAPTER 8: Recent findings on development of emotional understanding and emotional self-regulation in early childhood • New research on the influence of parents' elaborative reminiscing on self-concept and emotional understanding • New evidence addressing contributions of sociodramatic and rough-and-tumble play to young children's emotional and social development • Expanded and updated section on contributions of early childhood peer relations to school readiness and academic performance • New research on corporal punishment and children's adjustment, with special attention to children at high genetic risk for behavior problems • Updated Cultural Influences box on ethnic differences in the consequences of physical punishment • Recent research on moral understanding in early childhood, including contributions of language, theory of mind, peer and

sibling experiences, and parenting • Expanded discussion of media exposure and young children's aggression • New Biology and Environment box on transgender children • New findings on early intervention to prevent child maltreatment, with special attention to Healthy Families America home visiting program

CHAPTER 9: New Social Issues: Health box on family stressors and childhood obesity • New evidence on contributions of children's physical fitness to executive function, memory, and academic achievement • Expanded attention to informal, child-organized games, including SES and cultural variations • Updated research on school-age children's spatial reasoning, focusing on cognitive maps of large-scale spaces • New section on gains in executive function in middle childhood, including related changes in the brain, implications for academic learning, and interventions that train executive function in children with learning difficulties • Updated evidence on the school-age child's theory of mind, with special attention to recursive thought • New Cultural Influences box on the Flynn effect, dramatic gains in IQ from one generation to the next • Updated findings on reducing cultural bias in testing through dynamic assessment and interventions that counter the negative impact of stereotype threat • Expanded discussion of the diverse cognitive benefits of bilingualism • Updated section on U.S. academic achievement in international perspective

CHAPTER 10: Updated discussion of cultural influences on self-esteem, including gender and ethnic variations • New evidence addressing effects of person praise and process praise on children's mastery orientation • New section on culture and moral understanding • Enhanced consideration of racial and ethnic prejudice in school-age children, including effective ways to reduce prejudice • Revised and updated Biology and Environment box on bullies and their victims, with special attention to cyberbullying • Updated discussion of school-age children's gender-stereotyped beliefs, including stereotypes about achievement • Expanded coverage of effects of maternal and dual-earner employment on child development • Revised and updated Cultural Influences box on the impact of ethnic and political violence on children • Updated evidence on child sexual abuse, including long-term consequences for physical and psychological health • Enhanced discussion of resilience in middle childhood, including research on social and emotional learning interventions

CHAPTER 11: Updated statistics on physical activity levels among U.S. adolescents • New research on adolescent brain development, with implications for adolescent risk-taking and susceptibility to peer influence • New evidence on effects of pubertal timing on adjustment • Recent research on nutritional needs and dietary choices of U.S. adolescents • Expanded discussion of adolescent sexuality, with new evidence on factors contributing to early sexual activity • New research on substance use and abuse, including the Strong African American Families (SAAF) program, aimed at reducing drug experimentation • Updated discussion of sex differences in mental abilities, including current

evidence on reading, writing, and math achievement • Expanded discussion of school transitions, with new findings on achievement of students in K–8 versus middle schools • Updated Social Issues: Education box on effects of media multitasking on learning, with new evidence on consequences for executive function • Expanded discussion of high school students' part-time work and implications for academic and social adjustment

CHAPTER 12: Expanded consideration of influences on adolescents' self-esteem, including parents, peers, and larger social environment • New research on the process of identity development, along with personal and social influences • Updated evidence on adolescents' capacity to integrate moral, social-conventional, and personal concerns • Enhanced consideration of parental, peer, and school influences on moral maturity • Enhanced discussion of parent–adolescent relationships and development of autonomy, including cultural variations • New evidence on contributions of sibling relationships to adolescent adjustment • New research on gender differences in friendship quality among ethnic minority youths • Expanded and updated section on teenagers' online communication with friends, including consequences for friendship quality and social adjustment • Updated evidence on adolescent depression, addressing the combined influence of heredity, pubertal hormones, and family, peer, and life-event influences, with special attention to gender differences • New research on family, school, and neighborhood contributions to delinquency

CHAPTER 13: Updated Biology and Environment box on telomere length as a marker of the impact of life circumstances on biological aging • New statistics on overweight and obesity in adulthood, including international comparisons, variations among U.S. ethnic groups, and approaches to treatment • New research on substance abuse in early adulthood, including sex differences in progression to alcohol dependence • New findings on sexual attitudes and behavior among young adults, including Internet dating, sex differences in number of lifetime partners, sex without relationship commitment on U.S. college campuses, same-sex relationships, and implications of sexual activity for life satisfaction • Discussion of generational differences in acceptance of same-sex marriage, including high acceptance by Millennials • Updated section on risk of sexually transmitted infections (STIs) in early adulthood, with special attention to HIV/AIDS • Revised and updated evidence on sexual coercion • Updated evidence on cognitive ingredients of creativity, including reduced inhibition of information that, at first glance, appears irrelevant • New Social Issues: Education box on the importance of academic engagement in college for successful transition to the labor market • Enhanced consideration of women's progress in choosing male-dominated careers, with special attention to college women talented in math and science

CHAPTER 14: New evidence on emerging adults' identity development, including cultural variations in timing of identity achievement • Updated section on religion and spirituality among

emerging adults, with implications for psychological adjustment • New findings on forms of love, with special attention to compassionate love and contributions of commitment to lasting intimate relationships • Updated research on cultural variations in experience of love, including arranged-marriage couples whose love grew over time • New evidence on lesbian and gay intimate relationships • Updated discussion of the challenges and rewards of parenthood • Recent findings on cohabitation, with special attention to factors linked to relationship persistence and dissolution • New research on gay and lesbian parents and their children's development • Updated findings on the challenges experienced by women who pursue male-dominated careers • Enhanced consideration of gender variations in career development, including factors contributing to the widespread gender pay gap and to differences in career advancement

CHAPTER 15: Updated Biology and Environment box on anti-aging effects of dietary calorie restriction • New evidence on physical and mental symptoms associated with the climacteric and menopause • Updated evidence on sexual activity of midlife cohabiting and married couples • Updated findings on gender bias in medical treatment of women for heart attacks • New research on developmental trends in Type A behavior • New findings on regular physical exercise and reduced mortality risk throughout adulthood, along with approaches to increasing midlife physical activity • New Social Issues: Health box on mental health benefits of modest lifetime exposure to adversity • New section on executive function in midlife, focusing on declines in working memory, inhibition, and flexible shifting of attention, and on middle-aged adults' compensatory strategies • Revised and updated section on practical problem solving and expertise in middle adulthood

CHAPTER 16: New evidence on the relationship of midlife generativity to psychological adjustment, including civic, political, and religious engagement • Updated research on life regrets and midlife psychological well-being • Enhanced Biology and Environment box on factors that promote psychological well-being in midlife, with new evidence on the link between physical activity and improved executive function • Discussion of the dramatic rise in death rates due to suicide and drug and alcohol abuse among U.S. middle-aged white men • Revised and updated section on gender identity, with special attention to cohort effects on the midlife rise in androgyny • New research on marriage and divorce in middle adulthood • Updated evidence on SES variations in support provided by middle-aged parents to their adult children • New findings on cultural variations in middle-aged children caring for aging parents • Recent research on midlife sibling relationships, with special attention to the persisting influence of parental favoritism • New evidence on gender and SES variations in the midlife rise in job satisfaction

CHAPTER 17: New evidence on the relationship of visual and hearing impairments to cognitive functioning • Updated consideration of assistive technology for older people with disabilities •

Enhanced discussion of the impact of negative stereotypes of aging on older adults' physical, cognitive, and emotional functioning • Updated evidence on sexuality in late adulthood • New findings on risk and protective factors for Alzheimer's disease, including the role of epigenetic processes • Updated findings on the associative memory deficit in late life • New findings on the reminiscence bump in autobiographical recall • Enhanced discussion of language processing, with special attention to aging adults' narrative competence • Attention to the adverse impact of "elderspeak," simplified, patronizing language often directed at aging adults • Updated discussion of cognitive interventions aimed at older adults, including those directed at improving executive function • Revised and updated Social Issues: Education box on how intensive training in the art of acting enhances cognitive functioning in aging adults

CHAPTER 18: New section on the positivity effect, older adults' bias toward emotionally positive information, plus expanded discussion of late-life expertise in emotional self-regulation • Updated findings on spirituality and religiosity in late adulthood, including aspects of religious involvement that enhance older adults' psychological well-being • New research on contributions of personal control to life satisfaction • New evidence on socioemotional selectivity theory, including age-related change in closeness of social partners • Updated discussion of assisted living, including variations in quality of U.S. facilities, with implications for aging adults with limited financial resources • Revised and updated section on late-life marriage, with special attention

to diversity in marital satisfaction • New evidence on lesbian and gay older couples, including advantages of legally recognized marriage for physical and mental health • Updated research on late-life divorce, remarriage, and cohabitation, along with the growing number of couples described as living apart together • Enhanced and updated discussion of elder abuse, with updated statistics on U.S. incidence, new evidence on traits of perpetrators, and physical and mental health consequences for victims • New Biology and Environment box on Experience Corps, illustrating the benefits of volunteer service for older adults' physical and mental health

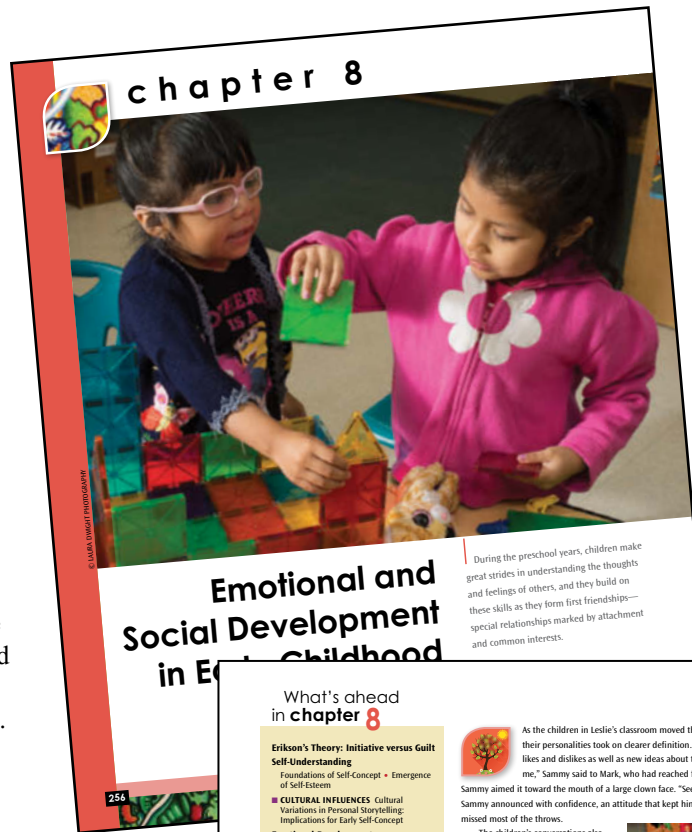
CHAPTER 19: Updated section on children's understanding of death including cultural variations in parents' candidness in discussing death with children • Attention to the role of forgiveness in relieving distress and inducing a sense of life completion among the terminally ill • Enhanced discussion of patients' and family members' experiences with dying at home • Updated evidence on the diverse benefits of hospice care for dying patients and family members • New findings on the success of music vigils in reducing pain and promoting psychological well-being among dying patients • Revised sections on medical aid-in-dying and voluntary euthanasia, including ethical issues and current public and physician opinion • Findings indicating that the typical response to loss of a loved one is resilience • Enhanced consideration of gender differences in grieving, with special attention to parents who have lost a child • Revised and updated section on death education

PEDAGOGICAL FEATURES

Maintaining a highly accessible writing style—one that is lucid and engaging without being simplistic—continues to be one of my major goals. I frequently converse with students, encouraging them to relate what they read to their own lives. In doing so, I aim to make the study of human development involving and pleasurable.

Chapter Introductions and Vignettes

To provide a helpful preview of chapter content, I include an outline and overview in each chapter introduction. To help students 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, the middle childhood section highlights the experiences and concerns of 10-year-old Joey; 8-year-old Lizzie; their divorced parents, Rena and Drake; and their classmates. In the chapters on late adulthood, students get to know Walt and Ruth, a vibrant retired couple, along with Walt's older brother, Dick, and his wife, Goldie, and Ruth's sister, Ida, a victim of Alzheimer's disease. Besides a set of main characters who bring unity to each age period, many additional vignettes offer vivid examples of development and diversity among children, adolescents, and adults.



chapter 8

Emotional and Social Development in Early Childhood

During the preschool years, children make great strides in understanding the thoughts and feelings of others, and they build on these skills as they form first friendships—special relationships marked by attachment and common interests.

What's ahead in chapter 8

- Erikson's Theory: Initiative versus Guilt Self-Understanding**
Foundations of Self-Concept • Emergence of Self-Esteem
- CULTURAL INFLUENCES** Cultural Variations in Personal Storytelling: Implications for Early Self-Concept
- Emotional Development**
Understanding Emotion • Emotional Self-Regulation • Self-Conscious Emotions • Empathy and Sympathy
- Peer Relations**
Advances in Peer Sociability • First Friendships • Peer Relations and School Readiness • Parental Influences on Early Peer Relations
- Foundations of Morality and Aggression**
The Psychoanalytic Perspective • Social Learning Theory • The Cognitive-Developmental Perspective • The Other Side of Morality: Development of Aggression
- CULTURAL INFLUENCES** Ethnic Differences in the Consequences of Physical Punishment
- Gender Typing**
Gender-Stereotyped Beliefs and Behaviors • Biological Influences on Gender Typing • Environmental Influences on Gender Typing • Gender Identity • Reducing Gender Stereotyping in Young Children
- BIOLOGY AND ENVIRONMENT**
Transgender Children
- Child Rearing and Emotional and Social Development**
Styles of Child Rearing • What Makes Authoritative Child Rearing Effective? • Cultural Variations • Child Maltreatment



As the children in Leslie's classroom moved through the preschool years, their personalities took on clearer definition. By age 3, they voiced firm likes and dislikes as well as new ideas about themselves. "Stop bothering me," Sammy said to Mark, who had reached for Sammy's beanbag as Sammy aimed it toward the mouth of a large clown face. "See, I'm great at this game," Sammy announced with confidence, an attitude that kept him trying, even though he missed most of the throws.

The children's conversations also revealed early notions about morality. Often they combined statements about right and wrong with forceful attempts to defend their own desires. "You're 'posed to share,'" stated Mark, grabbing the beanbag out of Sammy's hand.

"I was here first! Gimme it back," demanded Sammy, pushing Mark. The two boys struggled until Leslie intervened, provided an extra set of beanbags, and showed them how they could both play.

As the interaction between Sammy and Mark reveals, preschoolers quickly become complex social beings. Young children argue, grab, and push, but cooperative exchanges are far more frequent. Between ages 2 and 6, first friendships form, in which children converse, act out complementary roles, and learn that their own desires for companionship and toys are best met when they consider others' needs and interests.

The children's developing understanding of their social world was especially apparent in their growing attention to the dividing line between male and female. While Priti and Karen cared for a sick baby doll in the housekeeping area, Sammy, Vance, and Mark transformed the block corner into a busy intersection. "Green light, go!" shouted police officer Sammy as Vance and Mark pushed large wooden cars and trucks across the floor. Already, the children preferred peers of their own gender, and their play themes mirrored their culture's gender stereotypes.

This chapter is devoted to the many facets of early childhood emotional and social development. We begin with Erik Erikson's theory, which provides an overview of personality change in the preschool years. Then we consider children's concepts of themselves, their insights into their social and moral worlds, their gender typing, and their increasing ability to manage their emotional and social behaviors. Finally, we ask, What is effective child rearing? And we discuss the complex conditions that support good parenting or lead it to break down, including the serious and widespread problems of child abuse and neglect.



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Summary / chapter 13

PHYSICAL DEVELOPMENT

Biological Aging Is Under Way in Early Adulthood (p. 438)

13.1 Describe current theories of biological aging, both at the level of DNA and body cells and at the level of tissues and organs.

- Once body structures reach maximum capacity and efficiency in the teens and twenties, biological aging, or senescence, begins.
- The immune response declines after age 20 because of shrinkage of the thymus gland and increased difficulty coping with physical and psychological stress.
- Women's reproductive capacity declines with age due to reduced quality and quantity of ova. In men, semen volume and sperm motility decrease gradually after age 35, and the percentage of abnormal sperm rises.

Health and Fitness (p. 444)

13.3 Describe the influence of sex, nutrition, and exercise on health, and discuss obesity in adulthood.

- Health inequalities associated with SES increase in adulthood. Health-related circumstances and habits underlie these disparities.
- Sedentary lifestyles and diets high in sugar and fat have contributed to the U.S. overweight and obesity epidemic. Excess weight is associated with serious health problems, social discrimination, and early death.
- Some weight gain in adulthood reflects a decrease in basal metabolic rate (BMR), but many young adults add excess weight. Effective treatment includes a nutritious diet low in calories plus regular exercise, recording of food intake and body weight, social support, and teaching problem-solving skills.
- Regular exercise reduces body fat, builds muscle, fosters resistance to disease, and enhances cognitive functioning and psychological well-being.

Physical Changes (p. 440)

13.2 Describe the physical changes of aging, paying special attention to the cardiovascular and respiratory systems, motor performance, the immune system, and reproductive capacity.

- Gradual physical changes take place in early adulthood and later accelerate. Declines in heart and lung performance are evident during exercise. Heart disease is a leading cause of death in adults, although it has decreased since the mid-twentieth century due to lifestyle changes and medical advances.

13.4 What are the most commonly abused substances, and what health risks do they pose?

- Tobacco, marijuana, and alcohol are the most commonly abused substances. Cigarette smokers, most of whom began before age 21, are at increased risk for many health problems, including decline in bone mass, heart attack, stroke, and numerous cancers.
- About one-third of heavy drinkers suffer from alcoholism, to which both heredity and environment contribute. Alcohol is implicated in liver and cardiovascular disease, certain cancers and other physical disorders, motor vehicle fatalities, crime, and sexual coercion.

13.5 Describe sexual attitudes and behavior of young adults, and discuss sexually transmitted infections and sexual coercion.

- Most adults are less sexually active than media images suggest, but they display a wider range of sexual choices and lifestyles and have had more sexual partners than earlier generations. The Internet has become a popular way to initiate relationships.
- Adults in committed relationships report high satisfaction with their sex lives. Only a minority report persistent sexual problems—difficulties linked to biological factors and to low SES and psychological stress.

Attitudes toward same-sex couples have become more accepting. Same-sex partners, like heterosexual partners, tend to be similar in education and background and more satisfied in committed relationships.

Sexually transmitted infections (STIs) continue to be prevalent throughout the twenties; women are at great risk for lasting health consequences. AIDS, the most deadly STI, is spreading most rapidly through men having sex with men and through heterosexual contact in poverty-stricken minority groups.

End-of-Chapter Summaries

Comprehensive end-of-chapter summaries, organized according to the major divisions of each chapter and highlighting important terms, remind students of key points in the text discussion. Learning objectives are included in the summary to encourage active study.

LOOK and LISTEN

While watching a parent and infant playing, list instances of parental intermodal stimulation and communication. What is the baby likely learning about people, objects, or language from each intermodal experience?

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While watching a parent and infant playing, list instances of parental intermodal stimulation and communication. What is the baby likely learning about people, objects, or language from each intermodal experience?

In sum, intermodal perception fosters all aspects of psychological development. When caregivers provide more concurrent visual, auditory, and tactile information, babies process more information and learn faster (Bahrick, 2010). Intermodal perception is yet another fundamental capacity that assists infants in their active efforts to build an orderly, predictable world.

Understanding Perceptual Development

Now that we have reviewed the development of infant perceptual capacities, how can we...

But even though they know better, many parents and children behave in ways that compromise safety. About 27 percent of U.S. parents fail to place their children in car safety seats, and nearly 75 percent of infant seats and 40 percent of child booster seats are improperly used (Macy et al., 2015; Safe Kids Worldwide, 2011). American parents, especially those of the high value they place on individual rights and personal freedom...

Furthermore, many parents overestimate young children's knowledge of hazards. And when parents teach safety to preschoolers, they frequently fail to explain the basis for the rules—despite evidence that explanations enhance children's retention, understanding, and compliance (Morrongiello, Ouellet, & Littlejohn, 2004; Morrongiello et al., 2014). Even children with well-learned rules, preschoolers need supervision to ensure that they comply (Morrongiello, Midgett, & Shields, 2001).

Interventions aimed at parents that highlight risk factors and that model and reinforce safety practices are effective in reducing home hazards and childhood injuries (Kendrick et al., 2008). Attention must also be paid to family conditions that can prevent childhood injury: relieving crowding in the home, providing social supports to ease parental stress, and teaching parents to use effective discipline—a topic we will take up in Chapter 8.

Ask yourself

CONNECT Using research on handedness, malnutrition, or unintentional injuries, show how physical growth and health in early childhood result from a complex interplay between heredity and environment.

APPLY One day, Leslie prepared a new snack to serve at preschool. Her childer stuffed with ricotta cheese. The first time she served it, few children touched it. How can Leslie encourage her students to accept the snack? What tactics should she avoid?

REFLECT Ask a parent or other family member whether, as a preschooler, you were a picky eater, suffered from many infectious diseases, or sustained any serious injuries. What factors might have been responsible?

Motor Development

7.4 Cite major milestones of gross- and fine-motor development with factors that affect motor progress in early childhood.

Observe several 2- to 6-year-old children play in a neighborhood preschool, or child-care center. Note how many will see that a new motor skill occurs in a simpler movement.

Motor Development

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Look and Listen

This active-learning feature presents students with opportunities to observe what real children, adolescents, and adults say and do; speak with them or with professionals invested in their well-being; and inquire into community programs and practices that influence development. “Look and Listen” experiences are tied to relevant text sections, with the goal of making the study of development more authentic and meaningful.

Ask Yourself Questions

Active engagement with the subject matter is also supported by study questions at the end of most major sections. Three types of questions prompt students to think about human development in diverse ways: **Connect** questions help students build an image of the whole person by integrating what they have learned across age periods and domains of development. **Apply** questions encourage application of knowledge to controversial issues and problems faced by children, adolescents, adults, and professionals who work with them. **Reflect** questions personalize study of human development by asking students to reflect on their own development and life experiences.

Learning Objectives

New to this edition, learning objectives appear below each main heading, guiding students’ reading and study.

Three Types of Thematic Boxes

Thematic boxes accentuate the philosophical themes of this book:

Social Issues boxes discuss the impact of social conditions on children, adolescents, and adults, and emphasize the need for sensitive social policies to ensure their well-being. They are divided into two types: **Social Issues: Education** boxes focus on home, school, and community influences on learning—for example, *Magnet Schools: Equal Access to High-Quality Education*, *Media Multitasking Disrupts Learning*, and *How Important Is Academic Engagement in College for Successful Transition to the Labor Market?*

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Social Issues: Education

How Important Is Academic Engagement in College for Successful Transition to the Labor Market?

Do critical thinking, complex reasoning, and written communication—skills designated by educators and employers as crucial for success in the twenty-first century economy—really matter in college graduates’ efforts to secure a satisfying, well-paid job? To find out, researchers gave 1,600 students at 25 U.S. four-year colleges and universities a test of general collegiate learning in the fall of their first year and, again, around the time they graduated (Irem & Rolska, 2014). The students also responded to surveys and in-depth interviews about the meaningfulness of their college experiences. Two years after graduation, they reported on employment outcomes.

Participants’ post-college paths varied widely. Some transitioned successfully to challenging work roles that launched them on a career track. But more than half were underemployed (in jobs not requiring a college education) or unemployed. Across institutions varying widely in admission requirements, senior-year collegiate learning scores predicted success at securing jobs requiring bachelor’s level skills, along with student reports that their work was both cognitively challenging and personally fulfilling.

Successful graduates were keenly aware of this link between collegiate learning and post-college success. Ashby, who landed a well-paid job as a program coordinator at a senior center, commented that her college in-class and out-of-class experiences taught her how “to work in groups... to think critically and be able to solve problems [and] to understand different perspectives” (Aram & Rolska, 2014, p. 77). In contrast, students with low college learning scores found it hard to articulate the benefits of their college experiences. After an unsuccessful search for work related to his business degree, Nathan accepted a low-wage job as a delivery driver for a retail chain. Although he graduated with a high grade point average, he mentioned going to lots of parties, could think of little that stood out about his courses, and did not participate in any educationally relevant extracurricular activities.

Like Nathan, most participants relevant little in collegiate learning during their four years of college. Since the 1970s, the time U.S. college students spend studying has declined by half, while the time they devote to socializing and other forms of entertainment has risen dramatically (Brent & Cantwell, 2010). As institutions redefined students as consumers, academic demands receded and grade inflation increased.

Surveys of employers indicate that less than one-fourth of U.S. college graduates enter the labor market with excellent collegiate skills (Fischer, 2013). Clear evidence that critical thinking, complex reasoning, and written communication have substantial labor market payoffs underscores the need for colleges to promote students’ involvement in academics and career-relevant extracurricular experiences, and to upgrade the rigor of their courses.

advisers or professors (Stewart, Lim, & Kim, 2015). At the same time, colleges that do little to help high-risk students, through developmental courses and other support services, have a higher percentage of dropouts.

Beginning to prepare young people in early adolescence with the necessary vision and skills for the twenty-first century

within reach, through a wide array of strategies considered in Chapters 11 and 12.

Once young people enroll in college, reaching out to them, especially during the early weeks and throughout the first year, is crucial. Programs that forge bonds between teachers and students

Social Issues: Health

The Silver Lining in Life's Adversities

Many adults, in recounting a difficult time in their lives, say that ultimately it made them stronger—an outcome confirmed by research. As long as serious adversity is not frequent and overwhelming, it can lead to remarkable personal benefits.

In a study carried out in France, researchers followed a nationally representative sample of 2,000 adults, ranging in age from 18 to 101, for four years (Seery, Holman & Silver, 2010). To assess lifetime exposure to adversity, participants were given a list of 37 negative life events and asked to indicate which ones they had experienced, how often, and the age at which each had occurred. The list focused on serious stressors—for example, violent assault, death of a loved one, severe financial difficulties, divorce, and major disasters such as fire, flood, or earthquake.

activities due to poor physical and mental health), fewer post-traumatic stress symptoms, and greater life satisfaction (see Figure 15.5). Furthermore, people with modest lifetime adversity were less negatively affected by exposure to recent adversity. These outcomes remained after controlling for diverse factors that might influence experiences of adversity, including age, gender, ethnicity, marital status, SES, and so on.

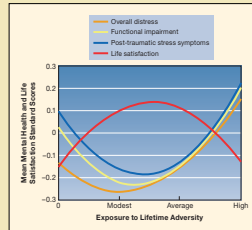


FIGURE 15.5 Relationship of Lifetime Exposure to Adversity to Mental Health Outcomes. A nationally representative sample of 2,000 adults with no or high adversity, no or high traumatic stress symptoms, and post-traumatic stress symptoms (Seery, E. A., Holman, T. L., & Silver, R. C., 2010, *Journal of Personality and Social Psychology*, 99, 1025–1035). Adapted with permission from the American Psychological Association.

Social Issues: Health boxes address values and practices relevant to physical and mental health. Examples include *A Cross-National Perspective on Health Care and Other Policies for Parents and Newborn Babies*, *Family Stressors and Childhood Obesity*, and *The Silver Lining in Life's Adversities*.

CHAPTER 2 Genetic and Environmental Foundations 71

Biology and Environment

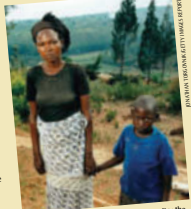
The Tutsi Genocide and Epigenetic Transmission of Maternal Stress to Children

In 1994, in a genocidal rampage committed by members of the Hutu majority against the Tutsi people of Rwanda, nearly 1 million perished within a three-month period. The horror was so extreme that in surveys of Rwandans during the years following the genocide, an estimated 40 to 60 percent reported symptoms of post-traumatic stress disorder (PTSD) (Neugebauer et al., 2009; Schaal et al., 2011). In PTSD, flashbacks, nightmares, and difficulty concentrating lead to intense distress, physical symptoms, and loss of interest in relationships and daily life.

Parental PTSD is a strong predictor of child PTSD (Briere et al., 2009). In both associated with stress responses, blood levels of cortisol, a hormone that our brain produces to regulate our body's response to stress, are elevated in individuals who have experienced trauma.

Might this epigenetic process contribute to parent-to-child transmission of PTSD? To explore this question, researchers identified 50 Tutsi women who had been pregnant during the genocide (Perroud et al., 2014). Half had been directly exposed to the trauma; the other half had not been exposed due to being out of the country at the time. Eighteen years later, the mothers and their adolescent children were assessed for PTSD and depression by trained psychologists. Blood samples from the children were analyzed for methylation of the glucocorticoid receptor gene and assessment of stress-hormone levels (which we discuss further in Chapter 3).

Compared with non-exposed mothers, children of mothers who witnessed the genocidal carnage had higher PTSD and depression symptoms, and their DNA showed increased methylation of the glucocorticoid receptor gene.



This Rwandan mother gave birth shortly after the genocide, nine years later, she continues to suffer from PTSD caused by the brutal experience of her mother, brother, and two sisters in the genocide. Her daughter's PTSD and depression symptoms suggest her daughter's prenatal exposure to severe maternal stress.

with mental health issues, including PTSD and depression, and with occasional source of resilience. The presence of post-life stressors counter in the

Biology and Environment boxes highlight growing attention to the complex, bidirectional relationship between biology and environment. Examples include *The Tutsi Genocide and Epigenetic Transmission of Maternal Stressors to Children*, *Transgender Children*, and *Experience Corps: Promoting Retired Adults' Physical and Mental Health and Children's Academic Success*.

CHAPTER 19 Death, Dying, and Bereavement 649

Cultural Influences

Cultural Variations in Mourning Behavior

The ceremonies that commemorated Solie's and Nicholas's deaths—the first Jewish, the second Quaker—were strikingly different. Yet they served common goals: announcing that a death had occurred, ensuring social support, celebrating the life of the deceased, and conveying a philosophy of life after death.

At the funeral home, Solie's body was washed and shrouded, a Jewish ritual signifying return to a state of purity. Then it was placed in a plain wood casket, and the family gathered—just three days after death, decomposition. To underscore the finality of death, Jewish tradition does not permit viewing of the body; it remains in a closed coffin. Traditionally, the coffin is not left alone until family maintains a day-and-night vigil. To return the body quickly to the life-giving earth from which it sprang, Solie's funeral was scheduled as soon as relatives could gather—just three days after death. Solie's husband and children symbolized their grief by cutting a black ribbon and pinning it to their clothing. The rabbi recited psalms of comfort, *Elizah*, and the family sang. The service continued at the graveside. Once the coffin had been lowered into the ground, the coffin and tombstone were turned facing earth on top of burial. The service concluded with the *Kaddish* prayer, which affirms life while accepting death.

At home, the family lit a memorial candle, which burned throughout the seven-day mourning period. A meal of consolation, prepared by others, followed, creating a warm sense of community. Jewish custom prescribes that after 30 days, life most gradually returns to normal. When a parent dies, the mourning period is extended to 12 months. Nicholas was cremated promptly. During the next week, relatives and close friends gathered with Grace and Sasha at their home. Together, they planned a memorial service to celebrate Nicholas's life.

When people arrived on the appointed day, a clerk of the Friends (Quaker) Meeting welcomed them and explained to newcomers the Quaker custom of worshipping silently, with those who feel moved to speak rising at any time to share thoughts and feelings. Many mourners offered personal statements about Nicholas or read poems and selections from Scripture. After concluding comments from Grace and Sasha, everyone joined hands to conclude the service. A reception for the family followed.

Quakers give little attention to hope of heaven or fear of hell, focusing mainly on "salvation by character"—working for justice, justice, and a living community. In recent years, virtual cemeteries have arisen on the Internet, which allow postings whenever bereaved individuals feel ready to tributes at little or no cost, and continuous, easy access to the memorial. Most creators of Web tributes choose to tell personal stories of their loved ones, rather than highlighting a laugh, a favorite joke, or a touching moment. Some speak directly to the visitor to connect with other mourners who provide a means for people excluded from traditional death rituals to engage in public mourning. The following "graveside" is this highly flexible medium for mourning:



Kalash mourners in rural Pakistan surround the body of a tribal funeral rite for men include drum beating and dancing, which are intended to ward off any evils the dead may face on their final journey.

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I wish I could maintain contact with you, to keep alive the vivid memories of your impact on my life... Because I cannot visit your grave today, I use this means to tell you how much you are loved.

Cultural Influences boxes deepen the attention to culture threaded throughout the text. They highlight both cross-cultural and multicultural variations in human development—for example, *Immigrant Youths: Adapting to a New Land*, *The Flynn Effect: Massive Generational Gains in IQ*, and *Cultural Variations in Mourning Behavior*.

Applying What We Know Tables

In this feature, I summarize research-based applications on many issues, speaking directly to students as parents or future parents and to those pursuing different careers or areas of study, such as teaching, health care, counseling, or social work. The tables include *Supporting Early Language Learning*, *Regulating Screen Media Use*, and *Relieving the Stress of Caring for an Aging Parent*.

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Applying what we Know

Supporting Early Language Learning

STRATEGY	CONSEQUENCE
Respond to coos and babbles with speech sounds and words.	Encourages experimentation with sounds that can later be blended into first words.
Establish joint attention and comment on what child sees.	Provides experience with the turn-taking pattern of human conversation.
Play social games, such as pat-a-cake and peekaboo.	Predicts earlier onset of language and faster vocabulary development.
Engage toddlers in joint make-believe play.	Provides experience with the turn-taking pattern of human conversation.
Engage toddlers in frequent conversations.	Promotes all aspects of conversational dialogue.
Read to toddlers often, engaging them in dialogues about picture books.	Provides faster early language development and academic success during the school years.
	Provides exposure to many aspects of language, including vocabulary, grammar, communication skills, and information about written symbols and story structures.

Compared to their higher-SES agemates, children from low-SES homes usually have smaller vocabularies. By 18 to 24 months, they are slower at word comprehension and have acquired 30 percent fewer words (Fernald, Marchand, & Weisleder, 2013). Limited parent-child conversation and book reading are major factors. On average, a middle-SES child is read for 1,000 hours between 1 and 5 years, a low-SES child for only 25 hours (Neuman, 2003).

Not surprisingly, rate of early vocabulary growth is a strong predictor of low-SES children's vocabulary size at kindergarten entry, which forecasts their later literacy skills and academic success (Rowe, Raudenbush, & Goldin-Meadow, 2012). Higher-SES children who lag behind their agemates in word learning have more opportunities to catch up in early childhood. Young and Grace, like most toddlers, need a referential style: their parents' frequent naming of objects that refer to objects in the environment. A smaller number of toddlers use an expressive style: complex and pronouns ("Thank you," "Close," "I want it"). These styles reflect early ideas about the functions of language. Caitlin and Grace, for example, thought words were for naming things. In contrast, expressive-style children believe words are for talking about people's feelings and needs (Bates et al., 1994). The vocabularies of referential-style toddlers grow faster because all languages contain many more object labels than social phrases.

What accounts for a toddler's language style? Rapidly developing referential-style children's language style? Rapidly active interest in exploring objects. They also eagerly imitate their parents' frequent naming of objects (Masur & Rodemsky, 1999). Expressive-style children's language style? Their parents more often use verbal routines ("How are you?" "It's no trouble") that support social relationships (Gallagher, 1987).

The two language styles are also linked to culture. Object words (nouns) are particularly common in the vocabularies of toddlers who have more words for actions (verbs) and social routines. Mothers' speech in each culture reflects this difference (Chan, Branclone, & Tariff, 2009; Chan et al., 2011; Choi & Gopnik, 1995; Fernald & Morikawa, 1993). American mothers, perhaps because of a cultural emphasis on the importance of group membership, emphasize actions and social routines. Also, in Mandarin, sentences often begin with verbs, making action words especially salient to Mandarin-speaking toddlers.

At what point should parents be concerned if their child talks very little or not at all? If a toddler's language development is greatly delayed when compared with the norms in Table 5.3 (page 175), then parents should consult the child's doctor or a speech and language therapist. Late babbling may be a sign of intervention (Rowe, Raudenbush, & Goldin-Meadow, 2012). Some toddlers who do not follow simple directions or who, after age 2, have difficulty putting their thoughts into words may suffer from a hearing impairment or a language disorder that requires immediate treatment.

Supporting Early Language Development

Consistent with the interactionist view, a rich social environment builds on young children's natural readiness to acquire language. For a summary of how caregivers can consciously support language development, see the following text.

Milestones Tables

A Milestones table appears at the end of each age division of the text. These tables summarize major physical, cognitive, language, emotional, and social attainments, providing a convenient aid for reviewing the chronology of human development.

Milestones Development in Infancy and Toddlerhood

BIRTH–6 MONTHS

Physical

- Height and weight increase rapidly. (116)
- Newborn reflexes decline. (101–103)
- Distinguishes basic tastes and odors; prefers sweet-tasting foods. (108)
- Responses can be classically and operantly conditioned. (130–131)
- Habituates to unchanging stimuli; recovers to novel stimuli. (131–132)
- Sleep is increasingly organized into a night-day schedule. (125)
- Holds head up, rolls over, and grasps objects. (134, 136)
- Perceives auditory and visual stimuli as organized patterns. (138, 140, 141–142)
- Shows sensitivity to motion, then binocular, and finally foveal human facial patterns; recognizes features of mother's face. (142)
- Masters a wide range of intermodal (visual, auditory, and tactile) relationships. (144)

Cognitive

- Engages in immediate and deferred imitation of adults' facial expressions. (132–133, 154)
- Repeats chance behaviors that lead to pleasurable and interesting results. (151–152)
- Has some awareness of many physical properties (including object permanence) and basic numerical knowledge. (153–154, 158–159)

7–12 MONTHS

Physical

- Approaches adultlike sleep-wake schedule. (125)
- Sits alone, crawls, and walks. (134)

Language

- Coos and, by end of this period, babbles. (175)
- Begin to establish joint attention with caregiver, who labels objects and events. (176)
- By end of this period, comprehends some word meanings. (176)

Emotional/Social

- Social smile and laughter emerge. (185)
- Matches facial tone of caregiver in face-to-face conversations; later, expects matched responses. (188)

Cognitive

- Engages in intentional, goal-directed behavior. (152)
- Finds object hidden in an initial location. (152)
- Recall memory improves, as indicated by gains in deferred imitation of adults' actions. (154–155, 163)
- Too lost in problem solving emerges; solves simple problems by analogy to a previous problem. (155)
- Categorizes objects on the basis of subtle sets of features, even when the perceptual contrast between categories is minimal. (164)

19–24 MONTHS

Physical

- Walks up stairs with help, jumps, and walks on tiptoe. (134)
- Manipulates small objects with good coordination. (137)

Cognitive

- Solves simple problems suddenly, through representation. (152)
- Finds a hidden object that has been moved while out of sight. (152)
- Engages in make-believe play, using simple actions experienced in everyday life. (153, 168)

Language

- Engages in deferred imitation of actions an adult tries to produce, even if not fully realized. (155)
- Categorizes objects conceptually, on the basis of common function or behavior. (164–165)
- Begin to use language as a flexible symbolic tool to modify existing mental representations. (154)

Emotional/Social

- Produces 200 to 250 words. (175)
- Combines two words. (177)

Emotional/Social

- Self-conscious emotions (shame, embarrassment, guilt, envy, and pride) emerge. (188–189)
- Acquires a vocabulary for talking about feelings. (189)
- Begin to use language to assist with emotional self-regulation. (189–190)
- Begin to tolerate caregiver's absences more easily; separation anxiety declines. (197)
- Recognizes image of self and, by end of this period, uses own name or personal pronoun to refer to self. (207)
- Shows signs of empathy. (208)

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

208 CHAPTER 6 Emotional and Social Development in Infancy and Toddlerhood

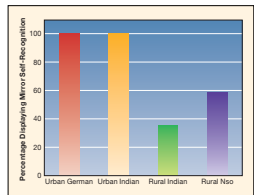


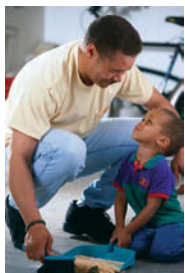
FIGURE 6.4 Mirror self-recognition at 19 months in four cultures. Urban middle SES German and East Indian toddlers, whose mothers emphasized autonomous child-rearing goals, attained mirror self-recognition earlier than Noo toddlers and toddlers of rural East India, whose mothers emphasized relational child-rearing goals. (Based on Kärtner et al., 2012)

Categorizing the Self

By the end of the second year, language becomes a powerful tool in self-development. Between 18 and 30 months, children develop a **categorical self** as they classify themselves and others on the basis of age (“baby,” “boy,” or “man”), sex (“boy” or “girl”), physical characteristics (“big,” “strong”), and even goodness versus badness (“I a good girl,” “Tommy mean!”) and competencies (“Did I!!! I can!”) (Stokp, Gralinski, & Kopp, 1990). Toddlers use their limited understanding of these social categories to organize their own behavior. As early as 17 months, they select and play in a more involved way with toys that are stereotyped for their own gender—dolls and tea sets for girls, trucks and cars for boys. Their ability to label their own gender predicts a sharp rise in these play preferences over the next few months (Zosuls et al., 2009). Then parents encourage gender-typed behavior by responding more positively when toddlers display it (Hines, 2015). As we will see in Chapter 8, gender typing increases dramatically during early childhood.

Self-Control

Self-awareness also contributes to effortful control, the extent to which children can inhibit impulses, manage negative emotion, and behave in socially acceptable ways. To behave in a self-controlled fashion, children must think of themselves as separate, autonomous beings who can direct their own actions. And they must have the representational and memory capacities to



This father encourages compliance and the beginnings of self-control. The toddler joins in the task with an eager, willing spirit, which suggests he is adopting the adult's directive as his own.

Self-Awareness and Early Emotional and Social Development

Self-awareness quickly becomes a central part of children's emotional and social lives. Recall that self-conscious emotions depend on a strengthening sense of self. Self-awareness also leads to first efforts to understand another's perspective. Older toddlers who have experienced sensitive caregiving draw on their advancing capacity to distinguish what happens to oneself from what happens to others to express first signs of **empathy**—the ability to understand another's emotional state and feel with that person, or respond emotionally in a similar way. For example, they communicate concern when others are distressed and may offer what they themselves find comforting—a hug, a reassuring comment, or a favorite doll or blanket (Hoffman, 2000; Moren, Kline, & Robinson, 2008).

Finally, the perspective taking that accompanies toddlers' firmer sense of self enables them to cooperate in resolving disputes over objects and playing games (Caplan et al., 1991). It also leads to clearer awareness of how to upset others. One 18-month-old heard her mother talking to another adult about an older sibling: “Anny is really frightened of spiders” (Dunn, 1989, p. 107). The innocent-looking toddler ran to the bedroom, returned with a toy spider, and pushed it in front of Anny's bed!

In-Text Key Terms with Definitions, End-of-Chapter Term List, and End-of-Book Glossary

In-text highlighting of key terms and definitions encourages students to review the central vocabulary of the field in greater depth by rereading related information. Key terms also appear in an end-of-chapter page-referenced term list and an end-of-book glossary.

Enhanced Art and Photo Program

Colorful graphics present concepts and research findings with clarity and attractiveness, thereby aiding student understanding and retention. Each photo has been carefully selected to complement text discussion and to represent the diversity of children, adolescents, and adults around the world.

CHAPTER 10 Emotional and Social Development in Middle Childhood 363

Gender Typing (p. 350)

10.7 What changes in gender-stereotyped beliefs and gender identity occur during middle childhood?

- School-age children extend their awareness of gender stereotypes to personality traits and academic subjects. But they also broaden their view of what males and females can do.
- Boys strengthen their identification with masculine traits, whereas girls move away from identification with “other gender” activities. Gender identity includes self-evaluations of gender typicality, contentedness, and the pressure to conform to gender roles—each of which affects adjustment.

Family Influences (p. 351)

10.8 How do parent-child communication and sibling relationships change to middle childhood?

- Despite declines in time spent with parents, coregulation allows parents to exercise general oversight over children, who increasingly make their own decisions.
- Sibling rivalry tends to increase with participation in a wider range of activities and more frequent parental comparisons. Only children rated personality traits and are higher in self-esteem, school performance, and educational attainment.

10.9 What factors influence children's adjustment to divorce and blended family arrangements?

- Marital breakup is often quite stressful for children. Individual differences are affected by parental psychological health, financial well-being, child characteristics (age, temperament, and sex), and social supports. Children with difficult temperaments are at greater risk for adjustment problems. Divorce is linked to early relationship difficulties.

The overriding factor in positive adjustment following divorce is effective parenting. Positive father-child relationships are protective, as are teachers, siblings, and friends. However, medication from parental conflict resolution in the custody disputes does not appear to be effective.

10.10 How do maternal employment and life in dual career families affect school-age children?

- Earning money and doing higher self-esteem, and lower behavior problems. In dual-income families, the father's willingness to share responsibilities is a crucial factor. Workplace supports help parents in their child-rearing roles.
- Authoritative child-rearing, parental involvement, and regular after-school chores lead to self-care. Good “after-care” programs also aid school performance and emotional and social adjustment, especially for low-SES children.

Some Common Problems of Development (p. 356)

10.11 Can common fears and anxieties in middle childhood?

- School-age children's fears include physical harm, media events, academic failure, parents' loss. Children with inhibited temperaments are at higher risk of developing phobias. Harsh living conditions can also cause event anxiety.

10.12 Discuss factors related to child sexual development, and its prevention and treatment.

- Child sexual abuse is typically committed by those boys. Abusers have characteristics that predispose them toward sexual exploitation of children. Reported cases are strongly associated with often have never adjustment problems.
- Treatment for abused children typically requires crisis, educational programs that teach children to recognize inappropriate sexual advances and identify sources of help reduce the risk of sexual abuse.

10.13 Cite factors that foster resilience in middle childhood.

- Only a modest relationship exists between stress in childhood and psychological disturbance in adulthood. Children's personal characteristics, school, community, and social resources predict resilience.

Important Terms and Concepts

- blended, or recombinant, families (p. 356)
- controversial children (p. 347)
- coregulation (p. 352)
- emotional-centered coping (p. 348)
- industry versus inferiority (p. 346)
- inhibited temperament (p. 350)
- maternal-oriented attribution (p. 339)
- neglected children (p. 347)
- peer acceptance (p. 347)
- peer group (p. 346)
- peer victimization (p. 346)
- person praise (p. 339)
- phobia (p. 358)
- popular-minority children (p. 348)
- popular children (p. 347)
- popular-prosocial children (p. 348)
- problems centered coping (p. 342)
- prosocial practice (p. 348)
- rejected-aggressive children (p. 348)
- rejected-withdrawn children (p. 347)
- rejected-withdrawn children (p. 348)
- self-care children (p. 357)
- social comparisons (p. 349)

ACKNOWLEDGMENTS

The dedicated contributions of many individuals helped make this book a reality and contributed to refinements and improvements in this seventh edition.

REVIEWERS

An impressive cast of over 150 reviewers has provided many helpful suggestions and constructive criticisms, as well as encouragement and enthusiasm for the organization and content of the text. I am grateful to each one of them.

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EDITORIAL AND PRODUCTION TEAM

I cannot begin to express what a great pleasure it has been, once again, to work with Tom Pauken, Managing Editor, who oversaw the preparation of the third, fifth, and sixth editions of *Development Through the Lifespan* and who returned to edit this seventh edition along with its supplements package. Tom's unmatched dedication to my titles, keen organizational skills, responsive day-to-day communication, careful review of manuscript, insightful suggestions, interest in the subject matter, patience, and sense of humor (at just the right moments) greatly enhanced the quality of the text and made it possible for me to keep pace with Pearson's tight revision time frame. I greatly look forward to working with Tom on future projects.

My sincere thanks, as well, to Roth Wilkofsky, Senior Publisher, for crafting a caring climate at Pearson in which to prepare this revision and for bringing the publishing team together in New York for the seventh edition planning meeting. I have benefited greatly from Roth's astute problem solving and encouragement, wide-ranging knowledge and experience, and cordiality.

Donna Simons and Liz Napolitano, Senior Production Managers, coordinated the complex production tasks, transforming my manuscript into an exquisitely beautiful text. I am deeply grateful for their keen aesthetics, attention to detail, flexibility, efficiency, and thoughtfulness.

Rachel Trapp, Assistant Editor, has been nothing short of amazing. In addition to spending countless hours searching, gathering, and organizing scholarly literature, she assisted with a wide array of editorial and production tasks. Judy Ashkenaz and Michelle McSweeney, Development Editors, carefully reviewed and commented on each chapter, helping to ensure that reviewers' comments were diligently considered and that every thought would be clearly expressed and well developed. Lorretta Palagi provided outstanding copyediting and careful compilation of the references list.

The supplements package benefited from the talents and dedication of several individuals. Judy Ashkenaz wrote the new Lecture Enhancements for the Instructor's Resource Manual and revised its chapter summaries and outlines. Kimberly Michaud prepared a superb Test Bank, and Julie Hughes, Denise Wright, and Rachel Trapp carefully crafted the online assessments. Rachael Payne designed and wrote a highly attractive PowerPoint presentation. Maria Henneberry and Phil Vandiver of Contemporary Visuals in Bloomington, Illinois, prepared an inspiring set of new video segments.

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 texts, passing from childhood

to adolescence and then to adulthood as successive editions were written. David has a special connection with the books' subject matter as an elementary school teacher. Peter is now an experienced attorney, and his vivacious and talented wife Melissa an accomplished linguist and university professor. All three continue to enrich my understanding through reflections on events and progress in their own lives. Finally, I thank my husband, Ken, for willingly making room in our lives for the immensely demanding endeavor of authoring seven editions of *Development Through the Lifespan*.

Laura E. Berk

mydevelopmentlab

MyDevelopmentLab is a collection of online homework, tutorial, and assessment products designed to improve college and university students' learning. Authored by Laura Berk, MyDevelopmentLab for *Development Through the Lifespan*, Seventh Edition, engages students through active learning and promotes in-depth mastery of the subject matter, thereby fostering more thorough preparation for class, quizzes, and exams.

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INSTRUCTOR RESOURCES

In addition to MyDevelopmentLab, several other author-produced instructor materials accompany *Development Through the Lifespan's* seventh edition. Altogether, these resources enhance student learning and engagement in the course content.

Instructor's Resource Manual (IRM) This thoroughly revised IRM can be used by first-time or experienced instructors to enrich classroom experiences. Two new lecture enhancements accompany each chapter, presenting cutting-edge topics, with article citations and suggestions for expanding on chapter content in class.

Test Bank The Test Bank contains over 2,000 multiple-choice and essay questions, all of which are page-referenced to the chapter content and also classified by type.

Pearson MyTest This secure online environment allows instructors to easily create exams, study guide questions, and quizzes from any computer with an Internet connection.

PowerPoint Presentation The PowerPoint presentation provides outlines and illustrations of key topics for each chapter of the text.

"Explorations in Lifespan Development" DVD and Guide This revised DVD, designed for classroom use, is over nine hours in length and contains more than 80 four- to ten-minute narrated segments, 20 of which are new to this edition, that illustrate theories, concepts, and milestones of human development. The DVD and Guide are available only to instructors who are confirmed adopters of the text.

About the Cover Art



© KEN KASHIAN

Growing up in Depression-era Detroit, Harold Gregor displayed passion for and talent in art as a child. As early as kindergarten, he drew—so much so that he recalls being placed in the corner for wasting paper. He earned his bachelor’s degree from Wayne State University, master’s degree from Michigan State University, and Ph.D. from Ohio State University in painting. After a decade of teaching and experimentation with diverse artistic styles in southern California, he moved to the American heartland, joining the faculty at Illinois State University in 1970.

The Illinois farm and prairie landscape quickly became a compelling source of inspiration, and Gregor gained national prominence as one of the foremost American Photo-realist painters. Starting with close-up views of corn cribs, an indigenous form of architecture that fascinated him, he soon moved to panoramas and aerial views of prairie farm scenes, introducing imaginative colors that accentuated the unique and varied beauty of the Midwestern landscape.

In 2004, while climbing a cliff trail in Italy, he fell and broke his right wrist. With his right arm in a cast, he transformed an obstacle into an opportunity: He began to paint with his left hand. Once his right arm healed, he refined his left-handed paintings, eventually arriving at brilliantly colorful, abstract stylistic innovations he calls Vibrascapes, of which the dazzling, energetic image on the cover of this text is an example.

Now a distinguished professor emeritus, Harold Gregor is the epitome of “successful aging.” At age 87, he continues to paint prolifically, prepare new exhibitions, and teach. On his studio wall can be found a Chinese proverb, which reads, “What happiness to wake alive again into this same gray world of winter rain.” He says the proverb reminds him that although growing older is accompanied by unforeseen challenges, he feels blessed each day to do what he enjoys most: painting and teaching.

Harold Gregor’s paintings have been shown at the White House, the American Embassy in Moscow, and the Art Institute of Chicago. They have won numerous prestigious awards and can be viewed in galleries across the United States. To learn more about his life and work, visit www.hgregor.com; and watch the video segment, *Creativity in Late Life*, that accompanies this text.

Legend for Photos Accompanying Sofie’s Story

Sofie’s story is told in Chapters 1 and 19, from her birth to her death. The photos that appear at the beginning of Chapter 1 follow her through her lifespan and include family members of two succeeding generations.

Page 2

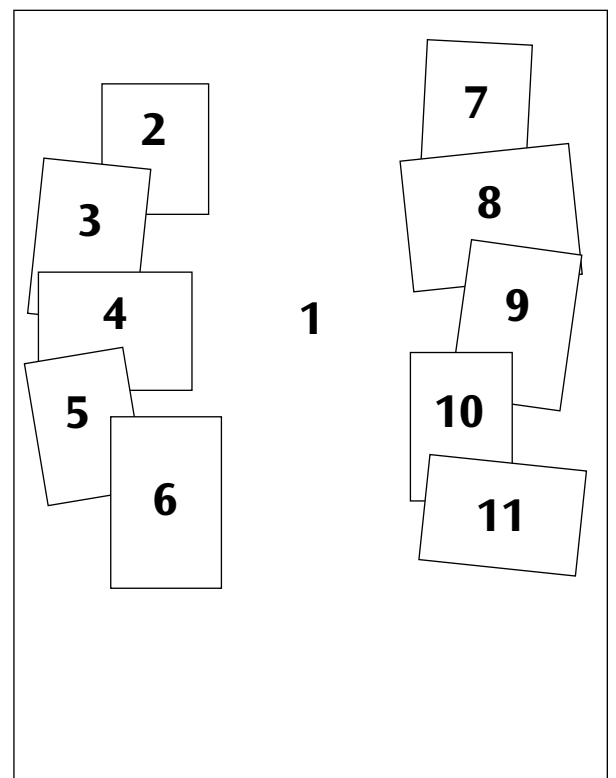
1. Sofie, age 18, high school graduation.
2. Sofie as a baby, with her mother.
3. Sofie, age 6, with her brother, age 8.
4. Sofie’s German passport.
5. Sofie, age 60, and daughter Laura on Laura’s wedding day.
6. Sofie and Phil, less than two years before Sofie died.
7. Sofie’s grandsons, David and Peter, ages 5 and 2, children of Laura and Ken.
8. Laura, Ken, and sons Peter and David, ages 10 and 13, on the occasion of David’s Bar Mitzvah.
9. Peter and Melissa on their wedding day.
10. David, toasting Peter and Melissa’s marriage.
11. Laura and Ken, at family gathering.

Page 3

Sofie, age 30, shortly after immigrating to the United States.

Page 4

Sofie and Phil in their mid-thirties, when they became engaged.



chapter 1



History, Theory, and Research Strategies

This photo essay chronicles the life course and family legacy of Sofie Lentschner. It begins in the early twentieth century with Sofie's infancy and concludes in the early twenty-first century, nearly four decades after Sofie's death, with the wedding of a grandson. For a description of each photo, see the legend on page 1.



What's ahead in **chapter 1**

A Scientific, Applied, and Interdisciplinary Field

Basic Issues

Continuous or Discontinuous Development? • One Course of Development or Many? • Relative Influence of Nature and Nurture?

The Lifespan Perspective: A Balanced Point of View

Development Is Lifelong • Development Is Multidimensional and Multidirectional • Development Is Plastic • Development Is Influenced by Multiple, Interacting Forces

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Sofie Lentschner was born in 1908, the second child of Jewish parents who made their home in Leipzig, Germany, a city of thriving commerce and cultural vitality. Her father was a successful businessman and community leader, her mother a socialite well-known for her charm,

beauty, and hospitality. As a baby, Sofie displayed the determination and persistence that would be sustained throughout her life. She sat for long periods inspecting small objects with her eyes and hands. The single event that consistently broke her gaze was the sound of the piano in the parlor. As soon as Sofie could crawl, she steadfastly pulled herself up to finger its keys and marveled at the tinkling sounds.

By the time Sofie entered elementary school, she was an introspective child, often ill at ease at the festive parties that girls of her family's social standing were expected to attend. She immersed herself in schoolwork, especially in mastering foreign languages—a regular part of German elementary and secondary education. Twice a week, she took piano lessons from the finest teacher in Leipzig.

By the time Sofie graduated from high school, she spoke English and French fluently and had become an accomplished pianist. Whereas most German girls of her time married by age 20, Sofie postponed serious courtship in favor of entering university. Her parents began to wonder whether their intense, studious daughter would ever settle into family life.

Sofie wanted marriage as well as education, but her plans were thwarted by the political turbulence of her times. When Hitler rose to power in the early 1930s, Sofie's father, fearing for the safety of his wife and children, moved the family to Belgium. Conditions for Jews in Europe quickly worsened.

The Nazis plundered Sofie's family home and confiscated her father's business. By the end of the 1930s, Sofie had lost contact with all but a handful of her aunts, uncles, cousins, and childhood friends, many of whom (she later learned) were herded into cattle cars and transported to Nazi death camps. In 1939, as anti-Jewish laws and atrocities intensified, Sofie's family fled to the United States.

As Sofie turned 30, her parents, convinced that she would never marry and would need a career for financial security, agreed to support her return to school. Sofie earned two master's degrees, one in music and the other in librarianship. Then, on a blind date, she met Philip, a U.S. army officer. Philip's calm, gentle nature complemented Sofie's intensity and worldliness. Within six months they married. During the next four years, two daughters and a son were born.

When World War II ended, Philip left the army and opened a small men's clothing store. Sofie divided her time between caring for the children and helping Philip in the store. Now in her forties, she was a devoted mother, but few women her age were still rearing young children. As Philip struggled with the business, he spent longer hours at work, and Sofie often felt lonely. She rarely touched the piano, which brought back painful memories of youthful life plans shattered by war. Sofie's sense of isolation



COURTESY OF LAURA E. BERK

and lack of fulfillment frequently left her short-tempered. Late at night, she and Philip could be heard arguing.

As Sofie's children grew older, she returned to school again, this time earning a teaching credential. Finally, at age 50, she launched a career, teaching German and French to high school students and English to newly arrived immigrants. Besides easing her family's financial difficulties, she felt a gratifying sense of accomplishment and creativity. These years were among the most energetic and satisfying of Sofie's life. She had an unending enthusiasm for teaching—for transmitting her facility with language, her firsthand knowledge of the consequences of hatred and oppression, and her practical understanding of how to adapt to life in a new land. She watched her children, whose young lives were free of the trauma of war, adopt many of her values and commitments and begin their marital and vocational lives at the expected time.

Sofie approached age 60 with an optimistic outlook. Released from the financial burden of paying for their children's college education, she and Philip looked forward to greater leisure. Their affection and respect for each other deepened. Once again, Sofie began to play the piano. But this period of contentment was short-lived.

One morning, Sofie awoke and felt a hard lump under her arm. Several days later, her doctor diagnosed cancer. Sofie's spirited disposition and capacity to adapt to radical life changes helped her meet the illness head on. She defined it as an enemy to be fought and overcome. As a result, she lived five more years. Despite the exhaustion of chemotherapy, Sofie maintained a full schedule of teaching duties and continued to visit and run errands for her aging mother. But as she weakened physically, she no longer had the stamina to meet her classes. Bedridden for the last few weeks, she slipped quietly into death with Philip at her side. The funeral chapel overflowed with hundreds of Sofie's students.

One of Sofie's three children, Laura, is the author of this book. Married a year before Sofie died, Laura and her husband, Ken, often think of Sofie's message, spoken privately on the eve of their wedding day: "I learned from my own life and marriage that you must build a life together but also a life apart. You must

grant each other the time, space, and support to forge your own identities, your own ways of expressing yourselves and giving to others. The most important ingredient of your relationship must be respect."



COURTESY OF LAURA E. BERK

Laura and Ken settled in a small Midwestern city, near Illinois State University, where they served on the faculty for many years—Laura in the Department of Psychology, Ken in the Department of Mathematics. They have two sons, David and Peter, to whom Laura has related many stories about Sofie's life and who carry her legacy forward. David shares his grandmother's penchant for teaching; he is a third-grade teacher. Peter, a lawyer, shares her love of music, and his wife Melissa—much like Sofie—is both a talented linguist and a musician. When Peter asked Melissa to marry him, he placed a family heirloom on her finger—an engagement ring that had belonged to Sofie's aunt, who perished in a Nazi death camp. In the box that held

the ring, Melissa found a written copy of the story of Sofie and her family.

Sofie also had a lifelong impact on many of her students. A professor of human development wrote to Laura:

I teach a class in lifespan development. When I opened the textbook and saw the pictures of your mother, I was very surprised. I took high school German classes from her. I remember her as a very tough teacher who both held her students accountable and cared about each and every one of us. That she was an incredible teacher did not really sink in until I went to Germany during my [college] years and was able to both understand German and speak it.

Sofie's story raises a wealth of fascinating issues about human life histories:

- What determines the features that Sofie shares with others and those that make her unique—in physical characteristics, mental capacities, interests, and behaviors?
- What led Sofie to retain the same persistent, determined disposition throughout her life but to change in other essential ways?

- How do historical and cultural conditions—for Sofie, the persecution that destroyed her childhood home, caused the death of family members and friends, and led her family to flee to the United States—affect well-being throughout life?
- How does the timing of events—for example, Sofie’s early exposure to multiple languages and her delayed entry into marriage, parenthood, and career—affect development?
- What factors—both genetic and environmental—led Sofie to die sooner than expected?

These are central questions addressed by **developmental science**, a field of study devoted to understanding constancy and change throughout the lifespan (Lerner et al., 2014; Overton & Molenaar, 2015). Great diversity characterizes the interests and concerns of investigators who study development. But all share a single goal: to identify those factors that influence consistencies and transformations in people from conception to death. ●



A Scientific, Applied, and Interdisciplinary Field

1.1 What is developmental science, and what factors stimulated expansion of the field?

The questions just listed are not just of scientific interest. Each has *applied*, or practical, importance as well. In fact, scientific curiosity is just one factor that led the study of development to become the exciting field it is today. Research about development has also been stimulated by social pressures to improve people’s lives. For example, the beginning of public education in the early twentieth century led to a demand for knowledge about what and how to teach children of different ages. The interest of the medical profession in improving people’s health required an understanding of physical development, nutrition, and disease. The social service profession’s desire to treat emotional problems and to help people adjust to major life events, such as divorce, job loss, war, natural disasters, or the death of loved ones, required information about personality and social development. And parents have continually sought expert advice about child-rearing practices and experiences that would promote their children’s well-being.

Our large storehouse of information about development is *interdisciplinary*. It has grown through the combined efforts of people from many fields of study. Because of the need for solutions to everyday problems at all ages, researchers from psychology, sociology, anthropology, biology, and neuroscience have joined forces in research with professionals from education, family studies, medicine, public health, and social service, to name just a few. Together, they have created the field as it exists today—a body of knowledge that is not only scientifically important but also relevant and useful.



Basic Issues

1.2 Identify three basic issues on which theories of human development take a stand.

Developmental science is a relatively recent endeavor. Studies of children did not begin until the late nineteenth and early twentieth centuries. Investigations into adult development, aging, and change over the life course emerged only in the 1960s and 1970s (Elder & Shanahan, 2006). But speculations about how people grow and change have existed for centuries. As they combined with research, they inspired the construction of *theories* of development. A **theory** is an orderly, integrated set of statements that describes, explains, and predicts behavior. For example, a good theory of infant–caregiver attachment would (1) *describe* the behaviors of babies of 6 to 8 months of age as they seek the affection and comfort of a familiar adult, (2) *explain* how and why infants develop this strong desire to bond with a caregiver, and (3) *predict* the consequences of this emotional bond for future relationships.

Theories are vital tools for two reasons. First, they provide organizing frameworks for our observations of people. In other words, they *guide and give meaning* to what we see. Second, theories that are verified by research provide a sound basis for practical action. Once a theory helps us *understand* development, we are in a much better position *to know how to improve* the welfare and treatment of children and adults.

As we will see, theories are influenced by the cultural values and belief systems of their times. But theories differ in one important way from mere opinion or belief: A theory’s continued existence depends on *scientific verification*. Every theory must be tested using a fair set of research procedures agreed on by the scientific community, and the findings must endure, or be replicated over time.

Within the field of developmental science, many theories offer very different ideas about what people are like and how they change. The study of development provides no ultimate truth because investigators do not always agree on the meaning of what they see. Also, humans are complex beings; they change physically, mentally, emotionally, and socially. No single theory has explained all these aspects. But the existence of many theories helps advance knowledge as researchers continually try to support, contradict, and integrate these different points of view.

This chapter introduces you to major theories of human development and research strategies used to test them. In later chapters, we will discuss each theory in greater depth and also introduce other important but less grand theories. Although there are many theories, we can easily organize them by looking at the stand they take on three basic issues: (1) Is the course of development continuous or discontinuous? (2) Does one course of development characterize all people, or are there many possible courses? (3) What are the roles of genetic and environmental factors—nature and nurture—in development? Let’s look closely at each of these issues.

Continuous or Discontinuous Development?

How can we best describe the differences in capacities among infants, children, adolescents, and adults? As Figure 1.1 illustrates, major theories recognize two possibilities.

One view holds that infants and preschoolers respond to the world in much the same way as adults do. The difference between the immature and mature being is simply one of *amount or complexity*. For example, when Sofie was a baby, her perception of a piano melody, memory for past events, and ability to categorize objects may have been much like our own. Perhaps her only limitation was that she could not perform these skills with as much information and precision as we can. If this is so, then changes in her thinking must be **continuous**—a process of gradually augmenting the same types of skills that were there to begin with.

According to a second view, infants and children have *unique ways of thinking, feeling, and behaving*, ones quite different from those of adults. If so, then development is **discontinuous**—a process in which new ways of understanding and responding to the world emerge at specific times. From this perspective, Sofie could not yet perceive, remember, and categorize experiences as a mature person can. Rather, she moved through a series of developmental steps, each with unique features, until she reached the highest level of functioning.

Theories that accept the discontinuous perspective regard development as taking place in **stages**—*qualitative* changes in thinking, feeling, and behaving that characterize specific periods of development. In stage theories, development is like climbing a staircase, with each step corresponding to a more mature, reorganized way of functioning. The stage concept also assumes that people undergo periods of rapid transformation as they step up from one stage to the next. In other words, change is fairly sudden rather than gradual and ongoing.

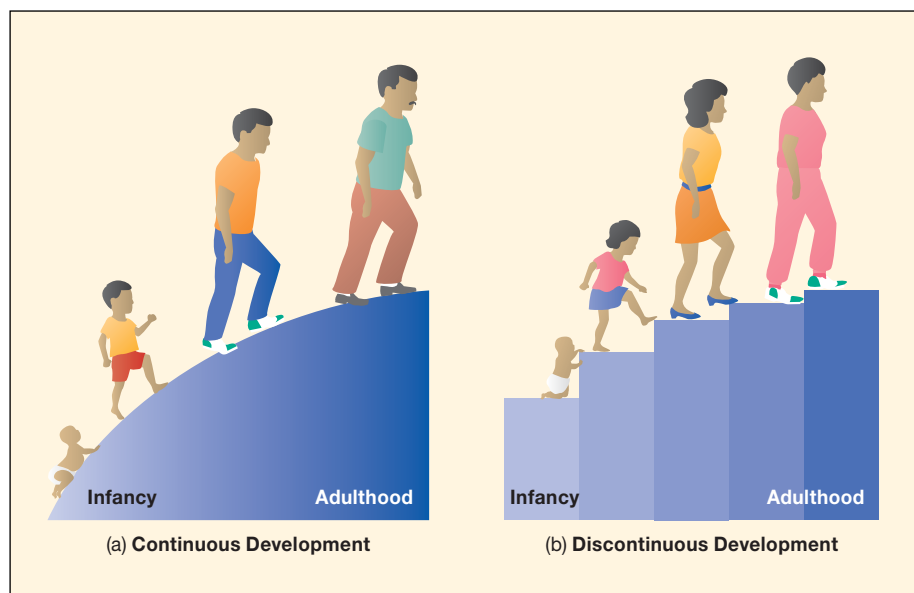
Does development actually occur in a neat, orderly sequence of stages? This ambitious assumption has faced significant challenges. Later in this chapter, we will review some influential stage theories.

One Course of Development or Many?

Stage theorists assume that people everywhere follow the same sequence of development. Yet the field of human development is becoming increasingly aware that children and adults live in distinct **contexts**—unique combinations of personal and environmental circumstances that can result in different paths of change. For example, a shy individual who fears social encounters develops in very different contexts from those of an outgoing agemate who readily seeks out other people. Children and adults in non-Western village societies have experiences in their families and communities that differ sharply from those of people in large Western cities. These different circumstances foster different intellectual capacities, social skills, and feelings about the self and others (Kagan, 2013a; Mistry & Dutta, 2015).

As you will see, contemporary theorists regard the contexts that shape development as many-layered and complex. On the personal side, they include heredity and biological makeup. On the environmental side, they include both immediate settings—home, school, and neighborhood—and circumstances more remote from people's everyday lives: community resources, societal values, and historical time period. Furthermore, new evidence is increasingly emphasizing *mutually influential relations* between individuals and their contexts: People not only are affected by but also contribute to the contexts in which they develop (Elder, Shanahan, & Jennings, 2015). Finally, researchers today are more conscious than ever before of cultural diversity in development.

FIGURE 1.1 Is development continuous or discontinuous? (a) Some theorists believe that development is a smooth, continuous process. Individuals gradually add more of the same types of skills. (b) Other theorists think that development takes place in discontinuous stages. People change rapidly as they step up to a new level and then change very little for a while. With each new step, the person interprets and responds to the world in a reorganized, qualitatively different way. As we will see later, still other theorists believe that development is characterized by both continuous and discontinuous change.



Relative Influence of Nature and Nurture?

In addition to describing the course of human development, each theory takes a stand on a major question about its underlying causes: Are genetic or environmental factors more important? This is the age-old **nature–nurture controversy**. By *nature*, we mean the hereditary information we receive from our parents at the moment of conception. By *nurture*, we mean the complex forces of the physical and social world that influence our biological makeup and psychological experiences before and after birth.

Although all theories grant roles to both nature and nurture, they vary in emphasis. Consider the following questions: Is the developing person's ability to think in more complex ways largely the result of a built-in timetable of growth, or is it primarily influenced by stimulation from parents and teachers? Do children acquire language rapidly because they are genetically predisposed to do so or because parents teach them from an early age? And what accounts for the vast individual differences among people—in height, weight, physical coordination, intelligence, personality, and social skills? Is nature or nurture more responsible?

A theory's position on the roles of nature and nurture affects how it explains individual differences. Theorists who emphasize *stability*—that individuals who are high or low in a characteristic (such as verbal ability, anxiety, or sociability) will remain so at later ages—typically stress the importance of *heredity*. If they regard environment as important, they usually point to *early experiences* as establishing a lifelong pattern of behavior. Powerful negative events in the first few years, they argue, cannot be fully overcome by later, more positive ones (Bowlby, 1980; Sroufe, Coffino, & Carlson, 2010). Other theorists, taking a more optimistic view, see development as having substantial **plasticity** throughout life—as open to change in response to influential experiences (Baltes, Lindenberger, & Staudinger, 2006; Overton & Molenaar, 2015).

Throughout this book, you will see that investigators disagree, often sharply, on the question of *stability versus plasticity*. Their answers often vary across *domains*, or aspects, of development. Think back to Sofie's story, and you will see that her linguistic ability and persistent approach to challenges were stable over the lifespan. In contrast, her psychological well-being and life satisfaction fluctuated considerably.



The Lifespan Perspective: A Balanced Point of View

1.3 Describe the lifespan perspective on development.

So far, we have discussed basic issues of human development in terms of extremes—solutions favoring one side or the other. But as we trace the unfolding of the field, you will see that the positions of many theorists have softened. Today, some theorists believe that both continuous and discontinuous changes occur.



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Since the 1960s, researchers have moved from focusing only on child development to investigating development over the entire life course. This woman and her companions on a river rafting trip illustrate the health, vitality, and life satisfaction of many contemporary older adults.

Many acknowledge that development has both universal features and features unique to each individual and his or her contexts. And a growing number regard heredity and environment as inseparably interwoven, each affecting the potential of the other to modify the child's traits and capacities (Lerner et al., 2014; Overton & Molenaar, 2015).

These balanced visions owe much to the expansion of research from a nearly exclusive focus on the first two decades of life to include development during adulthood. In the first half of the twentieth century, it was widely assumed that development stopped at adolescence. Infancy and childhood were viewed as periods of rapid transformation, adulthood as a plateau, and aging as a period of decline. The changing character of the North American population awakened researchers to the idea that gains in functioning are lifelong.

Because of improvements in nutrition, sanitation, and medical knowledge, *average life expectancy* (the number of years an individual born in a particular year can expect to live) gained more in the twentieth century than in the preceding 5,000 years. In 1900, U.S. life expectancy was just under age 50; in 2000, it was 76.8. Today, it is 78.8 years in the United States and even higher in most other industrialized nations, including neighboring Canada. Life expectancy continues to increase; in the United States, it is predicted to reach 84 years in 2050. Consequently, there are more older adults—a worldwide trend that is especially striking in developed countries. People age 65 and older accounted for about 4 percent of the U.S. population in 1900, 7 percent in 1950, and 14 percent in 2013 (U.S. Census Bureau, 2015d).

Older adults are not only more numerous but also healthier and more active. Challenging the earlier stereotype of the withering person, they have contributed to a profound shift in our view of human change. Increasingly, researchers are envisioning it from a *developmental systems perspective*—as a perpetually ongoing process, extending from conception to death, that is molded by a complex network of biological, psychological, and social influences (Lerner, 2015). A leading systems approach is the **lifespan perspective**. Four assumptions make up this broader

view: that development is (1) lifelong, (2) multidimensional and multidirectional, (3) highly plastic, and (4) affected by multiple, interacting forces (Baltes, Lindenberger, & Staudinger, 2006; Smith & Baltes, 1999; Staudinger & Lindenberger, 2003).

Development Is Lifelong

According to the lifespan perspective, no age period is supreme in its impact on the life course. Rather, events occurring during each major period, summarized in Table 1.1, can have equally powerful effects on future change. Within each period, change occurs in three broad domains: *physical*, *cognitive*, and *emotional/social*, which we separate for convenience of discussion (see Figure 1.2 for a description of each). Yet these domains are not really distinct; they overlap and interact.

Every age period has its own agenda, its unique demands and opportunities that yield certain similarities in development across many individuals. Nevertheless, throughout life, the challenges people face and the adjustments they make are highly diverse in timing and pattern, as the remaining assumptions make clear.

Development Is Multidimensional and Multidirectional

Think back to Sofie's life and how she continually faced new demands and opportunities. From a lifespan perspective, the challenges and adjustments of development are *multidimensional*—affected by an intricate blend of biological, psychological, and social forces.

Lifespan development is also *multidirectional*, in at least two ways. First, development is not limited to improved performance. Rather, at every period, it is a joint expression of growth and decline. When Sofie directed her energies toward mastering languages and music as a school-age child, she gave up refining other skills to their full potential. Later, when she chose to become a teacher, she let go of other career options. Although gains are especially evident early in life, and losses during the final years, people of all ages can improve current skills and develop new ones, including skills that compensate for reduced functioning (de Frias, 2014; Stine-Morrow et al., 2014). Most older adults, for example, devise compensatory techniques for dealing with their increasing memory failures. They may rely more on external aids, such as calendars and lists, or generate new internal strategies, such as visualizing exactly where they will be and what they will be doing when they must keep an appointment or take medication.

Second, besides being multidirectional over time, change is multidirectional within each domain of development. Although some qualities of Sofie's cognitive functioning (such as memory) probably declined in her mature years, her knowledge of both English and French undoubtedly grew throughout her life. And she also developed new forms of thinking. For example, Sofie's wealth of experience and ability to cope with diverse problems led her to become expert in practical matters—a quality of reasoning called *wisdom*. Recall Sofie's wise advice to Laura and Ken on the eve of their wedding day. We will consider the development of wisdom in Chapter 17. Notice in the examples just mentioned how the lifespan perspective includes both continuous and discontinuous change.

TABLE 1.1
Major Periods of Human Development

PERIOD	APPROXIMATE AGE RANGE	BRIEF DESCRIPTION
Prenatal	Conception to birth	The one-celled organism transforms into a human baby with remarkable capacities to adjust to life in the surrounding world.
Infancy and toddlerhood	Birth–2 years	Dramatic changes in the body and brain support the emergence of a wide array of motor, perceptual, and intellectual capacities and first intimate ties to others.
Early childhood	2–6 years	During the “play years,” motor skills are refined, thought and language expand at an astounding pace, a sense of morality is evident, and children establish ties with peers.
Middle childhood	6–11 years	The school years are marked by improved athletic abilities; more logical thought processes; mastery of fundamental reading, writing, math, and other academic knowledge and skills; advances in self-understanding, morality, and friendship; and the beginnings of peer-group membership.
Adolescence	11–18 years	Puberty leads to an adult-sized body and sexual maturity. Thought becomes abstract and idealistic and school achievement more serious. Adolescents begin to establish autonomy from the family and to define personal values and goals.
Early adulthood	18–40 years	Most young people leave home, complete their education, and begin full-time work. Major concerns are developing a career, forming an intimate partnership, and marrying, rearing children, or pursuing other lifestyles.
Middle adulthood	40–65 years	Many people are at the height of their careers and attain leadership positions. They must also help their children begin independent lives and their parents adapt to aging. They become more aware of their own mortality.
Late adulthood	65 years–death	People adjust to retirement, to decreased physical strength and health, and often to the death of an intimate partner. They reflect on the meaning of their lives.



Physical Development

Changes in body size, proportions, appearance, functioning of body systems, perceptual and motor capacities, and physical health

Cognitive Development

Changes in intellectual abilities, including attention, memory, academic and everyday knowledge, problem solving, imagination, creativity, and language

Emotional and Social Development

Changes in emotional communication, self-understanding, knowledge about other people, interpersonal skills, friendships, intimate relationships, and moral reasoning and behavior

FIGURE 1.2 Major domains of development. The three domains are not really distinct. Rather, they overlap and interact.

Development Is Plastic

Lifespan researchers emphasize that development is plastic at all ages. Consider Sofie’s social reserve in childhood and her decision to study rather than marry as a young adult. As new opportunities arose, Sofie moved easily into marriage and childbearing in her thirties. And although parenthood and financial difficulties posed challenges, Sofie and Philip’s relationship gradually became richer and more fulfilling. In Chapter 17, we will see that intellectual performance also remains flexible with advancing age. Older adults respond to special training with substantial (but not unlimited) gains in a wide variety of mental abilities (Bamidis et al., 2014; Willis & Belleville, 2016).

Evidence on plasticity reveals that aging is not an eventual “shipwreck,” as has often been assumed. Instead, the metaphor of a “butterfly”—of metamorphosis and continued potential—provides a far more accurate picture of lifespan change. Still, development gradually becomes less plastic, as both capacity and opportunity for change are reduced. And plasticity varies greatly across individuals. Some children and adults experience more diverse life circumstances. Also, as the Biology and Environment box on pages 10–11 indicates, some adapt more easily than others to changing conditions.

Development Is Influenced by Multiple, Interacting Forces

According to the lifespan perspective, pathways of change are highly diverse because *development is influenced by multiple*

forces: biological, historical, social, and cultural. Although these wide-ranging influences can be organized into three categories, they work together, combining in unique ways to fashion each life course.

Age-Graded Influences. Events that are strongly related to age and therefore fairly predictable in when they occur and how long they last are called **age-graded influences**. For example, most individuals walk shortly after their first birthday, acquire their native language during the preschool years, reach puberty around age 12 to 14, and (for women) experience menopause in their late forties or early fifties. These milestones are influenced by biology, but social customs—such as starting school around age 6, getting a driver’s license at age 16, and entering college around age 18—can create age-graded influences as well. Age-graded influences are especially prevalent in childhood and adolescence, when biological changes are rapid and cultures impose many age-related experiences to ensure that young people acquire the skills they need to participate in their society.

History-Graded Influences. Development is also profoundly affected by forces unique to a particular historical era. Examples include epidemics, wars, and periods of economic prosperity or depression; technological advances like the introduction of television, computers, the Internet, smartphones, and tablets; and changes in cultural values, such as attitudes toward women, ethnic minorities, and older adults. These **history-graded influences** explain why people born around the same