

5th Edition

# Lifespan Development

A Topical Approach



Robert S. Feldman

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**Fifth Edition**

**Robert S. Feldman**

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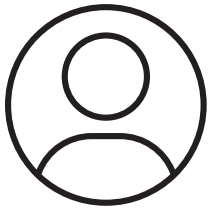
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# Preface

**L**ifespan Development: A Topical Approach is the outgrowth of conversations and survey data drawing on the thinking of literally hundreds of instructors. These instructors voiced two main challenges in teaching lifespan development, reaching a surprising degree of consensus. First, almost every instructor acknowledged that the breadth of lifespan development is so vast that it is difficult to cover the entire field within the confines of a traditional college term. Consequently, many instructors saw most lifespan development texts as too long. Their students were concerned about the length of the texts and had trouble completing the entire book.

Second, many instructors expressed the concern that traditional, chronologically based lifespan development books were arranged in a way that made it difficult for students to understand the scope of development within particular topical areas (such as social or personality development across the entire life span) without skipping from one chapter to another.

*Lifespan Development: A Topical Approach* addresses both of these concerns. This book, which is based on the chronologically organized, highly popular *Development Across the Life Span*, is shorter than traditional lifespan books, and it is arranged in a way that helps students to see the “big picture” of development across the entire life span within a specific topical area.

*Lifespan Development: A Topical Approach* maintains the student-friendliness that has been the hallmark of the original. It is rich in examples and illustrates the applications that can be derived from the research and theory of lifespan developmentalists. It pays particular attention to the applications that can be drawn from theory and research in the field.

To optimize student learning and to provide instructors with maximum flexibility, the book uses a modular approach. Each chapter is divided into three modules focusing on particular subtopics. Consequently, rather than facing long, potentially daunting chapters, students encounter material that is divided into smaller, more manageable chunks. Of course, presenting material in smaller chunks represents a structure that research long ago found to be optimal for promoting learning.

The modular approach has another advantage: It allows instructors to customize instruction by assigning only those modules that fit their course. Because the modules are self-contained, instructors can pick and choose which modules best contribute to their course. Because of the flexibility

of this structure, instructors who wish to highlight a particular topic can do so easily and—equally important—have the option of not including specific modules.

## Overview of the Fifth Edition

This edition of *Lifespan Development: A Topical Approach*—like its predecessors—provides a broad overview of the field of human development. It covers major topics, such as physical development, cognitive development, and social and personality development. In addition, separate chapters focus on health and wellness, language development, intelligence, development of the self, moral development and aggression, gender and sexuality, relationships, living in a multicultural world, and death and grieving.

The book seeks to accomplish the following four major goals:

- First and foremost, the book is designed to provide a broad, balanced overview of the field of lifespan development. It introduces readers to the theories, research, and applications that constitute the discipline, examining both the traditional areas of the field and more recent innovations. It demonstrates how lifespan developmentalists use theory, research, and applications to help solve significant social problems.
- The second goal is to highlight both the commonalities and the diversity of today’s multicultural society. Consequently, the book incorporates material relevant to diversity in all its forms—racial, ethnic, gender, sexual orientation, religion, and cultural—throughout every chapter. In addition, every chapter has at least one *Developmental Diversity and Your Life* section. These features explicitly consider how cultural factors relevant to development both unite and diversify our contemporary global society.
- The third goal of the text is to explicitly tie development to students’ lives. Findings from the study of lifespan development have a significant degree of relevance to students, and this text illustrates how these findings can be applied in a meaningful, practical sense. Applications presented include current news items, timely world events, and contemporary uses of lifespan development that draw readers into the field. Numerous descriptive scenarios and vignettes reflect everyday situations in people’s lives, explaining how they relate to the field.

- Finally, the fourth goal is one that is implicit in the other three: making the field of lifespan development engaging, accessible, and interesting to students. Lifespan development is a joy both to study and to teach because so much of it has direct, immediate meaning for our lives. Because all of us are involved in our own developmental paths, we are tied in very personal ways to the content areas covered by the book. *Lifespan Development: A Topical Approach*, then, is meant to engage and nurture this interest, planting a seed that will develop and flourish throughout readers' lifetimes.

In accomplishing these goals, the book strives to be user friendly. Written in a direct, conversational voice, it duplicates as much as possible a dialogue between author and student. The text is meant to be understood and mastered on its own by students of every level of interest and motivation. To that end, it includes a variety of pedagogical features that promote mastery of the material and encourage critical thinking.

In short, the book blends and integrates theory, research, and applications, focusing on the breadth of human development. Furthermore, rather than attempting to provide a detailed historical record of the field, it focuses on the here and now, drawing on the past where appropriate, but with a view toward delineating the field as it now stands and the directions toward which it is evolving. Similarly, while providing descriptions of classic studies, the emphasis is on current research findings and trends.

*Lifespan Development: A Topical Approach* is meant to be a book that readers will want to keep in their personal libraries, one that they will take off the shelf when considering problems related to that most intriguing of questions: How do people come to be the way they are?

## Special Features

In addition to its modular structure, *Lifespan Development: A Topical Approach* includes a set of features designed to engage students and help them learn the material effectively. These include:

### Chapter-Opening Prologues

Each chapter begins with a short vignette, describing an individual or situation that is relevant to the basic developmental issues being discussed in the chapter.

### Looking Ahead Sections

These opening sections orientate readers to the topics to be covered, bridging the opening prologue with the remainder of the chapter.

### Learning Objectives

Each major section includes numbered learning objectives to provide a means for instructors to evaluate student mastery of specific content. These learning objectives anchor the module reviews and chapter summary.

### From Research to Practice

Each chapter includes a section that describes current developmental research applied to everyday problems, helping students to see the impact of developmental research throughout society. All of these sections are new in this edition. Each *From Research to Practice* box concludes with a Shared Writing prompt, which students can respond to, as well as respond to peers' responses, and instructors can moderate.

### Developmental Diversity and Your Life

Every chapter has at least one *Developmental Diversity and Your Life* section incorporated into the text. These sections highlight issues relevant to today's multicultural society.

### Neuroscience and Development

Special sections exploring what we know about development through the lens of neuroscience appear in many chapters.

### Running Glossary

Key terms are defined in the margins of the page on which the term is presented.

### Development in Your Life

Every chapter includes information on specific uses that can be derived from research conducted by developmental investigators.

### Module Review and Journal Prompt

Interspersed throughout each chapter are three module reviews—short recaps of the chapter's main points—as well as Journal Prompts designed to elicit critical thinking about the subject matter through written responses.

### End-of-Chapter Material

Each chapter ends with a summary and an epilogue that refers back to the opening prologue and ties the chapter together. The Looking Back summary is keyed to the learning objectives provided at the start of major sections of each chapter.

### From the Career Perspective

Students encounter frequent questions throughout the chapters designed to show the applicability of the material to a variety of professions, including education, nursing, social work, and health care providers.

## What's New in the Fifth Edition?

This edition includes several important revisions to address the changes and challenges society—and the field of lifespan development—have witnessed recently. Although we don't yet fully know the long-term effects the COVID-19 pandemic will have on our lifespan development, its immediate impact has been referenced throughout the chapters.

Similarly, increased sensitivity to issues surrounding diversity, equity, and inclusion issues has prompted numerous revisions in every chapter. Careful revisions to speak to all students have been made throughout the chapters, including more inclusive language and specific topics that speak to diversity, equity, and inclusion issues. Photos throughout have been selected with care to showcase the diversity within society. For a complete list of the diversity, equity, and inclusion coverage and revisions to address these issues, please see the Instructor's Resource Manual or the Instructor Resources in Revel.

Furthermore, all the *From Research to Practice* boxes—which describe a contemporary developmental research topic and its applied implications—and many of the Prologues and Epilogues are new to this edition.

Finally, the fifth edition of *Lifespan Development: A Topical Approach* incorporates a significant amount of new and updated information. For instance, advances in such areas as behavioral genetics, brain development, evolutionary perspectives, and cross-cultural approaches to development receive expanded and new coverage. Dozens of figures and photos have been revised or replaced, and more than a thousand new citations have been added, with most of those from articles and books published in the last few years.

New topics were added to every chapter. The following sample of new and revised topics featured in this edition provides a good indication of the currency and diversity of the revision:

### Chapter 1: An Introduction to Lifespan Development

- New Prologue on the COVID-19 pandemic
- Revised *From Research to Practice* box on applications of lifespan development
- New content related to:
  - Lifespan development situated within developmental science
  - Social construction of race
  - Data on the increasing number of people who view themselves as multiracial
  - Replication crisis
  - Meta-analysis
  - Representation of research participants

- Inclusiveness and equity among lifespan developmentalists
- Population impacts in informed consent
- Socioeconomic and cultural factors on willingness to provide informed consent
- COVID-19 vaccine hesitancy in the context of public policy and research
- Hart & Risley language study in the context of diversity of research participants
- Ethical principles promoting equity
- How the work of lifespan development specialists is influenced by current events related to diversity, equity, and inclusion, including the emergency of Black Lives Matter and the death of George Floyd
- Racism as an individual and systemic issue
- New Figure 1-1: Shifting Race and Ethnicity on self-described identity based on U.S. Census data

### Chapter 2: Genetics, Prenatal Development, and Birth

- New Prologue on spina bifida and difficult decisions made during the prenatal period
- New *From Research to Practice* on CRISPR and genetic engineering
- New *From Research to Practice* on Institutional Racism and Health Disparities
- New content related to:
  - Fertility therapies and multiple birth rates
  - Intersex individuals
  - Chorionic villus sampling (CVS) testing for down syndrome and other disorders
  - Transgenerational epigenetic inheritance
  - Parental influence on personality and behavior over time
  - Examples of the type of people and relationships that influence development
  - Prenatal exposure to androgens and resulting differentiation
  - Assisted Reproductive Technology (ART)
  - The use of surrogacy by gay couples
  - Infertility and abortion data
  - Abortion and mental health
  - The effects of poor nutrition during pregnancy
  - Food shortage and COVID-19
- New Figure 2-6: Uniquely Human?
- New Figure 2-13: Infertility

## Chapter 3: Physical Growth and Aging Across the Life Span

- New Prologue highlighting the rapid physical changes during infancy
- New *From Research to Practice*: “Differences in Infant Mobility: Does Practice Really Make Perfect?”
- More nuanced language regarding “disorders” and “impairments”
- New content related to:
  - The number of older adults versus children in the United States
  - Poverty and sensitive periods
  - Poverty and development
  - The limbic system during adolescence
  - Brain development and alcohol intake during adolescence
  - The role brain maturity during adolescence played in making decisions about face-to-face instruction during the COVID-19 pandemic
  - Individual differences and norms
  - Example of the impact of losing elasticity in the lens during adulthood
  - Four stages of life that show changes in metabolism
  - Data for hearing loss and use of hearing aids
  - Taste and smell changes during depression
- New Figure 3-9: Late Adulthood Across the World
- New Figure 3-22: Changes in Metabolism Across the Life Span

## Chapter 4: Health and Wellness

- New Prologue on making the sometimes-stressful transition into adulthood
- New *From Research to Practice*: “The Color of Pregnancy: Can Institutional Racism Account for Racial Health Disparities?” and writing prompt
- New *Developmental Diversity and Your Life*: “How Cultural Beliefs Influence Health and Health Care”
- New section on vaping, including statistics on prevalence, safety and risk, addiction, and physical effects
- New content related to:
  - Federal laws related to children’s education
  - The impact of No Child Left Behind
  - Adolescent and adult stress as a result of topics in the news
  - Data on food-insecure households, including race and food security

- Data on children in poverty nationally
- Data on COVID-19 pandemic’s impact on family poverty
- Data on adolescent obesity and teenage exercise and obesity
- Data on anorexia rates in the United States and on anorexia in males
- The developmental impact of long-term environmental hazards in the home
- Poverty and lead poisoning
- Acknowledgment of the legalization of marijuana in many U.S. states
- Drug use for academic performance
- Celebrity and social media influence on drug use
- Data on the opioid epidemic
- Alcohol effects on teenage brain development
- Statistics on smoking addiction
- Prevalence of sexually transmitted infections
- COVID-19 and its impact on health and wellness of those in early adulthood
- COVID-19 prevalence, death, and race
- Murder rates in the United States during the COVID-19 pandemic
- Data on psychological disorders in older adults
- Changes in brain function brought on by menopause
- Menopause symptoms and race
- New Figure 4-1: Feeling Stress
- New Figure 4-4: Obesity in Children
- New Figure 4-5: Little Physical Activity Among High School Students
- New Figure 4-8: Lead Exposure Risk and Cognitive Performance
- New Figure 4-13: Vaping Use Soars
- New Figure 4-14: Sexually Transmitted Infections
- New Figure 4-16: Racial and Ethnic Disparities Related to the Pandemic
- New Figure 4-17: Death from Heart Disease Worldwide
- New Figure 4-18: Age and the Risk of Breast Cancer
- New Figure 4-19: Money Worries

## Chapter 5: Cognitive Growth: Piaget and Vygotsky

- New Prologue on baby talk
- New *From Research to Practice* on screen time and video deficit



- New section on comparing the theories of postformal thought
- New content related to the adaptability of reflexes

## Chapter 6: Cognitive Growth: Information Processing Approaches

- New Prologue on cognitive advances
- New *From Research to Practice* on brain growth and infantile amnesia
- Revised discussion comparing whole-language approaches to reading and phonics

## Chapter 7: Language Development

- New Prologue on baby's first words
- New *From Research to Practice* on benefits of bilingualism in children
- New content related to:
  - Deaf children and gestural babbling
  - Poverty's impact on parents
  - Data on bilingualism
  - The politicization of bilingual and immersion education
- New Figure 7-5: Words Spoken to Preschoolers
- New Figure 7-6: Diversity of Languages Other Than English Spoken in the United States

## Chapter 8: Intelligence

- New Prologue on children's interactions
- New *From Research to Practice* on brain training
- New content related to:
  - Example of racist overtones of a school competency test when discussing IQ tests
  - Real-world example of selective optimization with compensation
- Revisions to:
  - Clarify the evidence supporting Gardner's multiple intelligences
  - Update terminology for Bayley Scales of Infant and Toddler Development
  - Reword example of using crystallized intelligence for clarity
  - Update terminology for selective optimization with compensation
  - Update federal laws regarding education or individuals with disabilities

## Chapter 9: Social and Emotional Development

- New Prologue demonstrating a preschool child's ability to understand other's emotions

- New *From Research to Practice* on enduring the loneliness of the COVID-19 pandemic
- New content related to:
  - Single and gay father-led family units
  - Adolescent moodiness during the COVID-19 pandemic
  - The role of bullying in adolescent depression
  - Sex differences in experiences of loneliness during the COVID-19 pandemic
  - Depression, loneliness, and other mental health changes during the COVID-19 pandemic
  - Cluster suicide
- New Figure 9-6: Pandemic Loneliness
- New Figure 9-7: Suicide Rates
- New Figure 9-10: The Stability of Personality

## Chapter 10: Development of the Self

- New Prologue about the complexities and changing patterns of family life
- New *From Research to Practice* about the danger of inflated praise
- Addition of empathy and gender identity as keywords with definition
- New content related to:
  - Infant use of deception as a reflection of their developing theory of mind
  - Data around children's use of gender labels
  - The centrality of getting a job as a key event in the social clock of life
  - Data on the gender wage gap
  - Working from home, burnout, and unemployment during the COVID-19 pandemic
  - Research around public safety workers and expertise

## Chapter 11: Moral Development and Aggression

- New Prologue on moral choices
- New *From Research to Practice* on the COVID-19 pandemic's effects on vulnerable children
- Addition of new section "Media and Video Games with Violent Content: Are they Harmful?" and associated discussions
- New content related to:
  - The consistency of parenting style and outcomes across cultures
  - Smart speakers and preschool attitudes and interactions

- Praise and adjustment
- Data around wives abusing husbands
- The financial pressures that may impact people when they stay in abusive relationships
- “Honor killings”
- The varied forms of child abuse
- Child abuse during the COVID-19 pandemic
- New Figure 11-4: Child Abuse and Neglect Fatalities

## Chapter 12: Gender and Sexuality

- New Prologue on gender identity
- New *From Research to Practice*: “Gender Understanding in Transgender Children”
- New *From Research to Practice* on adolescents and pornography
- New section on gay and lesbian relationships
- Addition of keywords “emerging adulthood” and “gender identity” with definitions
- Inclusive and more nuanced language around the type of partnerships people have
- New content related to:
  - “Gender reveal parties”
  - Prenatal care and fetal gender
  - Gender identification in transgender children
  - Gender constancy during the preschool period and its effect on gender-related behavior
  - The appearance of gender schemas in preschoolers
  - Pronoun usage among transgender individuals
  - Transgender individuals and gender-confirmation surgery
  - The impact of abstinence-only sex education
  - Emerging adulthood and physiological changes in the brain
  - Love as a prerequisite to marriage in different countries
  - Gender differences in preferred characteristics in a partner
  - Infant attachment style and adult behavior
  - Civil unions and other legal alternatives to marriage
  - Reasons for marriage
  - Infidelity and divorce
  - Data around remarriage rates
  - The economic motivation for remarriage
  - Data about failure rates for second and third marriages and divorce rate
- New Figure 12-6: The Decline of Frequent Dating
- New Figure 12-10: Cohabitation

## Chapter 13: Friends and Family

- New Prologue on the pressure teenagers feel around relationships, identity, and self-esteem
- New *From Research to Practice*: “What Does Your Brain Have to Do with Social Activism?”
- New content related to:
  - Play and self-regulation
  - Play and brain development
  - The COVID-19 pandemic and impact on children’s friendships
  - Research on gay and lesbian gender preferences in friendships
  - Research about low-income households, reading, and parental involvement in school
  - COVID-19 and increasing poverty rate
  - Data on the number of single-parent households, number of people living in nonfamily households, teenage birth rate, mother’s workforce participation, and number of children in low-income households
  - The age women choose to have children
  - Benefits for children on spacing children apart
  - The gender gap in household work and childcare during the COVID-19 pandemic
  - Data on the number of children living in blended families, single-parent families, and gay and lesbian households
  - Multigenerational family households, including the increase during the COVID-19 pandemic
  - Empty nest experiences during the COVID-19 pandemic
  - Snowplow parenting
  - Poverty, race, and divorce
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- New Figure 13-2: Generation Gaps and Similarities
- New Figure 13-3: Time Spent with Parents and Adolescent Delinquency
- New Figure 13-6: Average Hours Per Day Spent on Unpaid Household and Care Work by Gender and Employment Status
- New Figure 13-7: The Varieties of Family Life

## Chapter 14: Living in a Multicultural World: Diversity, Schooling, and Everyday Life and Leisure

- New Prologue on homeschooling
- New *From Research to Practice*: “Is Reading from Digital Books Good for Preschoolers?”

- New content related to:
  - The impact of childcare programs later in life
  - COVID-19 and forced closure of childcare centers
  - Comparison of the United States and other countries' reactions to the COVID-19 pandemic in terms of family support
  - COVID-19 and homeschooling
  - Racial and ethnic differences in school achievement as a result of the COVID-19 pandemic
  - Data on the percent of people who drop out of high school and complete college who live below the poverty line
  - Racial differences in college attendance and student debt
  - Data on the “average” college student in terms of age
  - Data on adolescent use of social media, technology, and video games, and their impact
  - Adulthood and leisure time
  - Early retirement planning during the COVID-19 pandemic
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- New Table 14-1: Childcare Center Ideal Size and Staffing
- New Figure 14-3: Children Living in Poverty
- New Figure 14-10: Discrepancies Between Black and White Wealth
- New Figure 14-11: Perceptions of Academic Ability
- New Figure 14-12: Time Expenditures
- New Figure 14-13: Teens Online
- New Figure 14-14: Mixed Views of Media

## Chapter 15: Death and Dying

- New Prologue on accepting death
- New *From Research to Practice* on palliative care
- “Assisted death” replaces “assisted suicide” as more appropriate, less value-laden, term
- New content related to:
  - Death of parent following death of child
  - Blackfeet Indians conception of death
  - New legislation and jurisdictions permitting assisted death
  - Conceptions of death in childhood
  - Dying alone due to the COVID-19 pandemic restrictions on medical center
  - Psychological flexibility in dealing with grief
- New Figure 15-4: Who Needs Bereavement Support?

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# About the Author



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Professor Feldman is past-president of the Federation of Associations of Behavioral and Brain Sciences Foundation, a consortium of social, behavioral, and brain science societies. In addition, he was president of the board of New England Public Radio, and he currently is a member of the University of Massachusetts Amherst Foundation board.

Professor Feldman loves music, is an enthusiastic pianist, and enjoys cooking and traveling. He has three children and six grandchildren, and he and his wife, a psychologist, live in western Massachusetts in a home overlooking the Holyoke Mountain Range.

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## Chapter 1

# An Introduction to Lifespan Development



## Learning Objectives

- LO 1.1** Define the field of lifespan development, and describe what it encompasses.
- LO 1.2** Describe the areas that lifespan development specialists cover.
- LO 1.3** Describe some of the basic influences on human development.
- LO 1.4** Summarize four key issues in the field of lifespan development.
- LO 1.5** Describe how the psychodynamic perspective explains lifespan development.
- LO 1.6** Describe how the behavioral perspective explains lifespan development.
- LO 1.7** Describe how the cognitive perspective explains lifespan development.
- LO 1.8** Describe how the humanistic perspective explains lifespan development.
- LO 1.9** Describe how the contextual perspective explains lifespan development.
- LO 1.10** Describe how the evolutionary perspective explains lifespan development.
- LO 1.11** Discuss the value of applying multiple perspectives to lifespan development.
- LO 1.12** Describe the role that theories and hypotheses play in the study of development.
- LO 1.13** Compare the two major categories of lifespan development research.
- LO 1.14** Identify different types of correlational studies and their relationship to cause and effect.

**LO 1.15** Explain the main features of an experiment.

**LO 1.16** Distinguish between theoretical research and applied research.

**LO 1.17** Compare longitudinal research, cross-sectional research, and sequential research.

**LO 1.18** Describe ethical issues that affect psychological research.

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## Chapter Overview

### Module 1.1: An Orientation to Lifespan Development

Defining Lifespan Development

The Scope of the Field of Lifespan Development

Influences on Development

*Developmental Diversity and Your Life: How Culture, Ethnicity, and Race Influence Development*

Key Issues and Questions: Determining the Nature—and Nurture—of Lifespan Development

### Module 1.2: Theoretical Perspectives on Lifespan Development

The Psychodynamic Perspective: Focusing on the Inner Person

The Behavioral Perspective: Focusing on Observable Behavior

The Cognitive Perspective: Examining the Roots of Understanding

*Neuroscience and Development: The Essential Principles of Neuroscience*

The Humanistic Perspective: Concentrating on the Unique Qualities of Human Beings

The Contextual Perspective: Taking a Broad Approach to Development

Evolutionary Perspectives: Our Ancestors' Contributions to Behavior

Why "Which Approach Is Right?" Is the Wrong Question

### Module 1.3: Research Methods

Theories and Hypotheses: Posing Developmental Questions

Choosing a Research Strategy: Answering Questions

Correlational Studies

Experiments: Determining Cause and Effect

*Developmental Diversity and Your Life: Do Lifespan Development Research Participants—and Researchers—Represent the World's Diversity?*

Theoretical and Applied Research: Complementary Approaches

Measuring Developmental Change

*From Research to Practice: Using Lifespan Developmental Research to Improve Public Policy*

Ethics and Research

*Development in Your Life: Thinking Critically About "Expert" Advice*

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## Prologue: Pandemic

Henry Padilla was born on April 30 during the first year of the COVID-19 pandemic. Three weeks earlier, his mother, Estella, had suffered a mild case of COVID-19 and was terrified that her baby would be affected. But in every way it was a routine delivery, and Henry, who weighed 7 pounds, 6 ounces, was a healthy newborn.

\* \* \*

On the same day in April that Henry was born, Mia Signorelli, 8 years old, was being homeschooled in her apartment in Brooklyn, New York. Her school had already been closed for weeks during the pandemic, and she communicated with her third-grade teacher online. Although the teacher provided lesson plans, her parents struggled to help her and felt totally inadequate as instructors. As for Mia, although she missed her friends and running through the park across from her apartment, she was glad school was closed.

\* \* \*

Ana Parnosky and Lilibeth Stein, 42-year-old parents of Alex Parnosky-Stein, had begun to feel like prison wardens. Trying to keep Alex safe from the ravages of the pandemic, they never let him leave the confines of their suburban home in Las Vegas. But for Alex, a high school junior, being stuck at home felt like torture. He constantly fought with his parents, and he missed going out with his buddies and being with his girlfriend. If he hadn't had his cell phone to stay in touch with his friends, he felt he'd go nuts. ■

## Looking Ahead

Each of these people was profoundly affected in unique ways by the COVID-19 pandemic. Still, their development, from infancy onward, has followed predictable patterns. While the specifics of our own development vary—some of us encounter economic deprivation or live in war-torn territories; others contend with family issues like divorce or parental unemployment—the broad strokes of the development that is set in motion the moment we are conceived are remarkably similar for all of us. Like LeBron James, Jeff Bezos, and King Charles of England, each and every one of us has traversed the territory known as lifespan development.

Issues ranging from cloning and the consequences of poverty on development to the effects of culture and race raise significant developmental concerns. Underlying these are even more fundamental issues. How do people develop physically over the course of their lives? How does their understanding of the world grow and change as they age? And how do their personalities and their social world develop as they move from birth through the end of their lives?

Each of these questions, and many others we'll encounter throughout this book, are central to the field of lifespan development. As a field, lifespan development encompasses not only a broad span of time—from before birth to death—but also a wide range of areas of development. Consider, for example, some of the interests that different specialists in lifespan development focus on when considering the individuals we met in the Prologue:

- Specialists in lifespan development who study physical growth and development might examine how the biological endowment from Henry's mother affects his later behavior and whether Henry's growth was affected by his mother's illness before he was born.
- Lifespan development specialists who investigate the ways thinking changes over the course of the life span might examine how Mia's understanding of the nature of the pandemic became more sophisticated as she grew older, and how the homeschooling she received affected her academic development over the remainder of her years in school.
- Lifespan development experts who specialize in the social and personality development might look at the ways that Alex's relationships with his parents and friends would change as a result of the pandemic quarantine that he endured.

Although their interests take many forms, these specialists in lifespan development share one concern: understanding the growth and change that occur during the course of life. Taking different approaches, developmentalists study how both the biological inheritance from our parents and the environment in which we live jointly affect our behavior.

Some developmentalists focus on explaining how our genetic background can determine not only how we look but also how we behave and relate to others in a consistent manner—that is, matters of personality. They explore ways to identify how much of our potential as human beings is provided—or limited—by heredity. Other lifespan development specialists look to the environment, exploring ways in which our lives are shaped by the world that we encounter. They investigate the extent to which we are shaped by our early environments and how our current circumstances influence our behavior in both subtle and obvious ways.

Whether they focus on heredity or environment, all developmental specialists acknowledge that neither heredity nor environment alone can account for the full range of human development and change. Instead, our understanding of people's development requires that we look at the interaction of heredity and environment, attempting to grasp how, in the end, both contribute to human behavior.



Andrew Angelov/Shutterstock

Many children struggled with online learning at the height of the COVID-19 pandemic.



In this chapter, we orient ourselves to the field of lifespan development. We begin with a discussion of the scope of the discipline, illustrating the wide array of topics it covers and the full range of ages, from conception to death, that it examines. We also survey the key issues and controversies of the field and consider the broad perspectives that developmentalists take. Finally, we discuss the ways developmentalists use research to ask and answer questions.

## MODULE 1.1

### AN ORIENTATION TO LIFESPAN DEVELOPMENT

Have you ever wondered how it is possible that an infant tightly grips your finger with tiny, perfectly formed hands? Or marvelled at the way an adolescent can make involved decisions about whom to invite to a party? Or wondered what it is that makes a grandfather at 80 so similar to the father he was when he was 40?

If you've ever contemplated such things, you are asking the kinds of questions that scientists in the field of *lifespan development* pose. In this section, we'll examine how the field of lifespan development is defined, the scope of the field, and some basic influences on human development.

### Defining Lifespan Development

**LO 1.1** Define the field of lifespan development, and describe what it encompasses.

**Lifespan development** is the field of study that examines patterns of growth, change, and stability in behavior that occur throughout the entire life span. Although the definition of the field seems straightforward, the simplicity is somewhat misleading. To understand what development is actually about, we need to look underneath the various parts of the definition.

In its study of growth, change, and stability, lifespan development takes a *scientific* approach and is situated within the broader field of developmental science. *Developmental science* is an interdisciplinary field that draws from biology, psychology, anthropology, sociology, education, and other related disciplines to address the issues of human development (Golinkoff et al., 2017; Ghavami et al., 2016; Wang, 2018).

Like members of other scientific disciplines, researchers in lifespan development test their assumptions about the nature and course of human development by applying scientific methods. As we'll see later in this chapter, they develop theories about development, and they use methodical, scientific techniques to validate the accuracy of their assumptions systematically.

Lifespan development focuses on *human* development. Although there are developmentalists who study the course of development in nonhuman species, the vast majority examine growth and change in people. Some seek to understand universal principles of development, whereas others focus on how cultural, racial, and ethnic differences affect the course of development. Still others aim to understand the unique aspects of individuals, looking at the traits and characteristics that differentiate one person from another. Regardless of approach, however, all developmentalists view development as a continuing process throughout the life span.

As developmental specialists focus on the ways people change and grow during their lives, they also

#### **lifespan development**

the field of study that examines patterns of growth, change, and stability in behavior that occur throughout the entire life span



How people grow and change over the course of their lives is the focus of lifespan development.

consider stability in people's lives. They ask in which areas, and in what periods, people show change and growth, and when and how their behavior reveals consistency and continuity with prior behavior.

Finally, developmentalists assume that the process of development persists throughout every part of people's lives, beginning with the moment of conception and continuing until death. Developmental specialists assume that in some ways people continue to grow and change right up to the end of their lives, whereas in other respects their behavior remains stable. At the same time, developmentalists believe that no particular, single period of life governs all development. Instead, they believe that every period of life contains the potential for both growth and decline in abilities and that individuals maintain the capacity for substantial growth and change throughout their lives.

## The Scope of the Field of Lifespan Development

### LO 1.2 Describe the areas that lifespan development specialists cover.

Clearly, the definition of lifespan development is broad, and the scope of the field is extensive. Consequently, lifespan development specialists cover several quite diverse areas, and a typical developmentalist will choose to specialize in both a topical area and an age range.

**TOPICAL AREAS IN LIFESPAN DEVELOPMENT.** Some developmentalists focus on **physical development**, examining the ways in which the body's makeup—the brain, nervous system, muscles, senses, and the need for food, drink, and sleep—helps determine behavior. For example, one specialist in physical development might examine the effects of malnutrition on the pace of growth in children, and another might look at how athletes' physical performance declines during adulthood (Fell & Williams, 2008; Muiños & Ballesteros, 2014).

Other developmental specialists examine **cognitive development**, seeking to understand how growth and change in intellectual capabilities influence a person's behavior. Cognitive developmentalists examine learning, memory, problem-solving skills, and intelligence. For example, specialists in cognitive development might want to see how problem-solving skills change over the course of life, or whether cultural differences exist in the way people explain their academic successes and failures (Coates, 2016; Mougrabi-Large & Zhou, 2020).

Finally, some developmental specialists focus on personality and social development. **Personality development** is the study of stability and change in the enduring characteristics that differentiate one person from another over the life span. **Social development** is the way in which individuals' interactions with others and their social relationships grow, change, and remain stable over the course of life. A developmentalist interested in personality development might ask whether there are stable, enduring personality traits throughout the life span, whereas a specialist in social development might examine the effects of racism or poverty or divorce on development (Manning et al., 2017; Atherton et al., 2020). These four major topic areas—physical, cognitive, social, and personality development—are summarized in Table 1-1.

**AGE RANGES AND INDIVIDUAL DIFFERENCES.** In addition to choosing to specialize in a particular topical area, developmentalists also typically look at a particular age range. The life span is usually divided into broad age ranges: the prenatal period (the period from conception to birth), infancy and toddlerhood (birth to age 3), the preschool period (ages 3 to 6), middle childhood (ages 6 to 12), adolescence (ages 12 to 20), young adulthood (ages 20 to 40), middle adulthood (ages 40 to 65), and late adulthood (age 65 to death).

It's important to keep in mind that these broad periods—which are largely accepted by lifespan developmentalists—are social constructions. A *social construction* is a shared notion of reality, one that is widely accepted but is a function of society and culture at a given time. Consequently, the age ranges within a period—and even the periods themselves—are in many ways arbitrary and are often culturally derived. For example, later in this book we'll discuss how the concept of childhood as a separate period did not even exist during the 17th century; at that time, children and adults were seen as little

#### physical development

development involving the body's physical makeup, including the brain, nervous system, muscles, and senses, and the need for food, drink, and sleep

#### cognitive development

development involving the ways that growth and change in intellectual capabilities influence a person's behavior

#### personality development




development involving the ways that the enduring characteristics that differentiate one person from another change over the life span

#### social development

the way in which individuals' interactions with others and their social relationships grow, change, and remain stable over the course of their life



**Table 1-1** Approaches to Lifespan Development

Topical Area	Defining Characteristics	Examples of Questions Researchers Ask*
Physical development 	Emphasizes how the brain, nervous system, muscles, sensory capabilities, and needs for food, drink, and sleep affect behavior	<ul style="list-style-type: none"> <li>• What determines the sex of a child? (2)</li> <li>• What are the long-term results of premature birth? (2)</li> <li>• What are the benefits of breast milk? (4)</li> <li>• What are the consequences of early or late sexual maturation? (3)</li> <li>• What leads to obesity in adulthood? (4)</li> <li>• How do adults cope with stress? (4)</li> <li>• What are the outward and internal signs of aging? (3)</li> <li>• What is the relationship between aging and illness? (4)</li> </ul>
Cognitive development 	Emphasizes intellectual abilities, including learning, memory, problem solving, and intelligence	<ul style="list-style-type: none"> <li>• What are the earliest memories that can be recalled from infancy? (6)</li> <li>• What are the intellectual consequences of media exposure? (14)</li> <li>• What is intelligence, and how is it measured? (8)</li> <li>• Are there benefits to bilingualism? (7)</li> <li>• What are the fundamental elements of information processing? (6)</li> <li>• Are there ethnic and racial differences in intelligence? (8)</li> <li>• What is cognitive development, and how did Piaget revolutionize its study? (5)</li> <li>• How does creativity relate to intelligence? (8)</li> </ul>
Personality and social development 	Emphasizes enduring characteristics that differentiate one person from another, and how interactions with others and social relationships grow and change over the life span	<ul style="list-style-type: none"> <li>• Do newborns respond differently to their mothers than to others? (9)</li> <li>• What is the best procedure for disciplining children? (11)</li> <li>• When does a sense of gender identity develop, and how do sex and gender provide a context for development? (12)</li> <li>• How can we promote cross-race friendships? (13)</li> <li>• What are the emotions involved in confronting death? (15)</li> <li>• How do we choose a romantic partner? (14)</li> <li>• What sorts of relationships are important in late adulthood? (13)</li> <li>• What are typical patterns of marriage and divorce in middle adulthood? (12)</li> <li>• In what ways are people affected by culture and ethnicity? (13)</li> </ul>

\*Numbers in parentheses indicate in which chapter the question is addressed.)

different from one another except in terms of size. Furthermore, while some periods have a clear-cut boundary (infancy begins with birth, the preschool period ends with entry into elementary school, and adolescence starts with sexual maturity), others don't.

For instance, consider the period of young adulthood, which at least in Western cultures is typically assumed to begin at age 20. That age, however, is notable only because it marks the end of the teenage period. In fact, for many people, such as those enrolled in higher education, the age change from 19 to 20 has little special significance, coming as it does in the middle of the college years. For them, more substantial changes may occur when they leave college and enter the workforce, which is more likely to happen around age 22. Furthermore, in some non-Western cultures, adulthood may be considered to start much earlier, when children whose educational opportunities are limited begin full-time work.

In fact, some developmentalists have proposed entirely new developmental periods. For instance, psychologist Jeffrey Arnett argues that adolescence extends into *emerging adulthood*, a period beginning late in the teenage years and continuing into the mid-20s. During emerging adulthood, people are no longer adolescents, but they haven't fully taken on the responsibilities of adulthood. Instead, they are still trying out different identities and engaging in self-focused exploration (Sumner et al., 2015; Arnett, 2016; Zorotovich & Johnson, 2019).

In short, there are substantial *individual differences* in the timing of events in people's lives. In part, this is a biological fact of life: People mature at different rates and reach developmental milestones at different points. However, environmental factors also play a significant role in determining the age at which a particular event is likely to occur. For example, the typical age of marriage varies substantially from one culture to another, depending in part on the functions that marriage plays in a given culture.

It is important to keep in mind, then, that when developmental specialists discuss age ranges, they are talking about averages—the times when people, on average, reach particular milestones. Some people will reach the milestone earlier, some later, and many will reach it around the time of the average. Such variation becomes noteworthy only when children show substantial deviation from the average. For example, parents whose child begins to speak at a much later age than average might decide to have their child evaluated by a speech therapist.



This wedding of two children in Sudan is an example of how cultural factors can play a significant role in determining the age when a particular event is likely to occur.

**THE LINKS BETWEEN TOPICS AND AGES.** Each of the broad topical areas of lifespan development—physical, cognitive, social, and personality development—plays a role throughout the life span. Consequently, some developmental experts focus on physical development during the prenatal period, and others during adolescence. Some might specialize in social development during the preschool years, whereas others look at social relationships late in adulthood. Still others might take a broader approach, looking at cognitive development through every period of life.

In this text, we'll take a comprehensive approach, proceeding chronologically from the prenatal period through late adulthood and death. Within each period, we'll look at different topical areas: physical, cognitive, social, and personality development. Furthermore, we'll also be considering the impact of culture on development, as we discuss next.

## Influences on Development

### LO 1.3 Describe some of the basic influences on human development.

*Bob, born in 1947, is a baby boomer; he was born soon after the end of World War II, when an enormous surge in the birth rate occurred as soldiers returned to the United States from overseas. He was an adolescent at the height of the civil rights movement and the beginning of protests against the Vietnam War. His mother, Leah, was born in 1922. She died at the age of 96, and she was part of the generation that passed its childhood and teenage years in the shadow of the Great Depression. Bob's son, Jon, was born in 1975. Now middle-aged and established in a career and raising his own family, he is a member of what has been called Generation X. Jon's younger sister, Sarah, who was born in 1982, is part of the next generation, which sociologists have called the Millennial Generation. She now is raising a preschooler of her own after finishing graduate school and starting her career. Having lived through the COVID-19 pandemic, she suspects that her children will be affected by it for the rest of their lives.*

These people are, in part, products of the social times in which they live. Each belongs to a particular **cohort**, a group of people born at around the same time in the same place. Such major social events as wars, economic upturns and depressions, famines, and pandemics (like COVID-19) work similar influences on members of a particular cohort (Twenge et al., 2015; Simons et al., 2021).

#### cohort

a group of people born at around the same time in the same place

*Cohort effects* provide an example of *history-graded influences*, which are biological and environmental influences associated with a particular historical moment. For instance, people who lived in New York City during the 9/11 terrorist attack on the World Trade Center experienced shared biological and environmental challenges due to the attack. Their development is going to be affected by this normative history-graded event (Kim et al., 2016; Liu & Lim, 2020).

In contrast, *age-graded influences* are biological and environmental influences that are similar for individuals in a particular age group, regardless of when or where they are raised. For example, biological events such as puberty and menopause are universal events that occur at relatively the same time throughout all societies. Similarly, a socio-cultural event such as entry into formal education can be considered an age-graded influence because it occurs in most cultures around age 6.

#### From an Educator's Perspective

How would a student's cohort membership affect their readiness for school? For example, what would be the benefits and drawbacks of growing up in a cohort in which cell phone use was routine, compared with previous cohorts in which cell phone use was less common?

Development is also affected by *sociocultural-graded influences*, the social and cultural factors present at a particular time for a particular individual, depending on such variables as race, ethnicity, social class, and subcultural membership. For example, children raised in remote and isolated areas of the African outback will experience significantly different upbringings from those raised in urban New York City (Chen & Zhou, 2019).

Finally, *non-normative life events* are specific, atypical events that occur in a person's life at a time when such events do not happen to most people. For example, a 6-year-old child whose parents die in an automobile accident has experienced a significant non-normative life event.

# Developmental Diversity and Your Life

## How Culture, Ethnicity, and Race Influence Development

*In the United States, parents praise young children who ask a lot of questions for being “intelligent” and “inquisitive.” The Dutch consider such children “too dependent on others.” Italian parents judge inquisitiveness as a sign of social and emotional competence and not intelligence. Spanish parents praise character far more than intelligence, and Swedes value security and happiness above all.*

What are we to make of these diverse parental expectations? Is one way of looking at children’s inquisitiveness right and the others wrong? Probably not, if we take into consideration the cultural contexts in which parents operate. In fact, different cultures and subcultures have their own views of appropriate and inappropriate methods and interpretations of childrearing, just as they have different developmental goals for children.

Specialists in child development must take into consideration broad cultural factors. For example, as we’ll discuss further in Chapter 8, children growing up in Asian societies tend to have a *collectivistic orientation*, focusing on the interdependence among members of society. In contrast, children in Western societies are more likely to have an *individualistic orientation*, in which they concentrate on the uniqueness of the individual.

Similarly, child developmentalists must also consider ethnic, racial, socioeconomic, and gender differences if they are to achieve an understanding of how people change and grow throughout the life span. If these specialists succeed in doing so, not only can they attain a better understanding of human development, but they may also be able to derive more precise applications for improving the human social condition.

To complicate the study of diverse populations, the terms *ethnic group*, *ethnicity*, and *race* are often used inappropriately. *Ethnic group* and *ethnicity* relate to cultural background, nationality, religion, and language. Members of ethnic groups share a common cultural background and group history.

*Race* originated as a biological concept, and initially it referred to classifications based on physical and structural characteristics of species. But such a definition has little validity in terms of humans, and research shows that it is not a meaningful way to differentiate people.

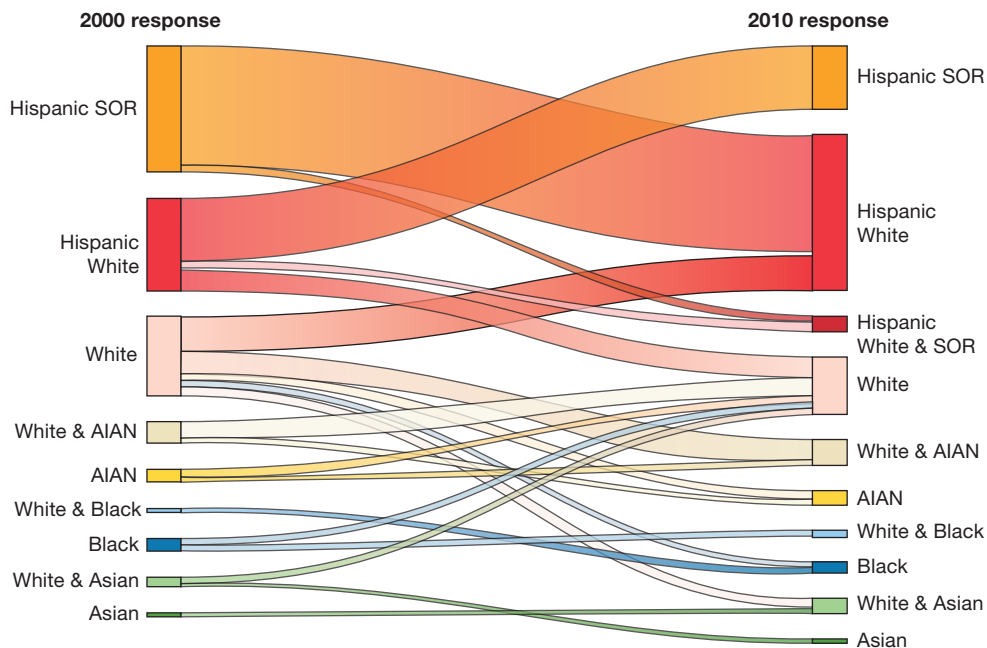
Moreover, depending on how race is defined, various observers have claimed there are between 3 and 300 races worldwide. Many people are fluid in how they see their own race and ethnic group membership; as shown in Figure 1-1. Over time, 6 percent of U.S. Census respondents shift in terms of how they self-identify.

**Figure 1-1** Shifting Race and Ethnicity

Six percent of U.S. Census respondents shift in the way that they answer questions about their own race and ethnic group membership. The top 20 changes between the 2000 and 2010 Census in self-identification are shown here. The data support the idea that race and ethnicity are social constructions, defined largely by people and their beliefs.

**Note:** SOR = Some other race; AIAN = American Indian and Alaska Native.

**(Source:** Elbert Wang, *The Wall Street Journal*, 2020, citing data from Liebler et al., 2017.)



Furthermore, an increasing number of people view themselves as multiracial: for example, the number of non-Hispanic Americans who identify as multiracial increased by 127 percent. In short, race and ethnic group today are generally thought of as a social construction, something defined by people and their beliefs (Liebler et al., 2017; Kung et al., 2018; Mosley et al., 2020; Tavernise et al., 2021).

In addition, there is little agreement about which names best reflect different races and ethnic groups. Should the term *African American*—which has geographical and cultural implications—be preferred over *Black*, which focuses primarily on skin color? Is *Native American* preferable to *Indian*? Is *Hispanic* more appropriate than *Latino* or *LatinX*? And how can researchers accurately categorize people with multiracial backgrounds? (Kloep et al., 2009; Jensen Arnett, 2017).

Relatedly, lifespan development specialists have increasingly considered issues of diversity, inclusion, and equity. In part as a consequence of the killing of George Floyd by a Minneapolis police officer and the emergence of social movements such as *Black Lives Matter*, researchers have sought to better understand *racism*, prejudice against others based on their race. Racism may be considered in terms of an individual's prejudice against others, but it also may be embodied in institutions such as schools and government. Researchers are studying both the devastating effects of racism and the ways that it can be reduced, as we'll see in future chapters (Andoh, 2021; Osborne et al., 2021).



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The face of the United States is changing as the proportion of people from different backgrounds is increasing.

## Key Issues and Questions: Determining the Nature—and Nurture—of Lifespan Development

### LO 1.4 Summarize four key issues in the field of lifespan development.

Today, several key issues and questions dominate the field. Among the key issues (summarized in Table 1-2) are the nature of change, the importance of critical and sensitive periods, lifespan approaches versus more focused approaches, and the nature–nurture issue.

Most developmentalists agree that taking an either/or position on the continuous–discontinuous issue is inappropriate. Although many types of developmental change are continuous, others are clearly discontinuous.

**CONTINUOUS CHANGE VERSUS DISCONTINUOUS CHANGE.** One of the primary issues challenging developmentalists is whether development proceeds in a continuous or discontinuous fashion. In **continuous change**, development is gradual, with achievements at one level building on those of previous levels. Continuous change is quantitative in nature; the basic underlying developmental processes that drive change remain the same over the course of the life span. Continuous change, then, produces changes that

#### **continuous change**

gradual development in which achievements at one level build on those of previous levels