

third edition

# Discovering the Life Span



MyPsychLab™

Robert S. Feldman

## PRESCHOOL PERIOD

(3 to 6 years)

## MIDDLE CHILDHOOD

(6 to 12 years)

- Height and weight continue to increase rapidly.
- The body becomes less rounded and more muscular.
- The brain grows larger, neural interconnections continue to develop, and lateralization emerges.
- Gross and fine motor skills advance quickly. Children can throw and catch balls, run, use forks and spoons, and tie shoelaces.
- Children begin to develop handedness.

- Growth becomes slow and steady. Muscles develop, and “baby fat” is lost.
- Gross motor skills (biking, swimming, skating, ball handling) and fine motor skills (writing, typing, fastening buttons) continue to improve.

- Children show egocentric thinking (viewing world from their own perspective) and “centration,” a focus on only one aspect of a stimulus.
- Memory, attention span, and symbolic thinking improve, and intuitive thought begins.
- Language (sentence length, vocabulary, syntax, and grammar) improves rapidly.

- Children apply logical operations to problems.
- Understanding of conservation (that changes in shape do not necessarily affect quantity) and transformation (that objects can go through many states without changing) emerge.
- Children can “decenter”—take multiple perspectives into account.
- Memory encoding, storage, and retrieval improve, and control strategies (meta-memory) develop.
- Language pragmatics (social conventions) and metalinguistic awareness (self-monitoring) improve.

- Children develop self-concepts, which may be exaggerated.
- A sense of gender and racial identity emerges.
- Children begin to see peers as individuals and form friendships based on trust and shared interests.
- Morality is rule-based and focused on rewards and punishments.
- Play becomes more constructive and cooperative, and social skills become important.

- Children refer to psychological traits to define themselves. Sense of self becomes differentiated.
- Social comparison is used to understand one’s standing and identity.
- Self-esteem grows differentiated, and a sense of self-efficacy (an appraisal of what one can and cannot do) develops.
- Children approach moral problems intent on maintaining social respect and accepting what society defines as right.
- Friendship patterns of boys and girls differ. Boys mostly interact with boys in groups, and girls tend to interact singly or in pairs with other girls.

Preoperational stage

Concrete operational stage

Initiative-versus-guilt stage

Industry-versus-inferiority stage

Phallic stage

Latency period

Preconventional morality level

Conventional morality level

**ADOLESCENCE**  
(12 to 20 years)

**YOUNG ADULTHOOD**  
(20 to 40 years)

**PHYSICAL DEVELOPMENT**

- Girls begin the adolescent growth spurt around age 10, boys around age 12.
- Girls reach puberty around age 11 or 12, boys around age 13 or 14.
- Primary sexual characteristics develop (affecting the reproductive organs), as do secondary sexual characteristics (pubic and underarm hair in both sexes, breasts in girls, deep voices in boys).

- Physical capabilities peak in the 20's, including strength, senses, coordination, and reaction time.
- Growth is mostly complete, although some organs, including the brain, continue to grow.
- For many young adults, obesity becomes a threat for the first time, as body fat increases.
- Stress can become a significant health threat.
- In the mid-30's, disease replaces accidents as the leading cause of death.

**COGNITIVE DEVELOPMENT**

- Abstract thought prevails. Adolescents use formal logic to consider problems in the abstract.
- Relative, not absolute, thinking is typical.
- Verbal, mathematical, and spatial skills improve.
- Adolescents are able to think hypothetically, divide attention, and monitor thought through meta-cognition.
- Egocentrism develops, with a sense that one is always being observed. Self-consciousness and introspection are typical.
- A sense of invulnerability can lead adolescents to ignore danger.

- As world experience increases, thought becomes more flexible and subjective, geared to adept problem solving.
- Intelligence is applied to long-term goals involving career, family, and society.
- Significant life events of young adulthood may shape cognitive development.

**SOCIAL/ PERSONALITY DEVELOPMENT**

- Self-concept becomes organized and accurate and reflects others' perceptions. Self-esteem grows differentiated.
- Defining identity is a key task. Peer relationships provide social comparison and help define acceptable roles. Popularity issues become acute; peer pressure can enforce conformity.
- Adolescents' quest for autonomy can bring conflict with parents as family roles are renegotiated.
- Sexuality assumes importance in identity formation. Dating begins.

- Forming intimate relationships becomes highly important. Commitment may be partly determined by the attachment style developed in infancy.
- Marriage and children bring developmental changes, often stressful. Divorce may result, with new stresses.
- Identity is largely defined in terms of work, as young adults consolidate their careers.

**THEORIES & THEORISTS**

Jean Piaget

Formal operations stage

Erik Erikson

Identity-versus-confusion stage

Intimacy-versus-isolation stage

Sigmund Freud

Genital stage

Lawrence Kohlberg

Postconventional morality level may be reached

## MIDDLE ADULTHOOD

(40 to 65 years)

## LATE ADULTHOOD

(65 years to death)

- Physical changes become evident. Vision declines noticeably, as does hearing, but less obviously.
- Height reaches a peak and declines slowly. Osteoporosis speeds this process in women. Weight increases, and strength decreases.
- Reaction time slows, but performance of complex tasks is mostly unchanged due to lifelong practice.
- Women experience menopause, with unpredictable effects. The male climacteric brings gradual changes in men's reproductive systems.

- Wrinkles and gray or thinning hair are marks of late adulthood. Height declines as backbone disk cartilage thins. Women are especially susceptible to osteoporosis.
- The brain shrinks, and the heart pumps less blood through the body. Reactions slow, and the senses become less acute. Cataracts and glaucoma may affect the eyes, and hearing loss is common.
- Chronic diseases, especially heart disease, grow more common. Mental disorders, such as depression and Alzheimer's disease, may occur.

- Some loss of cognitive functioning may begin in middle adulthood, but overall cognitive competence holds steady because adults use life experience and effective strategies to compensate.
- Slight declines occur in the efficiency of retrieval from long-term memory.

- Cognitive declines are minimal until the 80's. Cognitive abilities can be maintained with training and practice, and learning remains possible throughout the life span.
- Short-term memory and memory of specific life episodes may decline, but other types of memory are largely unaffected.

- People in middle adulthood take stock, appraising accomplishments against a "social clock" and developing a consciousness of mortality.
- Middle adulthood, despite the supposed "midlife crisis," usually is tranquil and satisfying. Individuals' personality traits are generally stable over time.
- While marital satisfaction is usually high, family relationships can present challenges.
- The view of one's career shifts from outward ambition to inner satisfaction or, in some cases, dissatisfaction. Career changes are increasingly common.

- Basic personality traits remain stable, but changes are possible. "Life review," a feature of this period, can bring either fulfillment or dissatisfaction.
- Retirement is a major event of late adulthood, causing adjustments to self-concept and self-esteem.
- A healthy lifestyle and continuing activity in areas of interest can bring satisfaction in late adulthood.
- Typical circumstances of late adulthood (reduced income, the aging or death of a spouse, a change in living arrangements) cause stress.

Generativity-versus-stagnation stage

Ego-integrity-versus-despair stage

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# DISCOVERING THE LIFE SPAN

**THIRD EDITION**

ROBERT S. FELDMAN  
University of Massachusetts, Amherst

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To Alex and Miles

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# Preface

## TO THE STUDENT

Welcome to the field of lifespan development! It's a discipline that's about you, about your family and those who came before you, and about those who may follow in your footsteps. It's about your genetic heritage, and it's about the world in which you were raised.

Lifespan development is a field that will speak to you in a very personal way. It covers the range of human existence from its beginnings at conception to its inevitable ending at death. It is a discipline that deals with ideas and concepts and theories, but one that above all has at its heart people—our fathers and mothers, our friends and acquaintances, and our very selves.

But before we jump into the world of lifespan development, let's spend a little time getting to know this book and the way it presents the material. Knowing how the book is constructed will pay off in big ways.

### Getting to Know the Book

You've probably already read a fair number of textbooks over the course of your college career. This one is different.

Why? Because it's written from your perspective as a student. Every word, sentence, paragraph, and feature in this book is included because it's meant to explain the field of lifespan development in a way that excites you, engages you with the content, and facilitates the study of the material. And by doing that, it maximizes your chances for not only learning the material and getting a good grade in your class, but also applying the material in a way that will improve your life.

The very organization of the book is based on what psychologists know about how students study most effectively. The text is divided into short modules, nestled within chapters, with each module having several clearly demarcated subsections. By focusing your study in short sections, you're much more likely to master the material.

Similarly, the material is organized into *learning objectives*, abbreviated as *LO*. At the start of every major section, you'll find them in the form of questions. It makes sense to pay particular attention to the learning objectives, because they indicate the material that instructors most want you to learn and that they use to develop test questions.

The book also has a way of indicating which terms are most critical to your understanding of lifespan development. Key terms and concepts are printed in **boldface type**, and are defined in the margins. Less-critical terms and concepts are printed in *italics* and defined within the paragraph where they first appear, but not in the margin.

To further help you study, modules end with a “Review, Check, and Apply” section. The “Review” section includes a summary of the material in the module, organized by learning objective. There are also several “Check Yourself” questions, which require that you recall and understand the material in order to answer correctly. Finally, there's a question that requires you to apply the material in the chapter to some real-world issue. By answering the “Applying Lifespan Development” question, you're demonstrating a higher-order understanding related to critical thinking.

You'll also find several recurring features in every chapter. There are opening vignettes designed to illustrate how lifespan development is relevant to everyday life. There are boxes, called “From Research to Practice,” which include recent research that is applied to current social issues, and “Cultural Dimensions” sections that highlight multicultural issues related to lifespan development.

Ever wish you could apply the theoretical material you're reading about in a textbook to your own life? The section called, “Becoming an Informed Consumer of Development,” offers a variety of tips and guidelines, based on the chapter's theme, ranging from child-rearing tips to choosing a career and planning your retirement. By applying these to your life, you'll learn the diversity of what the field of lifespan development has to offer.

Finally, there are several features illustrating how the material is relevant from the perspectives of people in different roles and professions, including parents, educators, health

care providers, and social workers. “From the Perspective of...” asks you questions designed to help you think critically about how lifespan development applies to someone working in a specific field, and “Putting It All Together”—a summary at the end of each chapter—will help you integrate the material in the modules and learn how it applies across a variety of dimensions.

### And That’s Not All...

In addition to the features of the book described above, there are a variety of superb online materials that will help you learn and master the material in the text. (Indeed, the entire book can be found online in an e-book format.) These materials include MyPsychLab and MyVirtualLife. MyPsychLab provides quizzes and tests that offer an individualized study plan, as well as videos and interactivities that allow a hands-on introduction to the material. MyVirtualLife is a unique, interactive online tool that allows you to virtually “raise” a child through adolescence by asking key questions about parenting practices, and then forecast your own life from adolescence through late adulthood. You’ll see how the decisions you make—based on the material you’re studying—play out in the life of your virtual child as well as your own.

Use these online materials! They are wonderful interactive tools that can help you learn the material in a way that can’t occur from reading the textbook alone.

### A Last Word...

I wrote this book for you. Not for your instructor, not for my colleagues, and not to see it sitting on my own bookshelf. I wrote this book as an opportunity to extend what I do in my own classes at the University of Massachusetts Amherst, and to reach a wider, and more diverse, set of students. For me, there’s nothing more exciting as a college professor than to share my teaching and knowledge with as many students as possible.

I hope this book grabs your interest in lifespan development and shows you how it can apply to your own life and improve it. Let me know if it does, or anything else you’d like to convey to me. I’d love to hear from you, and you can easily reach me at [feldman@psych.umass.edu](mailto:feldman@psych.umass.edu). In the meantime, enjoy your introduction to lifespan development.


## TO THE INSTRUCTOR

I’ve never met an instructor of a lifespan development course who didn’t feel that he or she was fortunate to teach the course. The subject matter is inherently fascinating, and there is a wealth of information to convey that is at once intriguing and practical. Students come to the course with anticipation, motivated to learn about a topic that, at base, is about their own lives and the lives of every other human being.

At the same time, the course presents unique challenges. For one thing, 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. In addition, many instructors find traditional lifespan development texts too long. Students are concerned about the length of the texts and have trouble completing the entire book. As a result, instructors are often reluctant to assign the complete text and are forced to drop material, often arbitrarily.

Finally, instructors often wish to incorporate into their classes computer-based electronic media that promote understanding of key concepts and take advantage of students’ capabilities using electronic media. Yet traditional lifespan development textbooks do little to integrate the electronic media with the book. Consequently, in most courses, the book and accompanying electronic media stand largely in isolation to one another. This lack of integration diminishes the potential impact of both traditional and electronic media and the advantages that an integration of the two could produce in terms of helping students engage with and learn the subject matter.

***Discovering the Life Span, Third Edition***, directly addresses these challenges. The book, which is based on the highly popular ***Development Across the Life Span***, is some 25 percent shorter than traditional lifespan books. At the same time, it 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.



The book uses a modular approach to optimize student learning. Each chapter is divided into two or three modules, and in turn each module is divided into several smaller sections. Consequently, rather than facing long, potentially daunting chapters, students encounter material that is divided into smaller, more manageable chunks. Of course, presenting material in small chunks represents a structure that psychological research long ago found to be optimum for promoting learning.

The modular approach has another advantage: It allows instructors to customize instruction by assigning only those modules that fit their course. Each of the book's chapters focuses on a particular period of the life span, and within each chapter separate modules address the three main conceptual approaches to the period: physical development, cognitive development, and social and personality development. Because of the flexibility of this structure, instructors who wish to highlight a particular theoretical or topical approach to lifespan development can do so easily.

Finally, *Discovering the Life Span, third edition*, provides complete integration between the book and a huge array of electronic media in MyVirtualLife and MyPsychLab, comprising online electronic exercises, videos, sample tests, and literally hundreds of activities that extend the text and make concepts come alive. The online material is referenced throughout the book in an engaging way, enticing students to go online to make use of the electronic materials that will help them understand the material in the book more deeply.

## AN INTRODUCTION TO *DISCOVERING THE LIFE SPAN*, THIRD EDITION

*Discovering the Life Span, third edition*—like its predecessor—provides a broad overview of the field of human development. It covers the entire range of the human life, from the moment of conception through death. The text furnishes a broad, comprehensive introduction to the field, covering basic theories and research findings, as well as highlighting current applications outside the laboratory. It covers the life span chronologically, encompassing the prenatal period, infancy and toddlerhood, the preschool years, middle childhood, adolescence, early and middle adulthood, and late adulthood. Within these periods, it focuses on physical, cognitive, and social and personality development.

In a unique departure from traditional lifespan development texts, each chapter integrates the physical, cognitive, and social and personality domains within each chronological period. Chapters begin with a compelling story about an individual representing the age period covered by the chapter, and the chapter ends by refocusing on that individual and integrating the three domains. At the same time, chapters drive students to MyPsychLab through marginal queries and reminders about the rich media content available to them.

The book also 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 more on current research findings and trends.

The book is designed to be user-friendly. Written in a direct, conversational voice, it replicates 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. These features include:

- **CHAPTER-OPENING PROLOGUES.** Each of the chapters starts with an attention-grabbing account of an individual who is at the developmental stage covered by the chapter. The material in the prologue sets the stage for the chapter, and the material is addressed in the end of the chapter when the physical, cognitive, and social and personality aspects are integrated.
- **LEARNING OBJECTIVES.** Every module begins with a set of learning objectives, clearly specifying what students are expected to master after reading and studying the material. The learning objectives are couched in the form of engaging questions meant to intrigue students and motivate learning.

- **MODULE-OPENING VIGNETTE.** Modules (which are nestled within chapters) begin with short vignettes, describing an individual or situation that is relevant to the basic developmental issues being addressed in the module.
- **FROM RESEARCH TO PRACTICE.** Each chapter includes a box that describes current developmental research or research issues, applied to everyday problems.
- **CULTURAL DIMENSIONS.** Every chapter includes several “Cultural Dimensions” sections incorporated into the text. These sections highlight issues relevant to today’s multicultural society. Examples of these sections include discussions about preschools around the world, gay and lesbian relationships, the marketing of cigarettes to the less advantaged, and race, gender, and ethnic differences in life expectancy.
- **BECOMING AN INFORMED CONSUMER OF DEVELOPMENT.** Every chapter includes information on specific uses that can be derived from research conducted by developmental investigators. For instance, the text provides concrete information on how to encourage children to become more physically active, help troubled adolescents who might be contemplating suicide, and planning and living a good retirement.
- **REVIEW, CHECK, AND APPLY SECTIONS.** Each module is divided into several subsections. At the end of each section are a series of questions on the chapter content, short recaps of the chapters’ main points, and an question oriented to apply the chapter content to the real world, keyed to the learning objectives. In addition, students are encouraged to use the MyPsychLab assessment resources associated with the chapter.
- **“FROM THE PERSPECTIVE OF...” QUESTIONS.** Students will encounter frequent questions throughout the text designed to show the applicability of the material to a variety of professions, including education, nursing, social work, and healthcare providers.
- **RUNNING GLOSSARY.** Key terms are defined in the margins of the page on which the term is presented.
- **END-OF-CHAPTER INTEGRATIVE MATERIAL.** At the end of each chapter, the chapter-opening prologue is recapped and addressed from the three domains of physical, cognitive, and social and personality development. In addition, questions address the prologue from the perspective of people such as parents, professional caregivers, nurses, and educators.

## WHAT’S NEW IN THE THIRD EDITION?

The third edition of *Discovering the Life Span* has been extensively revised in response to the comments of dozens of reviewers. Among the major changes are the following:

**Additions of New and Updated Material.** The revision incorporates a significant amount of new and updated information. For instance, advances in areas such as behavioral genetics, brain development, evolutionary perspectives, and cross-cultural approaches to development receive expanded and new coverage. In addition, this new edition reflects the recently-published new edition of DSM-5. Overall, hundreds of new citations have been added, with most of those from articles and books published in the last 2 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 of the revision:

### Chapter 1

Update on first person conceived in *in vitro*  
 New examples of police issues by lifespan development research  
 Debunking relationship between vaccination and autism  
 Research on same-sex parenting efficacy  
 Emerging adulthood

Down syndrome treatment  
 In vitro fertilization success rates  
 In vitro fertilization live birth rates  
 Psychological consequences of miscarriage  
 Statistics on international abortion incidence  
 Incidence of hunger worldwide  
 Miscarriage and postpartum depression  
 Controversy regarding routine screening  
 Statistics on infant mortality  
 Water birthing

### Chapter 2

Transgenerational epigenetic inheritance  
 Placental role in brain development



Costs of caring for premature infants  
Increase in cesarean deliveries  
Higher risk of mental illness in preterm infants

### **Chapter 3**

Reduced rates of infection in breastfed infants  
Shaken baby syndrome incidence  
Brain scan showing shaken baby syndrome damage  
Line between Cesarean delivery and infant obesity  
New statistics on incidence of SIDS  
Efficacy of educational media for children  
Parent responsiveness to infants' babbling  
Infant understanding of movement trajectories  
Infant understanding of gravity  
Evidence of infants' theory of mind at 18 months  
Research showing 10 and 13-month olds mentally represent social dominance  
Infant preferences for helpful versus antisocial behavior

### **Chapter 4**

Lack of link between vaccination and autism  
Importance of serving food with low sodium and fat content  
Preschool benefits 25 years after participation  
Additional characteristics of high quality child care  
Effect of violent video games  
Incidence of autism  
Spanking as a violation of human rights  
Genetic roots of generosity and selfishness

### **Chapter 5**

Autistic spectrum disorders  
Asthma  
Cost of psychological disorders in children  
ADHD incidence and treatment  
Changes in brain due to reading  
Change in term "mental retardation" to "intellectual disability"  
Decreasing digital divide between poor and affluent children  
Unmonitored digital use in children raised in poverty  
Immigrant children's physical health  
Sibling experiences in different cultural contexts  
Anti-bullying programs

### **Chapter 6**

Brain damage due to binge drinking in teenagers  
Cyberbullying  
Risky behavior caused by overestimation of rewards  
Media use supplants other forms of social interaction  
New figure on teens and cell phone use  
Waivers for "No Child Left Behind" law  
Use of Adderall to increase academic performance  
New AIDS statistics  
Friendship and social networks  
Sexting  
Teenage pregnancy rates at historic lows  
Declines in rates of adolescent sexual intercourse  
Increase in use of condoms  
Religion as viewing the world in terms of intentional design  
Gender-nonconforming gays and lesbian adjustment  
More positive societal attitudes towards homosexuality: majority support of gay and lesbian marriage  
Increase in bicultural identity

### **Chapter 7**

College completion for blacks  
Future orientation personality variable  
Sex discrimination in math intensive fields  
Average weight cross-culturally  
Emerging adulthood  
Total costs of raising children  
New figure on ideal family size  
Fertility rate in the United States, Afghanistan, and Zambia  
Increase in cohabitation  
New data on husband/wife division of labor  
Majority of births occur outside of marriage for women under 30

### **Chapter 8**

Multitasking and thinking quality  
Driving and texting  
Sexual activity in middle age  
Differences in brain activity in older adults  
Decline in percentage of post-menopausal women taking hormone therapy  
Coping mechanisms in successful marriages  
Disengagement from work during leisure time  
Boomerang generation statistics/figures  
Helicopter parenting  
Divorce rate increase for people 50 and older (statistics and graph)

## Chapter 9

Discovery of gene mutation that prevents Alzheimer's disease  
Updated statistics on life expectancy  
Drug therapy with mTOR to extend life  
Maximum aging possibilities  
Increase in sexually transmitted diseases in late adulthood  
Dwindling confidence in ability to retire comfortably  
Grandchildren as part of grandparents' social networks

Health improvements lead to greater involvement of great-grandparents in the lives of their great-grandchildren  
Elder abuse prevalence  
Changes in theory of mind in late adulthood  
Light/dark adaptation changes  
Selective optimization with compensation term changed  
Health screenings table condensed

## Chapter 10

Effectiveness of grief counseling  
Efficacy of encouraging people to express negative emotions following grief  
Criticisms of Kubler-Ross

# A FINAL NOTE

I am very excited about this new edition of *Discovering the Life Span*. I believe its length, structure, and media and text integration will help students learn the material in a highly effective way. Just as important, I hope it will nurture an interest in the field that will last a lifetime.



*Discovering the Life Span* is accompanied by a superb set of teaching and learning materials.

## FOR THE INSTRUCTOR:

- ***Instructor's Resource Manual* (ISBN: 0205994059).** Designed to make your lectures more effective and save you preparation time, this extensive resource gathers together the most effective activities and strategies for teaching your course. The *Instructor's Resource Manual* includes learning objectives, key terms and concepts, self-contained lecture suggestions, and class activities for each chapter with handouts, supplemental reading suggestions, and an annotated list of additional multimedia resources.

The *Instructor's Resource Manual* is available for download via the Pearson Instructor's Resource Center ([www.pearsonhighered.com](http://www.pearsonhighered.com)) or in MyPsychLab ([www.mypsychlab.com](http://www.mypsychlab.com)).

- ***PowerPoint Lecture Slides* (ISBN: 0205994040).** The PowerPoints provide an active format for presenting concepts from each chapter and feature prominent figures and tables from the text. The PowerPoint Lecture Slides are available for download via the Pearson Instructor's Resource Center ([www.pearsonhighered.com](http://www.pearsonhighered.com)) or in MyPsychLab ([www.mypsychlab.com](http://www.mypsychlab.com)).
- ***Test Item File* (ISBN: 0133802191).** For the third edition, each question was checked to ensure that the correct answer was marked and the page reference was accurate. The test bank contains multiple-choice, true/false, and essay questions, each referenced to the relevant page in the book and correlated to chapter learning objectives and APA learning outcomes. An additional feature for the test bank is the identification of each question as factual, conceptual, or applied. This allows professors to customize their tests and to ensure a balance of question types. Each chapter of the test item file begins with the Total Assessment Guide: an easy to reference grid that makes creating tests easier by organizing the test questions by text section, question type, and whether it is factual, conceptual, or applied. The Test Item File is available for download via the Pearson Instructor's Resource Center ([www.pearsonhighered.com](http://www.pearsonhighered.com)) or in MyPsychLab ([www.mypsychlab.com](http://www.mypsychlab.com)).
- ***MyTest* (ISBN: 0133802183).** This powerful assessment-generation program helps instructors easily create and print quizzes and exams. Questions and tests can be authored online, allowing instructors ultimate flexibility and the ability to efficiently manage assessments anytime, anywhere. For more information, go to [www.PearsonMyTest.com](http://www.PearsonMyTest.com) or MyPsychLab ([www.mypsychlab.com](http://www.mypsychlab.com)).
- ***My Virtual Life*.** Raise your child. Live your life. MyVirtualLife is two simulations in one. The first simulation allows students to raise a child from birth to age 18 and monitor the effects of their parenting decisions over time. In the second simulation students make first-person decisions and see the impact of those decisions on their simulated future self over time. By incorporating physical, social, emotional, and cognitive development throughout the entire life span, MyVirtualLife helps students think critically as they apply their course work to their own virtual life. You can access MyVirtualLife within MyPsychLab ([www.mypsychlab.com](http://www.mypsychlab.com)) or as a standalone product.
- ***MyPsychLab* (ISBN: 0205982492).** Available at [www.mypsychlab.com](http://www.mypsychlab.com), **MyPsychLab** is an online homework, tutorial, and assessment program that truly engages students in learning. It helps students better prepare for class, quizzes, and exams—resulting in better performance in the course. It provides educators a dynamic set of tools for gauging individual and class performance:
  - **Customizable** MyPsychLab is customizable. Instructors choose what students' course looks like. Homework, applications, and more can easily be turned on and off.
  - **Blackboard Single Sign-On** MyPsychLab can be used by itself or linked to any course management system. Blackboard single sign-on provides deep linking to all new MyPsychLab resources.

- **Pearson eText and Chapter Audio** Like the printed text, students can highlight relevant passages and add notes. The Pearson eText can be accessed through laptops, iPads, and tablets. Download the free Pearson eText app to use on tablets. Students can also listen to their text with the Audio eText.
- **Assignment Calendar & Gradebook** A drag and drop assignment calendar makes assigning and completing work easy. The automatically graded assessment provides instant feedback and flows into the gradebook, which can be used in the MyPsychLab or exported.
- **Personalized Study Plan** Students' personalized plans promote better critical thinking skills. The study plan organizes students' study needs into sections, such as Remembering, Understanding, Applying, and Analyzing.
- **MyPsychLab Margin Icons** Margin icons guide students from their reading material to relevant videos and activities. To package MyPsychLab with the student text, use ISBN 0133814912.
- **Class Preparation Tool.** Available for instructors within MyPsychLab, this exciting instructor resource makes lecture preparation easier and less time consuming. MyClassPrep collects the very best class preparation resources—art and figures from our leading texts, videos, lecture activities, classroom activities, demonstrations, and much more—in one convenient online destination. You can search through MyClassPrep's extensive database of tools by content topic or by content type. You can select resources appropriate for your lecture, many of which can be downloaded directly; or you can build your own folder of resources and present from within MyClassPrep.

## Video Resources for Instructors

- **The Development Video Series in MyPsychLab.** This video collection contains a rich assortment of updated video clips for each chapter, including new sketchnote-style tutorials as well as cross-cultural footage and applied segments featuring real students sharing their experiences. Many of these video segments are tied to quizzes or writing prompts and can be assigned through MyPsychLab.
- **Pearson Teaching Films Lifespan Development Video, ISBN: 0205656021.**

## FOR THE STUDENT:

### Media Supplements for the Student

- **NEW Interactive eText.** For the 3rd edition of *Discovering the Life Span*, Pearson is proud to offer a fully interactive eText version of the book to enliven the learning experience for students. Each chapter contains interactive experiences, rich video content, and assessments that provide students with immediate feedback on their progress. Pearson offers its titles on the devices students love through Pearson's MyLab products, CourseSmart, Amazon, and more. To learn more about pricing options and customization, visit [www.pearsonhighered.com](http://www.pearsonhighered.com).
- **MyPsychLab.** With this exciting new tool students are able to self-assess using embedded diagnostic tests and instantly view results along with a customized study plan.  
The customized study plan will focus on the student's strengths and weaknesses, based on the results of the diagnostic testing, and present a list of activities and resources for review and remediation, organized by chapter section. Some study resources intended for use with portable electronic devices are made available exclusively through the MyPsychLab, such as key terms, flashcards, and optimized video clips. Students will be able to quickly and easily analyze their own comprehension level of the course material, and study more efficiently, leading to exceptional exam results! An access code is required and can be purchased at [www.pearsonhighered.com](http://www.pearsonhighered.com) or at [www.mypsychlab.com](http://www.mypsychlab.com).

- **CourseSmart eTextbook (ISBN: 0205994253).** CourseSmart offers students an online subscription to *Discovering the Life Span*, third edition at up to 60 percent savings. With the CourseSmart eTextbook, students can search the text, make notes online, print our reading assignments that incorporate lecture notes, and bookmark important passages. Ask your Pearson sales representative for details or visit [www.coursesmart.com](http://www.coursesmart.com).

## SUPPLEMENTARY TEXTS

Contact your Pearson representative to package any of these supplementary texts with *Discovering the Life Span*, third edition.

- ***Current Directions in Developmental Psychology* (ISBN: 0205597505).** Readings from the American Psychological Society. This exciting reader includes over 20 articles that have been carefully selected for the undergraduate audience, and taken from the very accessible *Current Directions in Psychological Science* journal. These timely, cutting-edge articles allow instructors to bring their students a real-world perspective about today's most current and pressing issues in psychology. The journal is discounted when packaged with this text for college adoptions.
- ***Twenty Studies That Revolutionized Child Psychology* by Wallace E. Dixon Jr. (ISBN: 0130415723).** Presenting the seminal research studies that have shaped modern developmental psychology, this brief text provides an overview of the environment that gave rise to each study, its experimental design, its findings, and its impact on current thinking in the discipline.
- ***Human Development in Multicultural Contexts: A Book of Readings* (ISBN: 0130195235).** Written by Michele A. Paludi, this compilation of readings highlights cultural influences in developmental psychology.
- ***The Psychology Major: Careers and Strategies for Success* (ISBN: 0205684688).** Written by Eric Landrum (Idaho State University), Stephen Davis (Emporia State University), and Terri Landrum (Idaho State University), this 160-page paperback provides valuable information on career options available to psychology majors, tips for improving academic performance, and a guide to the APA style of research reporting.

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LeeAnn Miner, Mount Vernon Nazarene University  
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Michael Miranda, Kingsborough Community  
College/CUNY  
Steve Mitchell, Somerset Community College  
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Brad Morris, Grand Valley State University  
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Lisa Newell, Indiana, University of Pennsylvania  
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Karl Oyster, Tidewater Community College  
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Joseph Panza, Southern Connecticut State University  
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 Peter Talty, Keuka College  
 Amber Tatnall, SUNY Delhi  
 Becky Taylor, Texas Christian University  
 Marianne Taylor, Pacific Lutheran University  
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 Dave Urso, Lord Fairfax Community College  
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 Rebecca Walker-Sands, Central Oregon Community  
 College  
 James Wallace, St. Lawrence University  
 Todd Walter, D'Youville College  
 Mark Wasicsko, Northern Kentucky University  
 Debbie Watson, Shawnee State University  
 Sheree Watson, University of Southern Mississippi  
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 Glenn Weisfeld, Wayne State University  
 Orville Weiszhaar, Minneapolis Community and  
 Technical College  
 Lori Werdenschlag, Lyndon State College  
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 Technical College  
 Linda Whitney, Houston Community College Northwest  
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 County  
 Christy Wolfe, University of Louisville  
 Peter Wooldridge, Durham Technical Community  
 College  
 Shelly Wooldridge, University of Arkansas Community  
 College at Batesville  
 Bonnie Wright, Gardner-Webb University  
 Kent Yamauchi, Pasadena City College  
 Robin Yaure, Penn State Mont Alto  
 Ani Yazedjian, Texas State University-San Marcos  
 Mahbobeh Yektaparast, Central Piedmont Community  
 College  
 Susan Zandrow, Bridgewater State College  
 Rowan Zeiss, Blue Ridge Community College  
 Laura Zettel-Watson, California State  
 University-Fullerton  
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In the end, it is my immediate family who deserve the greatest thanks. My son, Jon, his wife, Leigh, and my grandsons Alex and Miles; my son, Josh, and his wife, Julie; and my daughter, Sarah, and her husband, Jeff, not only are nice, smart, and good-looking, but my pride and joy. And ultimately my wife, Katherine Vorwerk, provides the love and grounding that makes everything worthwhile. I thank them, with all my love.

Robert S. Feldman  
University of Massachusetts Amherst

# About the Author

**Robert S. Feldman** is Professor of Psychology and Dean of the College of Social and Behavioral Sciences at the University of Massachusetts at Amherst. A recipient of the College Distinguished Teacher Award, he teaches psychology classes ranging in size from 15 to nearly 500 students. During the course of more than 2 decades as a college instructor, he has taught both undergraduate and graduate courses at Mount Holyoke College, Wesleyan University, Virginia Commonwealth University, in addition to the University of Massachusetts.

Professor Feldman, who initiated the Minority Mentoring Program at the University of Massachusetts, also has served as a Hewlett Teaching Fellow and Senior Online Teaching Fellow. He initiated distance learning courses in psychology at the University of Massachusetts.

Professor Feldman also is actively involved in promoting the field of psychology. He is President of the Federation of Associations of the Behavioral and Brain Sciences Foundation, and he is on the Board of Directors of the Social Psychology Network.

A Fellow of both the American Psychological Association and the Association for Psychological Science, Professor Feldman received a B.A. with High Honors from Wesleyan University and an M.S. and Ph.D. from the University of Wisconsin-Madison.

Professor Feldman is a winner of a Fulbright Senior Research Scholar and Lecturer award, and he has written more than 200 books, book chapters, and scientific articles. He has edited *Development of Nonverbal Behavior in Children* (Springer-Verlag), *Applications of Nonverbal Behavioral Theory and Research* (Erlbaum), and co-edited *Fundamentals of Nonverbal Behavior* (Cambridge University Press). He is also author of *Child Development, Understanding Psychology*, and *P.O.W.E.R. Learning: Strategies for Success in College and Life*. His books have been translated into a number of languages, including Spanish, French, Portuguese, Dutch, Chinese, and Japanese.

His research interests include honesty and deception in everyday life and the use of non-verbal behavior in impression management, and his research has been supported by grants from the National Institute of Mental Health and the National Institute on Disabilities and Rehabilitation Research.

Professor Feldman loves music, is an enthusiastic, if not-exactly-expert, pianist, and enjoys cooking and traveling. He has three children, and he and his wife, a psychologist, live in western Massachusetts, in a home overlooking the Holyoke mountain range.





# 1 INTRODUCTION

*The Ruiz “Happy Birthday Family Reunion” was a big success. Marco Ruiz’s grandfather, Geraldo, who would turn 90 tomorrow, was in his glory at the center of the festivities.*

*Marco’s wife, Louise, had hatched the reunion idea while planning next summer’s wedding of their youngest daughter Eva. Eva’s husband-to-be, Peter, would be the first African American in the family, and Louise’s idea was to introduce him early so his ethnicity would be old news by the wedding day.*

*Louise’s brainstorm was apparently working, given the happy din of the huge throng in attendance. Marco took a quiet census: his father, Damiano, and Louise’s mom and dad, plus a gaggle of uncles, aunts, siblings, and cousins from his and Louise’s families. One generation down, he counted his children and their families, and virtual busloads of nieces and nephews with their families, down to the youngest child, the daughter of Marco’s niece Terri and her husband Tony, 4-year-old Alicia Wei-Li Saucedo, Geraldo’s great-great-granddaughter, who had been adopted from China.*

*Marco watched as Grandpa Geraldo hugged and chatted happily with Alicia. There in one small picture frame was the story of the five generations of Grandpa’s family, from 4 to 90.*

*Marco thought to himself: What is Grandpa making of all this? Is he wondering how he spawned all these different personalities? Is he speculating about their careers, their futures? Is he looking for traces of his stubbornness and short temper, his generosity and open-mindedness? Does he find in this gathering the vast ambitions that he had as a boy? Will any of them be—at last—the athlete that he never was, or will they be writers and thinkers like him and his children?*

*Marco smiled at Louise’s idea of “integrating” Peter into the family. Peter’s skin color wasn’t even an issue. The main stories were that Marco’s nephew Ted was here with his fiancé Tom, and his niece Clarissa had her fiancée Rosa on her arm. Marco’s smile grew broader. Let Grandpa wonder where this latest family trend came from.*

**Lifespan development** is a diverse and growing field with a broad focus and wide applicability. It covers the entire life span of the individual from birth to death as it examines the ways in which people develop physically, intellectually, and socially. It asks and attempts to answer questions about the ways in which people change and remain the same over their years of life.

Many of the questions that developmentalists ask are, in essence, the scientist’s version of the questions that parents ask about their children and themselves: How the genetic legacy of parents plays out in their children; how children learn; why they make the choices they make; whether personality characteristics are inherited and whether they change or are stable over time; how a stimulating environment affects development; and many others. To pursue these answers, of course, developmentalists use the highly structured, formal scientific method, while parents mostly use the informal strategy of waiting, observing, engaging with, and loving their kids.

In this chapter, we will introduce the field of lifespan development. We first discuss the breadth of the field, both in the range of years it covers and in the topics it addresses, and we look at the major theoretical perspectives that have examined those topics. We also describe the key features of the scientific method, the main approach that scientists take to answering questions of interest.



## BEGINNINGS

Nature vs. nurture: Which has the greater influence?



## THEORETICAL PERSPECTIVES ON LIFESPAN DEVELOPMENT

Is one right and one wrong?



## RESEARCH METHODS

What kind of research could you conduct using Marco's five-generation family?



### MyVirtualLife

If you are currently using MyVirtualLife, consider how you will navigate your journey through the lifespan. What decisions will you make?

Access [MyVirtualLife](#) for a chance to live your own virtual life.

To **preview** the decisions that you would make, try this activity in your eText.



MODULE  
1.1

BEGINNINGS

## New Conceptions

*In July 1978, Louise Brown became the world's first "test tube baby"—the first baby conceived through in vitro fertilization (IVF), a medical procedure in which fertilization of the mother's egg with the father's sperm occurs outside the mother's body.*

*Louise's parents told her the story of her conception when she was in preschool, explaining exactly what had happened and answering all her questions. Even so, she was ill-prepared for the years of questions from curious schoolmates about her supposed birth in a bottle in a science lab.*

*She did her best to minimize differences between herself and her schoolmates, but in those early years, she often felt alone. Gradually her sense of isolation diminished as she was joined by literally millions of other children conceived the same way. Today, IVF is essentially a routine procedure practiced all over the world.*

*And there's a happy ending: At age 28, Louise gave birth to a son, Cameron, conceived—she is pleased to say—the old-fashioned way (Falco, 2012; ICMRT, 2012).*



Louise Brown's conception may have been novel, but her development since then has followed a predictable pattern. While the specifics of our development vary, the broad strokes set in motion in that test tube more than three decades ago are remarkably similar for all of us. Shaquille O'Neal, Donald Trump, the Queen of England—all are traversing the territory known as lifespan development.

Louise Brown's conception is just one of the brave new worlds of the day. Issues that affect human development range from cloning to poverty to the prevention of AIDS. Underlying these are even more fundamental issues: How do we develop physically? How does our understanding of the world change throughout our lives? And how do our personalities and social relationships develop as we move through the life span?

These questions and many others are central to lifespan development. The field encompasses a broad span of time and a wide range of areas. Consider the range of interests that different specialists might focus on when considering Louise Brown:

- Lifespan development researchers who investigate behavior at the biological level might ask if Louise's functioning before birth was affected by her conception outside the womb.
- Specialists in lifespan development who study genetics might examine how the genetic endowment from Louise's parents affects her later behavior.
- Lifespan development specialists who investigate thinking processes might examine how Louise's understanding of the circumstances of her conception changed as she grew older.
- Other researchers in lifespan development, who focus on physical growth, might consider whether her growth rate differed from children conceived more traditionally.
- Lifespan development experts who specialize in the social world and social relationships might look at the ways that Louise interacted with others and the kinds of friendships she developed.

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

Whether they focus on heredity or environment, all developmental specialists acknowledge that neither one alone can account for the full range of human development. Instead, we must look at the interaction of heredity and environment, attempting to grasp how both underlie human behavior.

In this module, 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 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.

# AN ORIENTATION TO LIFESPAN DEVELOPMENT

- L01** What is the scope of the field of lifespan development?
- L02** What are cohorts, and how do they influence development?

1.1

1.2

1.3

Have you ever wondered at the way an infant tightly grips your finger with tiny, perfectly formed hands? Or marveled at how a preschooler methodically draws a picture? Or at the way an adolescent can make involved decisions about whom to invite to a party or the ethics of downloading music files? Or the way a middle-aged politician can deliver a long, flawless speech from memory? Or what makes a grandfather at 80 so similar to the father he was at 40?

If you've ever wondered about such things, you are asking the kinds of questions that scientists in the field of lifespan development pose. **Lifespan development** is the field of study that examines patterns of growth, change, and stability in behavior that occur throughout the life span.

In its study of growth, change, and stability, lifespan development takes a *scientific* approach. Like members of other scientific disciplines, researchers in lifespan development test their assumptions by applying scientific methods. They develop theories about development and use methodical, scientific techniques to validate the accuracy of their assumptions systematically.

Lifespan development focuses on *human* development. Although there are developmentalists who study nonhuman species, the vast majority study people. Some seek to understand universal principles of development, while others focus on how cultural, racial, and ethnic differences affect development. Still others aim to understand 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 change during the life span, they also consider stability. 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 from the moment of conception to the day of death, with people changing in some ways right up to the end of their lives and in other ways exhibiting remarkable stability. They believe that no single period governs all development, but instead that people maintain the capacity for substantial growth and change throughout their lives.

## Characterizing Lifespan Development: The Scope of the Field

Clearly, the definition of lifespan development is broad and the scope of the field is extensive. Typically, lifespan development specialists cover several diverse areas, choosing 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, and 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, while another might look at how athletes' physical performance declines during adulthood (Fell & Williams, 2008).

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, and intelligence. For example, specialists in cognitive development might want to see how problem-solving skills change over the course of life, or if cultural differences exist in the way people explain their academic successes and failures, or how traumatic events experienced early in life are remembered later in life (Penido et al., 2012; Feldman, 2013).

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

**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

**TABLE 1-1** APPROACHES TO LIFESPAN DEVELOPMENT

Orientation	Defining Characteristics	Examples of Questions Asked*
Physical development	Emphasizes how 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? (2.1)</li> <li>• What are the long-term results of premature birth? (2.3)</li> <li>• What are the benefits of breast milk? (3.1)</li> <li>• What are the consequences of early or late sexual maturation? (6.1)</li> <li>• What leads to obesity in adulthood? (7.1)</li> <li>• How do adults cope with stress? (8.1)</li> <li>• What are the outward and internal signs of aging? (9.1)</li> <li>• How do we define death? (10.1)?</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? (3.2)</li> <li>• What are the intellectual consequences of watching television? (4.2)</li> <li>• Do spatial reasoning skills relate to music practice? (4.2)</li> <li>• Are there benefits to bilingualism? (5.2)</li> <li>• How does an adolescent's egocentrism affect his or her view of the world? (6.2)</li> <li>• Are there ethnic and racial differences in intelligence? (5.2)</li> <li>• How does creativity relate to intelligence? (7.2)</li> <li>• Does intelligence decline in late adulthood? (9.2)?</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 lifetime	<ul style="list-style-type: none"> <li>• Do newborns respond differently to their mothers than to others? (2.3)</li> <li>• What is the best procedure for disciplining children? (4.3)</li> <li>• When does a sense of gender identity develop? (4.3)</li> <li>• How can we promote cross-race friendships? (5.3)</li> <li>• What are the causes of adolescent suicide? (6.3)</li> <li>• How do we choose a romantic partner? (7.3)</li> <li>• Do the effects of parental divorce last into old age? (9.3)</li> <li>• Do people withdraw from others in late adulthood? (9.3)</li> <li>• What are the emotions involved in confronting death? (10.1)?</li> </ul>

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

Finally, some developmental specialists focus on personality and social development. **Personality development** is the study of stability and change in the characteristics that differentiate one person from another over the life span. **Social development** is the way in which individuals' interactions and relationships with others 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, while a specialist in social development might examine the effects of racism or poverty or divorce on development. 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 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 (from conception to birth); infancy and toddlerhood (birth to 3); the preschool period (3 to 6); middle childhood (6 to 12); adolescence (12 to 20); young adulthood (20 to 40); middle adulthood (40 to 60); and late adulthood (60 to death).

It's important to keep in mind that these periods are social constructions. A *social construction* is a shared notion of reality that is widely accepted but is a function of society and culture at a given time. Thus, the age ranges within a period—and even the periods themselves—are in many ways arbitrary and culturally derived. For example, we'll see how the concept of

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**personality development** development involving the ways that the enduring characteristics that differentiate one person from another change over the life span  
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**social development** the way in which individuals' interactions with others and their social relationships grow, change, and remain stable over the course of life  
 -----

childhood as a special period did not even exist during the seventeenth century—children were seen then simply as miniature adults. Furthermore, while some periods have a clear-cut boundary (infancy begins with birth, the preschool period ends with entry into public 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 college. For them, more substantial changes are likely to occur when they leave college around age 22. Furthermore, in some cultures adulthood starts much earlier, as soon as a child can 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 in the late 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 (Arnett, 2010, 2011; de Dios, 2012; Syed & Seiffge-Krenke, 2013).

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; for example, the typical age of marriage varies from one culture to another, depending in part on the functions that marriage plays.

**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



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

1.1

1.2

1.3



## Cultural Dimensions

### How Culture, Ethnicity, and Race Influence Development

*Mayan mothers in Central America are certain that almost constant contact between themselves and their infant children is necessary for good parenting, and they are physically upset if contact is not possible. They are shocked when they see a North American mother lay her infant down, and they attribute the baby's crying to the poor parenting of the North American* (Morelli et al., 1992).

What are we to make of the two views of parenting depicted in this passage? Is one right and the other wrong? Probably not, if we take cultural context into consideration. Different cultures and subcultures have their own views of appropriate and inappropriate childrearing, just as they have different developmental goals for children (Feldman & Masalha, 2007; Huijbregts et al., 2009; Chen, Chen, & Zheng, 2012).

Clearly, to understand development, developmentalists must take into consideration broad cultural factors, such as an orientation toward individualism or collectivism, as well as finer ethnic, racial, socioeconomic, and gender differences. If they succeed in doing this, not only can they achieve a better understanding of human development, but they may be able to derive more precise applications for improving the human social condition.

To complicate the study of diverse populations, the terms *race* and *ethnic group* are often used inappropriately. *Race* is a biological concept, which should refer to classifications based on physical and structural characteristics of species. In contrast, *ethnic group* and *ethnicity* are broader, referring to cultural background, nationality, religion, and language.

The concept of race has proven particularly problematic. It has inappropriately taken on nonbiological meanings ranging from skin color to religion to culture. Moreover, as a concept it is exceedingly imprecise; depending on how it is defined, there are between 3 and 300 races, and no race is genetically distinct. The fact that 99.9 percent of humans' genetic makeup is identical in all humans makes the question of race seem insignificant (Helms, Jernigan, & Mascher, 2005; Smedley & Smedley, 2005; Alfred & Chlup, 2010).

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 race and skin color? Is *Native American* preferable to *Indian*? Is *Hispanic* more appropriate than *Latino*? And how can researchers accurately categorize people with multiracial backgrounds?

In order to fully understand development, then, we need to take the complex issues associated with human diversity into account. In fact, it is only by looking for similarities and differences among various ethnic, cultural, and racial groups that developmental researchers can distinguish principles of development that are universal from ones that are culturally determined. In the years ahead, then, it is likely that lifespan development will move from a discipline that primarily focuses on North American and European development to one that encompasses development around the globe (Fowers & Davidov, 2006; Matsumoto & Yoo, 2006; Kloep et al., 2009).



the life span. Consequently, some developmental experts may focus on physical development during the prenatal period, and others during adolescence. Some might specialize in social development during the preschool years, while others look at social relationships in late adulthood. And still others might take a broader approach, looking at cognitive development through every period of life.


In this book, we'll take a comprehensive approach, proceeding chronologically from the prenatal period through late adulthood and death. Within each period, we'll look at physical, cognitive, social, and personality development.

## Cohort and Other Influences on Development: Developing With Others in a Social World

Bob, born in 1947, is a baby boomer; he was born soon after the end of World War II, when returning soldiers caused an enormous bulge in the birth rate. He was an adolescent at the height of the Civil Rights movement and protested against the Vietnam War. His mother, Leah, was born in 1922; her generation passed its childhood and teenage years in the shadow of the Depression. Bob's son, Jon, was born in 1975. Now building a career and starting a 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.

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 epidemics (like the one due to the AIDS virus) work similar influences on members of a particular cohort (Mitchell, 2002; Dittman, 2005).

*Cohort effects* are an example of *history-graded influences*, 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. In fact, the specter of terrorism is a history-graded influence that is common to people living in the United States today (Bonanno, Galea, Bucchiarelli, & Vlahov, 2006; Breslau, Bohnert, & Koenen, 2010; Park, Riley, & Snyder, 2012).

 **From an educator's perspective:** How would a student's cohort membership affect his or her readiness for school? For example, what would be the benefits and drawbacks of coming from a cohort in which Internet use was routine, compared with earlier cohorts before the appearance of the Internet?

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 about the same time in all societies. Similarly, a sociocultural event such as entry into formal education can be considered an age-graded influence because it occurs in most cultures around age 6.

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 ethnicity, social class, and subcultural membership. For example, sociocultural-graded influences will be considerably different for white and nonwhite children, especially if one lives in poverty and the other in affluence (Rose et al., 2003).

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

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

## REVIEW, CHECK, AND APPLY

### REVIEW

#### L01 What is the scope of the field of lifespan development?

- Lifespan development is a scientific approach to understanding human growth and change throughout life.
- The field covers a broad range of ages and topical areas. Its chief aim is to examine the links between human age groups and the areas of physical, cognitive, social, and personality development.

#### L02 What are cohorts, and how do they influence development?

- Membership in a cohort, based on age and place of birth, subjects people to influences based on historical events (history-graded influences).
- People are also subject to age-graded influences, sociocultural-graded influences, and non-normative life events.

### CHECK YOURSELF

1. Three assumptions made by lifespan developmentalists are: (1) a focus on human development, (2) an understanding of stability in addition to growth and change, and (3) \_\_\_\_\_.
  - a the perception that development persists throughout our entire lives
  - b the perception that childhood developmental changes are the only changes worth studying
  - c the idea that some periods of the life span are more important than others
  - d the perception that development is a stagnant process
2. Stages of the life span such as adolescence and middle age are universal across cultures and stable across history.
  - True
  - False

3. The time when children utter their first complete sentence is an example of \_\_\_\_\_.

- a a history-graded influence
- b an age-graded influence
- c a sociocultural-graded influence
- d a non-normative life event

### APPLYING LIFESPAN DEVELOPMENT

- What are some examples in your life of events and experiences that have affected your age cohort differently from other cohorts?

✓ **Study and Review** on [MyPsychLab.com](https://www.mypsychlab.com)

1.1

1.2

1.3

## KEY ISSUES AND QUESTIONS: DETERMINING THE NATURE—AND NURTURE—OF LIFESPAN DEVELOPMENT

### L03 What are the key issues in the field of development?

### L04 How have developmental researchers resolved these issues?

Lifespan development is a decades-long journey through shared milestones, with many individual routes along the way. For developmentalists, the variations in lifespan development raise many questions. What are the best ways to think about the enormous changes that a person undergoes from before birth to death? How important is chronological age? Is there a clear timetable for development? How can one begin to find common threads and patterns?

These questions have been debated since lifespan development became established as a separate field in the late nineteenth and early twentieth centuries, though a fascination with the nature and course of humans' development can be traced back to the ancient Egyptians and Greeks.

In this section we examine four of the most important—and continuously argued—issues in the field of lifespan development. We also consider the resolutions to which researchers have come regarding these issues.

### 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; the underlying developmental processes remain the same over the life span. In this view

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