Child Development: A Cultural Approach

3rd Edition

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THIRD EDITION

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We dedicate this text to the many thousands of students whom we have taught and who have continuously inspired us to revisit and renew our knowledge of children. With this text, we hope to inspire the next generation of students to appreciate the amazing diversity of children's development, within and across cultures.

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Contents

Introducing the New Edition

Welcome to the third edition of *Child Development: A Cultural Approach*! We have made many exciting and important changes in this edition of the text. Lene Arnett Jensen is joining this edition as a coauthor with Jeffrey Jensen Arnett. Together, we have also published a topically organized child development text and a lifespan development text. This third edition has been expanded to a total of 12 chapters, compared to nine in the previous two editions. Chapter 1 has been reorganized and reconceptualized. We have made these changes to enhance the learning experience for students and to make the text more comprehensive.

In every chapter, this edition features up-to-date research. During the revision process, we have worked closely with instructors to provide the full scope of child development that students need to know. While we have substantially strengthened the coverage by adding three new chapters, we have also largely preserved the organization of the previously existing nine chapters, making it easy for instructors who have used prior editions to use the present one.

We have also worked closely with the Pearson team during the revision process to develop and enhance a wide range of interactive features that make the content and cultural approach even more engaging to students. Throughout the text, you'll see exciting new videos, interactive figures and maps, digital writing prompts, and self-assessments with instant feedback that allow students to be active and enthusiastic learners. As authors, we are involved in the creation of every one of these interactive features to ensure that they seamlessly align with our content.

Four New Ways to Approach Child Development

Child Development: A Cultural Approach, Third Edition, grows out of our personal, teaching, and professional experiences. Lene grew up in Denmark and Belgium and Jeff in the United States. Together, we have lived in Denmark, India, France, and the United States. We have shared the wonderful experience of being involved in the development of our twins, now 19 years old, who have traveled with us to all those places and consider themselves fully American and fully Danish. Both of us have taught a wide range of developmental psychology courses, including child development. What is striking to us about the world and the field of child development are the remarkable changes that both have undergone in recent decades. This text reflects those changes.

Globalization and technology have been making the world smaller—with distances shrinking and interconnections multiplying. Cultural diversity and globalization are often part of the everyday experiences of today's students—through travel, migration, and study abroad programs, as well as everyday real-life and virtual interactions. We see this vividly in our twins' lives as they learn about different cultures from their college instructors, have friends from different countries, and play internet games with children from across the globe. These worldwide changes are here to stay and will continue to profoundly impact children's lives.

Today, the field of child development is as fascinating and important as it has ever been—and, like the world, looks much different than it did 15 or 25 years ago. This text speaks to those changes. After all, child development does not occur in a vacuum. It happens in numerous communal contexts and cultural settings that are perpetually changing. By encouraging students to see children through a cultural lens, this text balances the universals and Western-centric research that have in the past characterized much of the field with the growing body of research on the development of children from diverse cultures within and across countries. Our experiences of growing up and working in a number of different countries have translated into an approach that emphasizes how universal features of development are shaped by cultural diversity. *Child Development: A Cultural Approach,* Third Edition, offers this new approach in four fundamental ways:

1. An emphasis on teaching students to *think culturally* about development;
2. A broadened *scope of child development* and an updated perspective on when children may be considered "grown up";
3. An unprecedented inclusion of *diverse contexts* of child development; and
4. A deep *integration of interactive digital technology* into the text.

1. Thinking Culturally

The world's population is more than 7.5 billion, and the population of the United States is about 330 million—less

than 5 percent of the total. By 2100, the world's population is expected to reach 11 billion, with almost all growth taking place in economically developing countries. Worldwide, child development is remarkably diverse. In Africa, for example, most children are multilingual because they learn both local and European languages in primary school. In Asia, after centuries of being excluded from educational opportunities, girls are reaching parity with boys in educational achievement. In fact, 15-year-old-girls in many Asian countries outperformed boys on recent international science tests. In Europe, it is now typical for young people in many countries to take a "gap year"—a year devoted to travel and exploration before they commit to higher education or a "real" job—as they enter emerging adulthood. For students, it is more important than ever to have knowledge of the wider world because of the increasingly globalized economy and because so many issues—such as climate change, disease, and terrorism—cross borders.

Although this text covers scientific findings from across the world, it aims to do something even more important. The ultimate learning goal is for students to *think culturally* about development. As this text emphasizes, diverse cultures exist both within and across nations, often intersecting in important ways with ethnicity, race, and religion. We hope that through this text students will learn to apply child development to the work they do as well as to their own lives, and to understand that there is always a cultural basis to development. To be clear, this does not mean that biology is not important. Transcending the old "nature versus nurture" division, students will learn that humans have evolved to be an incomparably cultural and global species, and that current research reveals fascinating ways that genes and the environment influence one another.

2. Broadening the Scope of Child Development

The second way that this text takes a new approach corresponds to the historical expansion of the field of child development, from an early, narrow focus on young children to a broader one that now encompasses adolescents and emerging adults. This expansion is reflected in the growth of professional organizations supported by instructors, researchers, and practitioners. The oldest, the Society for Research in Child Development (SRCD), was started in 1933. The Society for Research on Adolescence (SRA) and the European Association for Research on Adolescence (EARA) were established about a half century later, in 1984 and 1988 respectively, as scholars increasingly recognized the importance of the adolescent years. The Society for the Study of Emerging Adulthood (SSEA) is even more recent, begun in 2013, because scholars recognized that it was taking longer than in the past to "grow up" in many countries and that ages 18 to 25 had become crucial years of change and preparation for adult life. Also, major international organizations dedicated to the well-being of children, such as UNICEF (United Nations Children's Fund) and the WHO (World Health Organization), have broadened their focus on younger children to include adolescents and emerging adults.

In this text we provide in-depth coverage from prenatal development through middle childhood, and also cover adolescence and emerging adulthood. The learning goal is for students to know what contemporary child development looks like—to understand how the meanings of childhood, adolescence, and emerging adulthood are dependent on cultural and historical circumstances. For example, emerging adulthood exists in some cultures but not others, and consequently, adult work may be taken on anywhere from middle childhood to the 20s.

3. Encompassing Diverse Developmental Contexts

Not only has child development broadened in terms of the age groups covered, but today the field also addresses many more contexts of development than previously. From an early focus in the field on family (e.g., Freud) and peers (e.g., Piaget), researchers now address many other contexts such as work, media, and civic and religious organizations. This text addresses all of these developmental contexts.

It is not only that we cover diverse contexts, but we also address topics that reflect cultural diversity and change within those contexts. For example, we address diverse families, including sexual minority and multigenerational families. This text recognizes that many children all over the world work—not just to support their leisure activities, but to support their families. We cover not only long-known risks of media use to children's development, but also benefits of media use to cognitive, emotional, and social development.

Every chapter also includes "Apply Your Knowledge as a Professional" videos and "Apply This Chapter to Your Experiences" journaling prompts to help students see how what they have learned is applicable across a wide range of professions and developmental contexts. For example, the videos include interviews with a media literacy teacher, a child development researcher, a reproductive endocrinologist, and a court-appointed child advocate. In short, the learning goal is for students to know that current theory and research on child development pertain to many contexts and societal roles.

4. Embracing Interactive Digital Learning

Our fourth approach to offering an up-to-date and innovative text pertains to pedagogy. Today's students are the most tech-savvy generation of college students yet, and we wanted to present materials in a way that was inspired by the opportunities of *interactive* digital technology. When we wrote the text, we wrote it with digital features in the forefront of our minds rather than as an afterthought.

In addition to print, this text is available in Revel format, which provides an immersive digital and interactive learning experience. After all, a digital approach fits well with our cultural approach. Digital content easily travels across boundaries. For example, interactive maps of the United States and the world allow students to explore content across cultures in a more meaningful way. When students engage with content in a lively way, they learn more deeply and effectively.

Revel also allows us to update materials more frequently to provide students access to important cutting-edge knowledge. This third edition adds a new "Breaking Developments" feature that will be available in Revel. The feature will provide succinct summaries of landmark new research and significant cultural trends that have direct relevance to theory and research in the text, yet have occurred since the publication of the print text. "Breaking Developments" will be updated at the beginning of each January and July.

Understanding Children's Lives Today

As parents, we have learned a lot from raising twins who are now entering emerging adulthood. We occasionally share stories from their childhood to illustrate concepts in the text. At the outset of almost all chapters, we also include vivid descriptions of the lives of individual children, adolescents, and emerging adults from around the world. In videos throughout the text, children talk about their lives, including growing up as a Latina girl in the United States, having the daily chore of scavenging a dump in Cambodia to find food for the family pigs, and living with a learning disability. We wish for students to hear and see other individuals' perspectives, and we think this adds authenticity to the presentation of theories and research findings.

Growing up is universal. Every culture differentiates between children and adults, and children across all cultures share common developmental characteristics. Yet, culture also profoundly impacts psychological development. By encouraging students to see children from both a developmental and cultural perspective, we hope to inspire an understanding that will be useful and fruitful, not only while students are taking this course but throughout their lives.

What's New in the Third Edition?

The third edition marks the addition of a new coauthor, along with several exciting new enhancements to students' learning experience.

Lene Arnett Jensen Is Now a Coauthor with Jeffrey Jensen Arnett

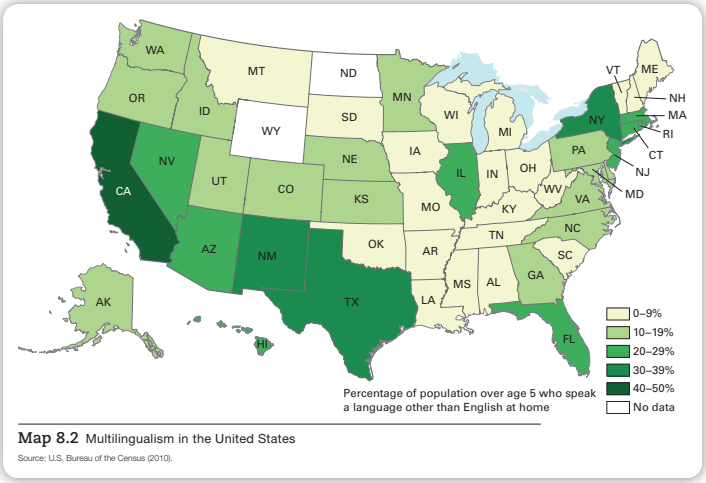
As you probably guessed right away from our names, we are related. When we married, we each took the other's last name as a new middle name. In addition to being partners in marriage and parenthood, for more than two decades we have thoroughly enjoyed coauthoring. Our first publication was in the journal *Child Development* in 1993 on the cultural bases of risk behavior among Danish adolescents. Our most recent publications include the first edition of a topical child development text, *Child Development Worldwide: A Cultural Approach* (Pearson, 2018), and the third edition of a lifespan text, *Human Development: A Cultural Approach* (Pearson, 2019).

Lene received her Ph.D. from the Committee on Comparative Human Development at the University of Chicago, a program renowned for its attention to culture. As described in more detail later in "About the Authors," her research focuses on moral development across the life course among diverse groups within the United States as well as in several other countries. She has also written extensively on children's identity development in the context of globalization. Just as is the case for Jeff, Lene has taught a wide range of developmental psychology courses at different colleges and universities.

For decades, we have valued writing together and here, too, we have aimed to use a lively, clear, and coherent writing style to keep students focused and thinking. We ask questions, give vivid examples, and use active voice. Both of us take a cultural approach to understanding psychological development, but we have different childhood experiences and different areas of expertise in our research, so we hope students will benefit from the synthesis of our voices throughout the text.

Enhanced Emphasis on Cultural Diversity

Additional Cultural Videos. The second edition introduced culturally based "Chapter Introduction" videos with diverse Americans for each chapter, as well as "Cultural Focus" videos filmed in Botswana, Mexico, and the United States. In this third edition we have added new videos to broaden and deepen understanding of culture, for example on the interaction between genes and culture in childhood obesity, and an unforgettable account of a young adolescent boy in Congo who sells cakes on the street to help support his family. There are also new videos homing in on cultural diversity within the United States, including one with Latina adolescents recounting changing views of gender in their community and one on religiosity among African American adolescents and emerging adults.



Map 8.2 Multilingualism in the United States

Source: U.S. Bureau of the Census (2010).

New Interactive Research and Artwork. Building on the previous edition, we have continued to incorporate interactive maps, figures, and tables to help students appreciate the diversity that exists within the United States and understand the role of culture, ethnicity, socioeconomic status, and other factors in child development. The maps of the United States help students understand similarities and differences between states. We also have many maps of the world that allow students to compare countries and regions across the globe. This edition includes new world maps on phenomena such as postpartum maternal depression and cosleeping.

Expanded Opportunities to Apply Knowledge

Additional Education Focus Features. This edition includes an Education Focus feature in every chapter, whereas the previous edition only included this feature in some chapters. The Education Focus features highlight the application of child development research to educational settings, both in and outside of school. Students read an overview of the topic and then respond to a review question.

Education Focus: Early Multilingual Education Across Contexts

On the basis of a comprehensive review of the research on multilingualism, a group of social scientists has issued policy guidelines for professional caregivers and teachers to ensure that multilingual children in the United States develop strong language skills. The report was endorsed by the American Academy of Pediatrics (McCabe et al., 2013). The report highlights six strategies:

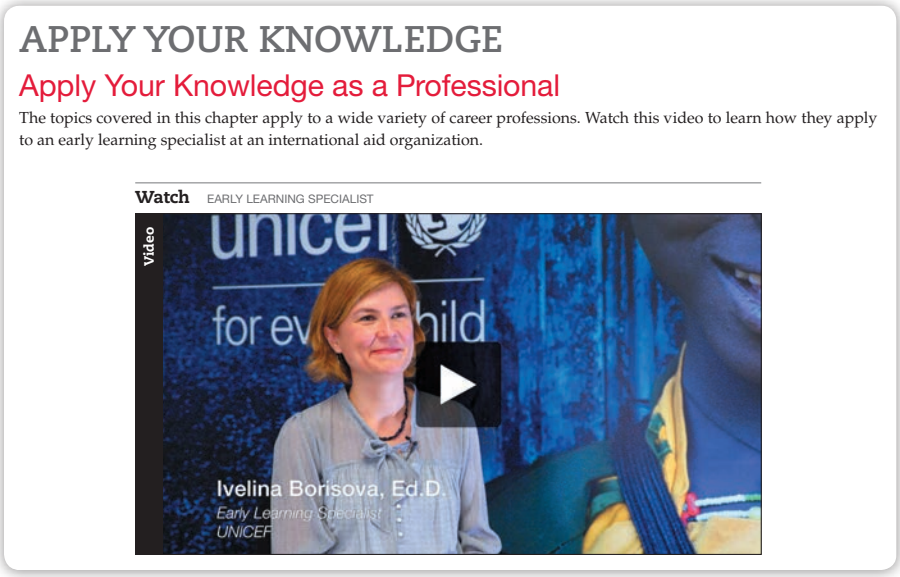
1. Avoid attributing children's language delays to multilingualism.
2. Ensure that multilingual children have exposure to rich versions of both the first language and English across a variety of contexts.
3. Provide support for development of the first language in the childcare environment.
4. Support the first language by also visiting other contexts and places where it is spoken.
5. Have the caregiver speak to the child in the language that comes most naturally to ensure a rich language environment.
6. Develop programs that expose children to high-quality English at an early age. Such exposure may involve home visitation, center-based early childhood education programs, healthcare providers, and mass media.

Source: David Grossman/Alamy Stock Photo

Experts recommend that children learning more than one language be exposed to them at an early age.

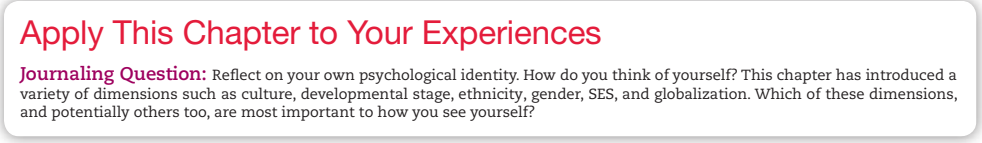
Review Question:

The policy report focuses on ways to support multilingual development in immigrant children. Do you think there is a need for new policies for professional caregivers and teachers to support multilingual development among American children from families in which only English is spoken? Explain.



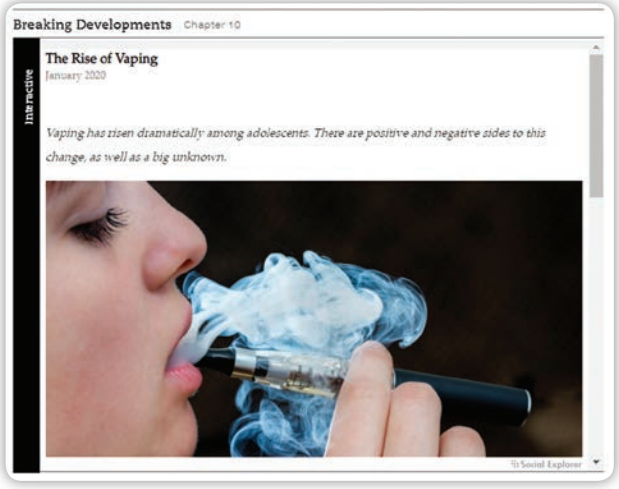
Upgraded "Apply Your Knowledge as a Professional" Videos. The previous edition featured several videos at the end of each chapter with professionals who explain how knowledge of child development and culture influences their work on a daily basis. In this edition, based on instructor and student feedback, we have chosen the best video for each chapter and shortened them to 3 to 4 minutes. These engaging videos allow students to learn about a wide variety of career paths. Diverse careers are profiled, including a pediatric nurse, a nanny, a middle school teacher, and a college counselor.

New "Journaling Questions." A new feature in this edition is a "Journaling Question" at the end of each chapter. This question encourages students to apply key information from across a chapter to their everyday experiences. Students' responses are easily shared with the instructor, providing the instructor with feedback on how well students are attaining and applying new knowledge.



New Feature to Stay Up-to-Date

"Breaking Developments." Important new findings on child development are published continuously. In the digital Revel format of the text we have added a new feature in this edition called "Breaking Developments," in which we summarize an exciting new research finding at the end of a chapter, drawing from research in diverse cultures. This feature allows students and instructors to keep up with the latest findings in child development research, rather than waiting 3 to 4 years between editions for updates of current research. We will add "Breaking Developments" at the beginning of January and July of each year, in selected chapters as research warrants.



Chapter-by-Chapter Highlights of New Research

Pooling our energies for this third edition, we have expanded the text and revised every chapter to incorporate the latest and most important child development research. While we cannot catalog every change here, we will highlight two key updates to each chapter and provide a brief description of new chapters.

Chapter 1: Child Development Today: Who, How, and Why

- New data on the global demographic divide, including a new video.
- A differentiation of research measurements from research designs, including new summary tables.

Chapter 2: Developmental Theories and Contexts: Past and Present

- Across history and cultures, humans have had theories about children's development. This **new chapter** distills the insights provided by such theories and explicates the major theoretical scientific conceptions that guide contemporary child development research.
- One of the ways that today's field is different from the past is that researchers investigate many more contexts than in the past. This chapter highlights the importance of each of these contexts. Finally, the chapter addresses five questions about children's development that cut across developmental theories and contexts.

Chapter 3: Genetics and Prenatal Development

- The latest statistics on assisted reproductive technologies and age of viability in developed countries, as well as sex ratios at birth across diverse countries.
- New glossary terms and descriptions pertaining to neurogenesis, multifactorial disorders, and maternal blood screening.

Chapter 4: Birth and the Newborn Child

- Information from diverse countries on maternal and paternal postpartum depression.
- The latest statistics for episiotomies (within the United States) and C-section rates (across countries).

Chapter 5: Infancy

- Exciting contemporary cognitive development research on object permanence across species, and the roles of babbling, gesturing, and turn-taking in the emergence of speech. (The substages of Piaget's sensorimotor stage were deleted to make room for these current research foci.)
- Findings on the impact of culture on the development of the social smile.

Chapter 6: Toddlerhood

- Updated information on the parent-child relationship, including findings from a meta-analysis on the long-term implications of early attachment, research on father involvement, and Scandinavian public policies to encourage paternal care of young children.
- Revised terminology and diagnostic criteria for autism spectrum disorder (ASD), including a new video with a clinician who diagnoses ASD in children.

Chapter 7: Early Childhood

- Information on the diets of American children, including the roles of socioeconomic status, ethnicity, and immigrant generation.
- A new section on theory of mind, including how different measurement techniques yield different findings on when children acquire it.

Chapter 8: Middle Childhood

- A new section on executive function in middle childhood, including how its development is impacted by physical exercise and multilingualism.
- Explication of the revised Wechsler-V measurement of IQ.

Chapter 9: Early Adolescence

- The chapter on adolescence in the second edition has been expanded into two chapters in this edition. This chapter, covering ages 10 to 14, addresses the dramatic changes of early adolescence.
- The physical changes of puberty are the most obvious, but there are other striking changes, for example, in cognitive development, self-esteem, family and peer relations, and media use.

Chapter 10: Late Adolescence

- This chapter addresses many developmental advances that take place in late adolescence, including in cognition, moral reasoning, and self-conceptions.
- The chapter also addresses problem behaviors that become prevalent for the first time often in late adolescence, including eating disorders, depression, substance use, and crime and delinquency. Yet the chapter also casts a critical eye on the notion that adolescence is universally and inherently a stage where the ability to think rationally is often overridden by rash and reckless impulses.

Chapter 11: Emerging Adulthood

- Important information about sleep in emerging adulthood, including the concepts of delayed sleep phase syndrome and sleep debt, as well as tips for sleep hygiene.
- A new section on the opportunities and limitations of online learning, and on blended learning, in which students learn partly online and partly through face-to-face learning in the classroom.

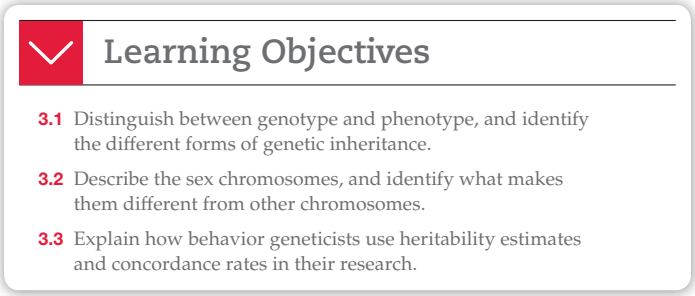
Chapter 12: The Future of Child Development

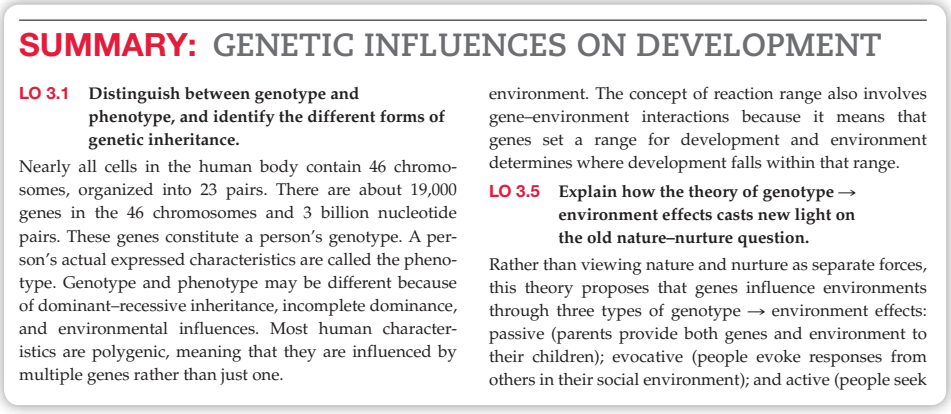
- This **new chapter** examines a variety of ways that the lives of children may change in the future, but always in all humility, acknowledging that no one knows for certain what the future may hold.
- Future predictions include greater gender parity, a rise in intelligence in most of the world, a worldwide increase in children's use of English and multilingualism, and a rise in individualism that is partly driven by the global diffusion of media.

Teaching and Learning Aids

Learning Objectives

Learning Objectives (LOs) for each chapter are listed at the start of each of the three main sections, providing an overview of the materials to be learned. Every LO is then repeated at the outset of the relevant part of the text. Based on Bloom's taxonomy, these numbered objectives help students better organize and understand the material. The end-of-section summaries are organized around these same objectives, as are all of the supplements and assessment materials.



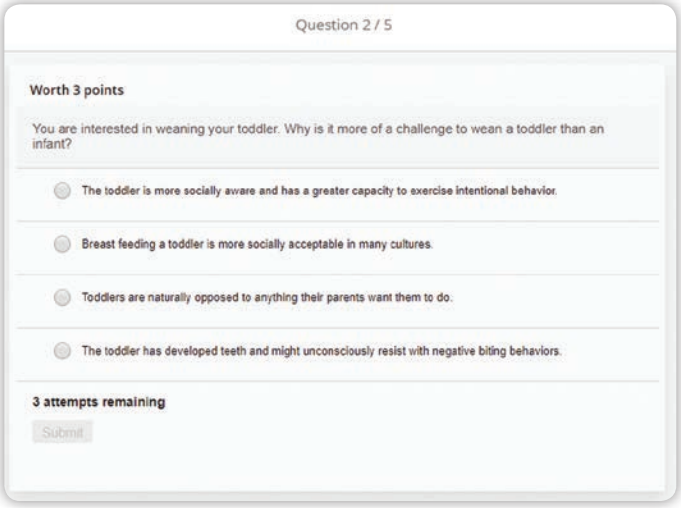


Section Summaries

Organized by Learning Objective (LO), a summary appears at the end of each of the three major sections within a chapter.

Practice Quizzes and Chapter Quiz

In the Revel version of this third edition, multiple-choice practice quizzes appear regularly throughout a chapter to help students assess their comprehension of the material. A cumulative multiple-choice quiz appears at the end of every chapter.



Revel

Educational Technology Designed for the Way Today's Students Read, Think, and Learn

Revel is an interactive learning environment that deeply engages students and prepares them for class. Media and assessment integrated directly within the authors' narrative let students read, explore interactive content, and practice in one continuous learning path. Thanks to the dynamic reading experience in Revel, students come to class prepared to discuss, apply, and learn from instructors and from each other.

Learn More About Revel

http://www.pearsonhighered.com/revel/

The third edition includes integrated videos and media content throughout, allowing students to explore topics more deeply at the point of relevancy.

Revel also offers the ability for students to assess their content mastery by taking multiple-choice quizzes that offer instant feedback and by participating in a variety of writing assignments such as peer-reviewed questions and auto-graded assignments. Additionally:

- **MyVirtualChild and MyVirtualLife.** MyVirtualChild is an interactive simulation now available in Revel that allows students to play the role of a parent and raise their own virtual child. By making decisions about specific scenarios, students can raise their children from birth to age 18 and learn firsthand how their own decisions and other parenting actions affect their child over time. In MyVirtualLife, students make decisions for a virtual version of themselves from emerging adulthood through the end of life.
- **Media assignments** for each chapter—including videos with assignable questions—feed directly into the gradebook, enabling instructors to track student progress automatically.
- **The Pearson eText** lets students access their text anytime and anywhere, and any way they want, including listening online.

Revel Combo Card

The Revel Combo Card provides an all-in-one access code and loose-leaf print reference (delivered by mail).

Presentation and Teaching Resources

The Instructor's Resource Center (www.pearsonhighered.com/irc) provides information on the following supplements and downloadable files:

Test Bank (ISBN: 0135163595)

The Test Bank contains over 2,500 questions with each question mapped to the textbook by learning objective and the major text section, or topic. Questions are additionally assigned the appropriate skill level, difficulty level, and the American Psychological Association (APA) learning objective. Each chapter of the test bank includes three Total Assessment Guides, one for each section, an easy-to-reference grid that organizes all test items by learning objective, skill level, and question type.

The test bank comes with Pearson MyTest (ISBN: 0135163617), a powerful test generation program that 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 wherever and whenever they want. Instructors can easily access existing questions and then edit, create, and store using simple drag-and-drop and Word-like controls. Data on each question provides information relevant to the skill level and difficulty level. In addition, each question maps to the text's major section, or topic, learning objective, and the American Psychological Association (APA) learning objective. For more information go to www.PearsonMyTest.com.

Lecture Powerpoint Slides with Linked Videos (ISBN: 013591700X)

The Lecture PowerPoints offer detailed outlines of key points for each chapter and include the videos from Revel. Standard Lecture PowerPoints (ISBN: 0135163625) without linked videos are also available. A separate *Art and Figure* version (ISBN: 0135163498) of these presentations contains all art from the text for which Pearson has been granted electronic permissions.

Instructor's Resource Manual (ISBN: 0135163641)

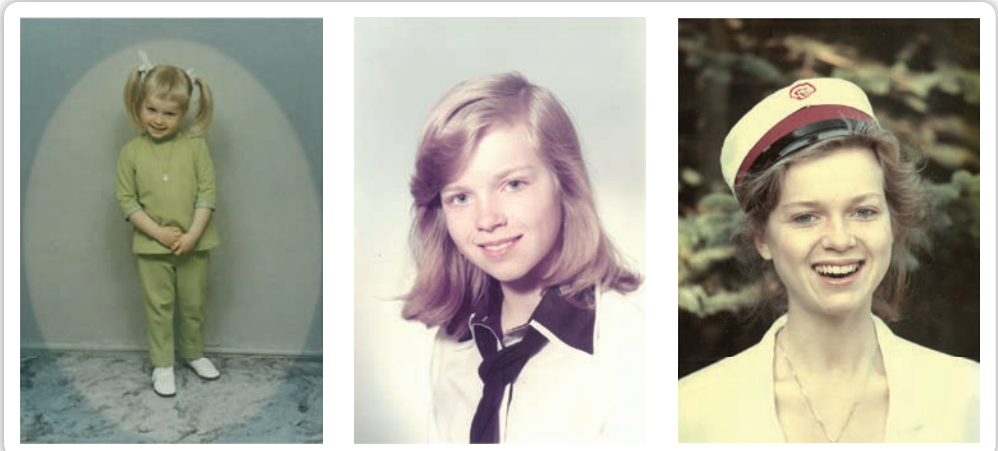
The Instructor's Resource Manual includes suggestions for preparing for the course, sample syllabi, and current trends and strategies for successful teaching. Each chapter offers integrated teaching outlines and includes a bank of lecture launchers, as well as activities, suggested supplemental readings, and a per chapter list of Revel videos, Journal Prompts, and Shared Writing Questions found in the Revel product.

About the Authors

Lene Arnett Jensen is Senior Research Scientist in the Department of Psychology at Clark University in Worcester, Massachusetts. She received her Ph.D. in developmental psychology in 1994 from the University of Chicago and did a 1-year postdoctoral fellowship at the University of California–Berkeley. Prior to coming to Clark University, she taught at the University of Missouri and Catholic University of America. She has also been a visiting professor at Stanford University, Aalborg University in Denmark, Maharaja Sayajirao University in India, and the University of Bordeaux in France. She has taught courses on child development for close to 30 years.

Through scholarship and professional collaboration, she aims to move the discipline of psychology toward understanding development in terms of both what is universal and what is cultural. She terms this a "cultural-developmental approach." Her research addresses moral development and cultural identity formation. Together with her students, she has conducted research in countries such as Denmark, India, Thailand, Turkey, and the United States. Her publications include *New Horizons in Developmental Theory and Research* (2005, with Reed Larson, Jossey-Bass/Wiley), *Immigrant Civic Engagement: New Translations* (2008, with Constance Flanagan, Taylor-Francis), *Bridging Cultural and Developmental Psychology: New Syntheses for Theory, Research and Policy* (2011, Oxford University Press), the *Oxford Handbook of Human Development and Culture* (2015, Oxford University Press), *Moral Development in a Global World: Research from a Cultural-Developmental Perspective* (2015, Cambridge University Press), and the *Oxford Handbook of Moral Development* (2020, Oxford University Press).

From 2004 to 2015, she was editor-in-chief for the journal *New Directions for Child and Adolescent Development* (with Reed Larson). She served as program chair for the 2012 biennial conference of the Society for Research on Adolescence (with Xinyin Chen), and currently serves on awards committees for the Society for Research on Child Development (SRCD) and the Society for Research on Adolescence (SRA). For more information, see www.lenearnettjensen.com.



Lene at ages 3, 11, and 17 years.

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Jeff at ages 8 months, 6 years, and 12 years.

Lene and Jeff live in Worcester, Massachusetts, with their twins, Miles and Paris.

The authors with their twins when they were toddlers and now at the outset of emerging adulthood.

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Chapter 1
Child Development Today: Who, How, and Why

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- Population Growth and Change
- Variations Across Countries
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- Evolution, Culture, and Child Development Today

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Two Central Purposes of Child Development Research
- Contributing Knowledge
- Improving Children's Lives

VINAY WAS BORN 25 YEARS AGO IN HIS FAMILY'S HOME IN A SMALL VILLAGE IN GUJARAT, A STATE IN THE NORTHWEST OF INDIA. His mother, age 24 and already the mother of two other children, received no prenatal care other than the advice provided by her own mother, her older sisters, and the village midwife. Vinay was born small and struggled to nurse in the early weeks of his life. However, he survived, and gradually, he grew. His mother carried him constantly in the early weeks and breastfed him often, but when he reached about two months old she passed most of his daily care off to his oldest sister, age 8, who was already experienced from having cared for her younger sister beginning at age 6. In his early years he was surrounded by family members all day long, his sisters and parents as well as his grandmother and cousins, aunts, and uncles.

By the time he was about 4 years old, Vinay helped his family with daily tasks such as feeding the chickens and also spent an hour or two a day at the village preschool, which had been started a few years earlier by a local university. He entered school at age 7, walking a mile each day to the next village with his older sisters, but often they were disappointed when they arrived to find that the teacher had not come that day. Nevertheless, by age 10 he had learned how to read, write, and do basic math quite well. After school he helped his family, caring for their animals and helping tend their rice fields.

When Vinay turned 12, his family had a big decision to make: Should he discontinue school and work for his family, as his older sisters had done, or should he be sent to the big city to live with his aunt and uncle so that he could continue school? After much discussion, his family decided to send him to the city because if he succeeded he could make enough money to help the rest of the family. He thrived in the city and his new school and enjoyed living with his aunt and uncle and their two children.

As he neared the end of high school, his uncle encouraged him to apply to universities in the United Kingdom and the United States to study computer science. He was accepted to several of them and chose a university in the UK. The first year he was terribly homesick and came close to quitting and returning home. However, he stayed with it, and each year he became more comfortable with his new country, making friends from India as well as from the UK and many other countries. After graduation he returned home to marry a young woman chosen by his family. Although he had not met her, his aunt and uncle had known her family for a long time, and he trusted their judgment. At age 25, he now works for an international engineering firm in Gujarat, and he and his wife have a 1-year-old girl.

The same year Vinay was born, a girl named Sofie was born in a hospital in Odense, Denmark. Her unmarried mother, age 35, stayed home with her in the early months, supported by the paid maternal leave provided by the Danish government. Her father visited occasionally and helped with her care. After six months, however, her mother was ready to return to work and enrolled Sofie in a small public daycare where she was looked after by a government-certified caregiver. At age 3 Sofie entered full-day preschool, also government-funded, and at age 7 she began primary school.

At age 15, Sofie had a big decision to make: What type of secondary school should she attend? There were several types to choose from, including one focused on math and the sciences, one focused on the liberal arts, and one focused on preparation for a business career. She ultimately chose the business school, hoping to have a business of her own one day. After graduating from secondary school at age 19, she worked in an office for a year, then traveled all over Asia for a year with a friend. When she returned to Denmark she continued her education at a business college for another 3 years, then went to work as an assistant manager in a clothing store. Now age 25, Sofie is thinking of opening her own store soon. She has had several boyfriends, and lived with one of them for a year, but she does not plan to marry or have children until she is at least 30 years old. Nevertheless, lately she has begun to feel like an

adult, because she is able to live independently and makes her own decisions.

How different childhood can be today, depending on the accident of where you happen to be born! These two stories, based on children in countries where we have lived and done research, show that the cultural context of development makes all the difference in how children develop, at every age.

In some ways, of course, childhood is the same everywhere. All infants are born helpless and in need of the love and care of others to survive. As children grow, they gain new abilities each year, but for many years they remain vulnerable and need protection and care. Everyone eventually reaches puberty and the life stage of adolescence. Yet, as these two examples show, there is a vast range in how we experience our development from conception to age 25. Our health, our family constellations, our education, and even the length of childhood vary greatly around the globe. We have two primary goals in this text: first, to describe to you the patterns of development that all children share, and second, to introduce you to the immense differences between the experiences of development for children in the wealthiest countries—the "developed" countries—and children in the not-as-wealthy rest of the world, the "developing" countries.

The Chinese have an expression for the limited way all of us learn to see the world: *jing di zhi wa*, meaning "frog in the bottom of a well." The expression comes from a fable about a frog that has lived its entire life in a well. The frog assumes that its tiny world is all there is. Only when a passing turtle tells the frog of the great ocean to the east does the frog realize that there is much more to the world. All of us are like that frog—which you can also see depicted on the cover of this text. We grow up as members of a culture and learn to see the world from the perspective that becomes most familiar to us. With *Child Development: A Cultural Approach*, we hope that you will come to understand how broad and diverse our world really is.

The goal of this text is rise out of the well together, by taking a cultural approach to understanding *child development*, the ways people grow and change until adulthood. This means that the emphasis of the text is on how children develop as members of a culture. *Culture* is the total pattern of a group's customs, beliefs, art, and technology. In other words, a culture is a group's common way of life, passed on from one generation to the next. From the day we are born, all of us experience our lives as members of a culture, or sometimes more than one. This profoundly influences how we develop, how we behave, how we experience life, and how we see the world.

Biology is important, too, of course, and this text provides in-depth discussion of up-to-date research on the interactions between biological and social influences. Nonetheless, human beings everywhere have essentially the same biological constitution, yet their paths from birth to adulthood are remarkably varied depending on the culture in which their development takes place.

As authors of this text, we will be your fellow frogs, your companions and guides as we rise with you out of the well to gaze at the broad, diverse, remarkable cultural panorama of child development. The text will familiarize you with many variations in child development and cultural practices, which may lead you to think about your own development and your own cultural practices in a new light.

This chapter sets the stage for the rest of the text by addressing the who, the how, and the why:

- **Who?** In this text, we address child development worldwide. Thus, we begin this chapter with a tour of the global human population. We look at demographic changes over time, today's diversity and interconnections across cultures, and population projections for the future. Additionally, we delve into the history of humanity in order to understand that humans have evolved to be a uniquely global and cultural species. In this text, we also take a perspective on child development that extends to age 25.

All cultures differentiate children from adults, but who is considered an adult within a culture and by what age varies (Arnett, 2016). The contemporary field of child development spans from the prenatal period through emerging adulthood, a new life stage in some cultures that comes after adolescence and extends until the mid-20s.

- **How?** The use of the scientific method is the hallmark of how researchers study child development. We will review the steps and tools of this method, including distinctive opportunities and challenges of conducting research with children across cultures.
- **Why?** As you will learn in this chapter, the scientific study of child development has expanded tremendously since its birth more than 100 years ago. We end the chapter by highlighting the importance of contemporary child development research to understanding and improving the lives of children.

Watch CHAPTER INTRODUCTION: CHILD DEVELOPMENT TODAY: WHO, HOW, AND WHY

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SECTION 1 CHILD DEVELOPMENT ACROSS THE GLOBE

Learning Objectives

1.1 Describe the nature of the "global demographic divide" between developing and developed countries, and explain why the United States is following a different demographic path from other developed countries.

1.2 Distinguish between children in developing countries and developed countries in terms of income, education, and cultural values.

1.3 Explain why socioeconomic status (SES), gender, and ethnicity are important aspects of child development within countries.

1.4 Summarize the evolution of characteristics that make modern humans distinct from other primate species.

1.5 Identify the major changes in human cultures since the Upper Paleolithic period.

1.6 Apply information about human evolution to how child development takes place today.

Children Today: A Worldwide Demographic Profile

Because the goal of this text is to provide you with an understanding of how **child development** takes place in **cultures** across the globe, let's begin with a demographic profile of the world's children in the early 21st century.

child development
the ways people grow and change until adulthood

culture
the total pattern of a group's customs, beliefs, art, and technology

Population Growth and Change

LO 1.1 Describe the nature of the "global demographic divide" between developing and developed countries, and explain why the United States is following a different demographic path from other developed countries.

Today the average number of children per family is lower than it has ever been—yet the total number of children is higher than it has ever been, and still rising. For most of history women typically had from four to eight children in the course of their reproductive lives (McFalls, 2007). Due to inadequate medical care and nutrition, however, most of the children died in infancy or childhood and never reached adulthood.

Then came the medical advances of the 20th century, and the eradication or sharp reduction of deadly diseases like smallpox, typhus, diphtheria, and cholera, all diseases to which children are especially vulnerable. During the second half of the 20th century, the birth rate began to fall worldwide, but more and more children lived to adulthood due to the conquest of these diseases. Today the **total fertility rate (TFR)** (number of births per woman) worldwide is 2.5, the lowest global rate ever recorded (United Nations Development Programme [UNDP], 2018). The global TFR of 2.5 is still substantially higher than the rate of 2.1 that is the *replacement rate* of a stable population. Consequently,

total fertility rate (TFR)
in a population, the number of births per woman

the total number of children in the world is still rising. However, the TFR is expected to decline to 2.1 by 2050 if current trends continue (Population Reference Bureau, 2014).

The projected increase in the number of children worldwide in the decades to come will not take place equally around the world. On the contrary, there is a "global demographic divide" between the wealthy, economically developed countries that make up about 20% of the world's population, and the economically developing countries that contain the majority of the world's population (Haub & Gribble, 2011). Nearly all the population growth in the decades to come will take place in developing countries. In contrast, nearly all wealthy countries are expected to decline in the number of children in their populations during this period and beyond, because they have fertility rates that are well below the replacement rate.

developed countries
world's most economically developed countries, with the highest median levels of income

developing countries
countries that have lower levels of income than developed countries but are experiencing rapid economic growth

For the purposes of this text, we will use the term **developed countries** to refer to the most affluent countries in the world. Classifications of developed countries vary, but usually this designation includes Canada, the United States, Japan, South Korea, Australia, New Zealand, Chile, and nearly all the countries of Europe (Organization for Economic Cooperation and Development [OECD], 2017). (The term "Western" countries is also sometimes used to refer to most developed countries because they are in the Western hemisphere, geographically, except Japan and South Korea, which are considered "Eastern" countries.) For our discussion, developed countries will be contrasted with **developing countries**, which have less wealth than the developed ones. The *Cultural Focus* feature provides more information.

Cultural Focus: Niger and the Netherlands: An Up-Close Look at the Global Demographic Divide

The stark global demographic divide between developing and developed countries is illustrated by comparing Niger (pronounced NYE-jur) and the Netherlands, two countries with similar population sizes of 17 million in 2013. By 2050, Niger is projected to nearly quadruple its population to 66 million, whereas the population of the Netherlands will likely only grow very slowly to 18 million. At the root of this divide are differences in the average number of births per woman and the share of the population in their childbearing years. As **Table 1.1** shows, women's total fertility rate in Niger is more than four times the rate of Dutch women. Also, half of Niger's population is younger than age 15, compared to 17% of the Netherland's population.

For more information on the global demographic divide and its implications for children, watch the video *The Demographic Divide*.

Table 1.1 The Demographic Divide: Niger and the Netherlands

	Niger	Netherlands
Population in 2013	17 million	17 million
Population projected for 2050	66 million	18 million
Total fertility rate	7.2	1.7
Total annual births	845,000	176,000
Total annual deaths	195,000	141,000
Population below age 15	50%	17%
Life expectancy at birth	60 years	82 years
Infant mortality rate per 1,000 births	51.0	3.7

Source: CountryEconomy.com (2018); Population Reference Bureau (2014).

Watch THE DEMOGRAPHIC DIVIDE

Source: Dave Hanlon/Fotolia

Source: Kypros/Alamy Stock Photo

Mothers from the Netherlands and Niger with their children.

Review Question:

What are some ways that a high ratio of children to adults in a country might influence children's psychological development?

As the comparison of Niger and the Netherlands exemplifies, an important implication of the global demographic divide is that the proportion of children in developing and developed countries differs markedly. Take a look at the two population pyramids in **Figure 1.1**. The proportion of the population that is younger than 25 years of age in developing countries is about 50%, compared to less than 30% for developed countries (United Nations, 2013).

Although developing countries with particularly rapid population growth are severely constrained in their efforts to address poverty (Population Reference Bureau, 2013), many developing countries are nonetheless improving economically today. They are experiencing economic growth as they join the globalized economy. For example, India is a developing country, and most of its people live on an income of less than

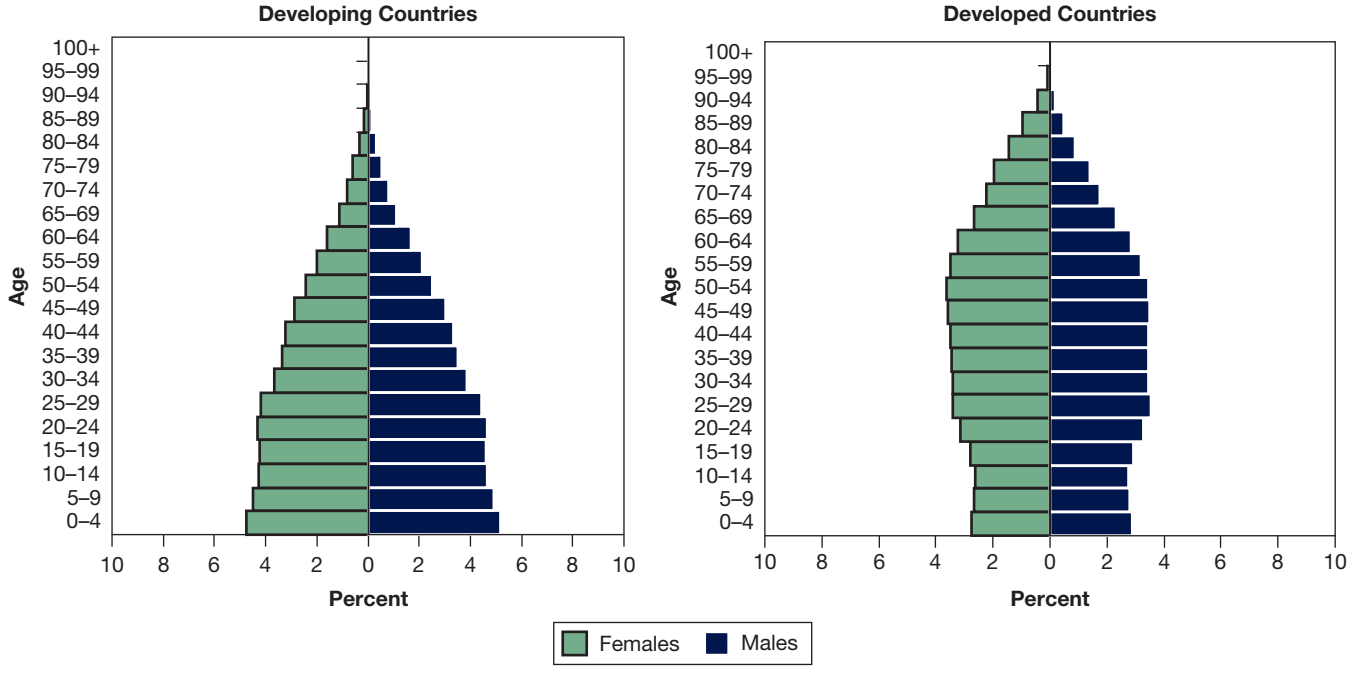


Figure 1.1 Population Pyramids in Developing and Developed Countries

Source: Based on Population Reference Bureau (2014).

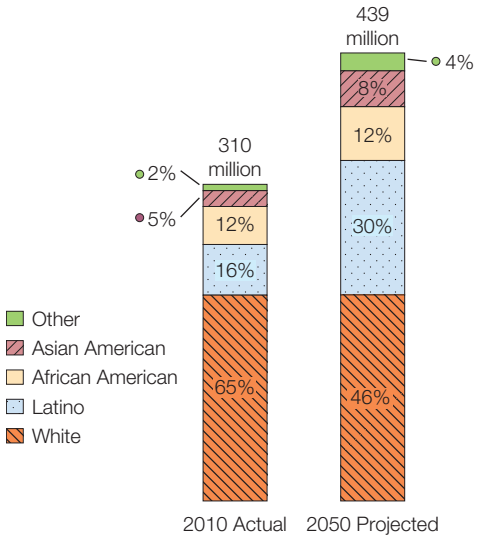


Figure 1.2 Projected Ethnic Changes in the U.S. Population to 2050

Which ethnic group is projected to change the most in the coming decades, and why?

Source: Based on Population Reference Bureau (2014).

$2 a day (UNDP, 2018). About half of Indian children are underweight and malnourished (World Bank, 2011; UNICEF, 2017). Fewer than half of Indian adolescents complete secondary school. Only about half of adult women are literate, and about three-fourths of adult men are. However, India's economy has been booming for the past two decades, lifting hundreds of millions of Indians out of poverty (UNDP, 2018). India is now a world leader in manufacturing, telecommunications, and services. If the economy continues to grow at its present pace, India will lead the world in economic production by 2050 (PricewaterhouseCoopers, 2011). Life is changing rapidly for Indians, and children born today are likely to experience much different economic and cultural contexts than their parents or grandparents have known.

The current population of developing countries is about 6.3 billion, about 80% of the world's population. In comparison, the current population of developed countries is 1.3 billion, about 20% of the total world population (UNDP, 2018). Among developed countries, the United States is one of the few likely to gain rather than lose population in the next few decades. Nearly all other developed countries—as exemplified previously by the Netherlands—are expected to remain fairly steady in population between now and 2050. Some countries, such as Germany, Taiwan, and many eastern European countries, are projected to decline. The decline will be steepest in Japan, which is projected to drop from a current population of 125 million to just 97 million by 2050 due to a low fertility rate and virtually no immigration (OECD Insights, 2016).

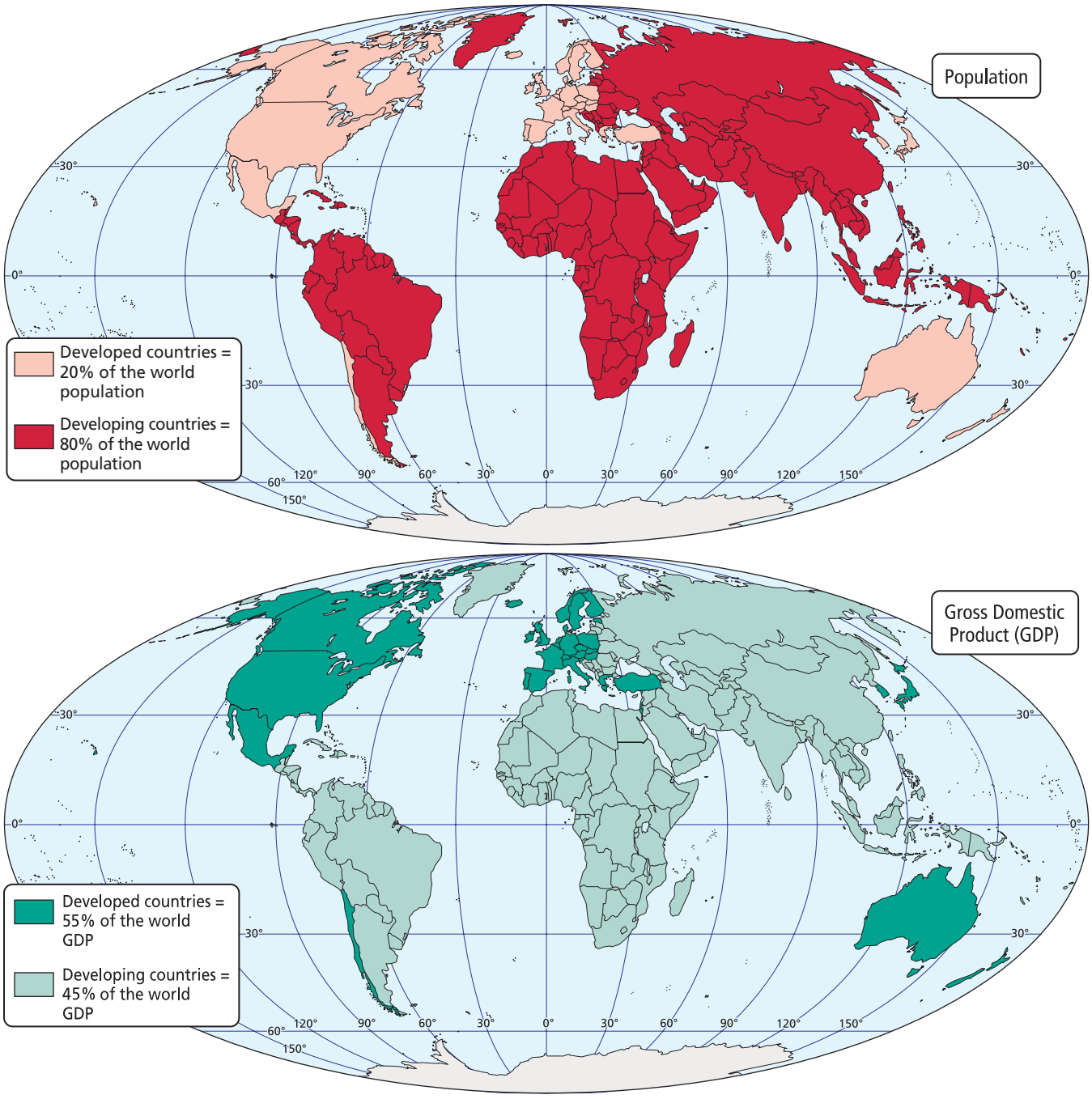
There are two reasons why the United States is following a different demographic path than most other developed countries. First, the United States has a TFR of 1.8, which is below the replacement rate of 2.1 but still higher than the TFR in most other developed countries (World Bank, 2017). Second, and more importantly, the United States allows more legal immigration than most other developed countries do, and there are millions of undocumented immigrants as well (Suárez-Orozco, 2015). The increase in population in the United States between now and 2050 will result entirely from immigration (Martin & Midgley, 2010). Both legal and undocumented immigrants to the United States come mainly from Mexico and Latin America, although many also come from Asia and other parts of the world. Consequently, as **Figure 1.2** shows, by 2050, the proportion of the U.S. population that is Latino is projected to rise from 16% to 30%. Canada has even more open immigration policies, so Canada, too, will experience an increase in population (DeParle, 2010; Population Reference Bureau, 2014).

Critical Thinking Question: Can you think of three ways that growing up in a country, such as the United States, with a relatively high proportion of immigrants is different from growing up in one, such as Japan, where there are few immigrants?

Variations Across Countries

LO 1.2 **Distinguish between children in developing countries and developed countries in terms of income, education, and cultural values.**

The demographic contrast between children in developed countries and children in the rest of the world is stark. As you can see from **Map 1.1**, this is not only with respect to population but also in other key areas, such as family income and education. With respect to income, about 40% of the world's population lives on less than $2 per day, and 80% of the world's population lives on a family income of less than $6,000 per year (Population



Map 1.1 Worldwide Variations in Population and Income Levels

Developed countries represent only 20% of the world population, yet they are much wealthier than developing countries. At what point in its economic development should a developing country be reclassified as a developed country?

Source: Population Reference Bureau (2014); UNDP (2018).

Reference Bureau, 2014; UNDP, 2018). At one extreme are the developed countries, where 9 of 10 persons are in the top 20% of the global income distribution, and at the other extreme is southern Africa, where half of the population is in the bottom 20% of global income. Africa's economic growth has been strong for the past decade, but it remains the poorest region in the world (McKinsey Global Institute, 2010; UNDP, 2018).

A similar contrast between rich and poor countries exists regarding education. Do you feel lucky? Your experience as a college student is a rare and privileged status in most of the world. In developed countries, virtually all children obtain primary and secondary

Source: Brian Kennedy/Moment/Getty Images

Children in rural areas of developing countries often start working at a young age.

education, and about 50% go on to tertiary education (college or other post-secondary training). However, in developing countries, about 20% of children do not complete primary school, and only somewhat more than half are enrolled in secondary school (UNDP, 2018). College and other tertiary education are only for the wealthy elite.

There are also some broad cultural differences between developed and developing countries, even though each category is very diverse. One important difference is that the cultures of developed countries tend to be based on individualistic values such as independence and self-expression (Greenfield, 2005; Hermans, 2015). In contrast, developing countries tend to prize collectivistic values such as obedience and group harmony (Sullivan & Cottone, 2010). These are not mutually exclusive categories and each country has some balance between individualistic and collectivistic values (Kağitçibaşi & Yalin, 2015). Furthermore, most countries contain a variety of cultures, some of which may be relatively individualistic whereas others may be relatively collectivistic. Nevertheless, the overall distinction between **individualism** and **collectivism** is useful for describing broad differences between cultural groups.

individualism
cultural values such as independence and self-expression

collectivism
cultural values such as obedience and group harmony

traditional cultures
people in the rural areas of developing countries, who tend to adhere more closely to the historical traditions of their culture than people in urban areas do

Within developing countries there is often a sharp divide between rural and urban areas, with children in urban areas living in families with higher incomes and receiving more education and better medical care. Often, the lives of middle-class children in urban areas of developing countries resemble the lives of children in developed countries in many ways, yet they are much different than children in rural areas of their own countries (UNDP, 2018). In this text, the term **traditional cultures** refers to people in the rural areas of developing countries, who tend to adhere more closely to the historical traditions of their culture than people in urban areas do. Traditional cultures tend to be more collectivistic than other cultures are, in part because in rural areas close ties with others are often an economic necessity (Gaskins, 2018; Sullivan & Cottone, 2010).

This worldwide profile of children today demonstrates that if you wish to understand psychological development, it is crucial to understand the lives of children and their families in developing countries, who comprise the majority of the world's population. The tendency in most social science research, especially in psychology, has been to ignore or strip away culture in pursuit of universal principles of development (Jensen, 2011; Rozin, 2006). As we will learn in the course of this text, it's true that there are some universals of child development. To fully comprehend children's development, however, we also need to understand its worldwide variations, in developing countries as well as in developed countries.

Most research in child development is on the 20% of the world's population that lives in developed countries—especially the 5% of the world's population that lives in the United States (Arnett, 2008; Henrich et al., 2010). This is changing, and in recent years there has been increasing attention paid in psychology and other social science fields to the cultural side of development (Bornstein, 2010; Goodnow & Lawrence, 2015; Jensen, 2015). By now, researchers have investigated patterns of child development in places all over the world. Furthermore, researchers studying American society have increased their attention to cultures within the United States that are outside of the White middle class.

Variations Within Countries

LO 1.3 Explain why socioeconomic status (SES), gender, and ethnicity are important aspects of child development within countries.

The contrast between developed countries and developing countries will be used often in this text as a general way of drawing a contrast between child development in relatively rich and relatively poor countries. However, it should be noted that there is substantial

variation within each of these categories. All developed countries are relatively wealthy, but child development in Japan is quite different from child development in France or Canada. All developing countries are less wealthy than developed countries, but child development in China is quite different than child development in Bolivia or Kenya. Throughout the text we will explore variations in child development within the broad categories of developed countries and developing countries.

Not only is there important variation in psychological development within each category of developed and developing countries, but there is additional variation within each country. Most countries today have a **majority culture** that sets most of the norms and standards and holds most of the positions of political, economic, intellectual, and media power (García Coll et al., 1996; Marks et al., 2015). In addition, there may be many minority cultures defined by ethnicity, religion, language, or other characteristics.

Variations in child development also occur because of differences within countries in the settings and circumstances of individual lives. The settings and circumstances that contribute to variations in pathways of development are called **contexts**. Contexts include environmental settings such as family, peer groups, school, work, and media, as well as civic and religious institutions. In the next chapter, we discuss why each of these contexts are important in children's lives, and we devote attention to research on the contexts across the entire text. Three other important aspects of variation that will be highlighted throughout are socioeconomic status, gender, and ethnicity.

The term **socioeconomic status (SES)** is often used to refer to a person's social class, which includes educational level, income level, and occupational status. For children and adolescents, because they may not yet have reached the social-class level they will have as adults, SES is usually used in reference to their parents' levels of education, income, and occupation. In most countries, SES is highly important in shaping development. It influences everything from the risk of infant mortality (as we saw for Niger and the Netherlands), to height and weight in infancy and childhood, to children's language development and communication styles within families, to age of first sexual intercourse and use of contraception in adolescence.

Differences in SES are especially sharp in developing countries (UNDP, 2018). In a country such as India, Peru, or Saudi Arabia, growing up as a member of the upper-class SES elite is very different from growing up as a member of the relatively poor majority, in terms of access to resources such as health care and education. However, even in developed countries there are important SES differences in access to resources. For example, in the United States, infant mortality is higher among low-SES families than among high-SES families, in part because low-SES mothers are less likely to receive prenatal care (Elder et al., 2016).

Gender is a key factor in development throughout the life course, in every culture (UNDP, 2018). The expectations that cultures have for females and males are different from the time they are born (Hatfield & Rapson, 2005). However, the degree of the differences varies greatly among cultures. In most developed countries today, the differences are relatively blurred: Men and women hold many of the same jobs, wear many of the same clothes (e.g., jeans, T-shirts), and enjoy many of the same entertainments. If you have grown up in a developed country, you may be quite surprised to learn in the chapters to come just how deep gender differences go in many other cultures. Nevertheless, gender-specific expectations exist in developed countries, too, as we will see.

Finally, **ethnicity** is a crucial part of child development. Ethnicity may include a variety of

majority culture
within a country, the cultural group that sets most of the norms and standards and holds most of the positions of political, economic, intellectual, and media power

contexts
settings that contribute to variations in pathways of child development, including family, peer groups, school, work, media, civic institutions, and religious institutions

socioeconomic status (SES)
a person's social class, including educational level, income level, and occupational status

gender
cultural categories of "female" and "male"

ethnicity
group identity that may include components such as cultural origin, cultural traditions, race, religion, and language

Minority cultures are often defined by ethnicity, religion, and language as well as distinct cultural traditions. Here a Latina girl and her parents in the United States are ready for her quinceañera (coming-of-age) celebration.

Source: Sollina Images/Tetra Images, LLC/Alamy Stock Photo

components, such as cultural origin, cultural traditions, race, religion, and language. Minority ethnic groups may arise as a consequence of immigration. There are also countries in which ethnic groups have a long-standing presence and may even have arrived before the majority culture. For example, Aboriginal peoples lived in Australia for many millennia before the first European settlers arrived. Many African countries were constructed by European colonial powers in the 19th century and consist of people of a variety of ethnicities, each of whom has lived in their region for many generations. Often, ethnic minorities within countries have distinct cultural patterns that are different from those of the ethnic majority. For example, in the Canadian majority culture, premarital sex is common, but in the large Asian Canadian minority group, female virginity until marriage remains highly valued (Sears, 2012). In many developed countries, most of the ethnic minority groups have values that are less individualistic and more collectivistic than in the majority culture (Suárez-Orozco, 2015).

Origins: The Rise of a Global and Cultural Species

In the course of this text, you will see that the lives of children, adolescents, and emerging adults are fabulously diverse across and within cultures. But how did this diversity arise? Humans are one species, so how did so many different ways of life develop from one biological origin? Before we turn our attention to the development of individuals—called **ontogenetic development**—it is important to understand our **phylogenetic development**, that is, the development of the human species. As we will see, humans have evolved to be a singularly cultural species capable of inhabiting almost any part of the globe (Tomasello, 2010). For students who hold religious beliefs that may lead them to object to evolutionary theory, we understand that you may find this section of the text challenging, but it is nevertheless important to be familiar with the theory of evolution and the scientific evidence supporting it, as this is the view accepted by nearly all scientists.

ontogenetic development
typical development of individuals within a given species

phylogenetic development
the evolutionary development of an entire species

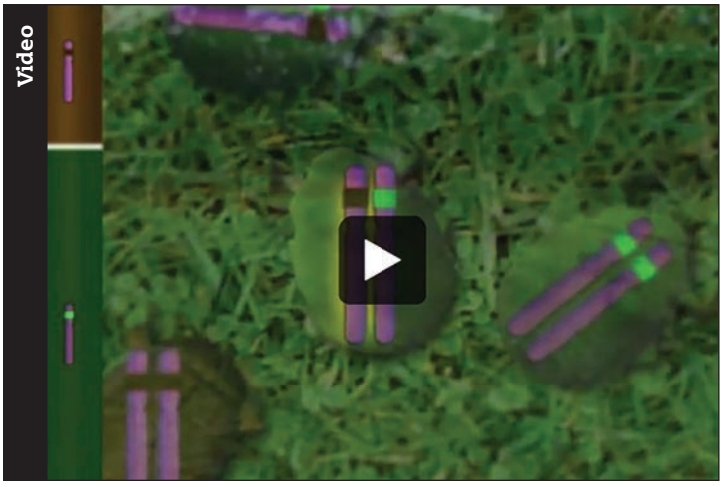
natural selection
evolutionary process in which the offspring best adapted to their environment survive to produce offspring of their own

From Africa to Distant Destinations

LO 1.4 **Summarize the evolution of characteristics that make modern humans distinct from other primate species.**

To understand human origins, it is important to know a few basic principles of the theory of evolution, first proposed by Charles Darwin in 1859 in his book *On the Origin of Species*. At the heart of the theory of evolution is the proposition that all species change through the process of **natural selection**. In natural selection, the young of a species are born with variations on a wide range of characteristics. Some young may be relatively large and others relatively small, some relatively fast and others relatively slow, and so on. Among the young, those who will be most likely to survive until they can reproduce will be the ones whose variations are best adapted to their environment. The video *Natural Selection* has more detail on this process.

Watch NATURAL SELECTION



According to evolutionary biologists, humans, chimpanzees, and bonobos (also called pygmy chimpanzees) had a common primate ancestor until about 6 million years ago (Shreeve, 2010). At about that time, this common ancestor split into three paths, leading to the development of humans as well as to chimpanzees and bonobos. The evolutionary line that eventually led

to humans is known as the *hominin* line. Early hominins lived in Africa, as chimpanzees and bonobos do today.

By 200,000 years ago the early hominin species had evolved into our species, **Homo sapiens** (Shreeve, 2010; Wilson, 2012). During the millions of years of evolution that led to *Homo sapiens*, crucial characteristics developed that made us distinct from chimpanzees, gorillas, and earlier hominins. Two of these pertain to the human brain. The size of *Homo sapiens*' brain became about three times as large as the brains of chimpanzees and early hominins. **Figure 1.3** shows changes in brain size in cubic centimeters (cc) in early humans, from two million years ago (early hominins) to one million years ago (early homo species) to *Homo sapiens*.

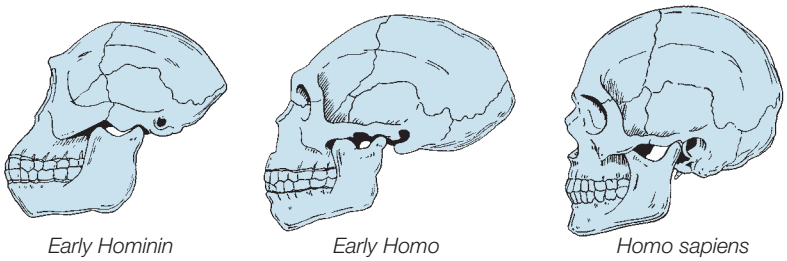


Figure 1.3 Changes in Brain Size in Early Humans

Source: Pearson Education

Homo sapiens
species of modern humans

To allow for the birth of bigger-brained babies, the female *Homo sapiens*' pelvis became relatively wide. However, *bipedalism* (walking on two legs) simultaneously required pelvises narrow enough for stable walking and running. This is almost certainly why human children are born at an earlier stage of brain development relative to other African great ape species; if we didn't come out of the womb as early as we do, we'd never make it out! The brain of a chimpanzee is 45% of its average adult size at birth and 85% by 1 year of age. In contrast, the human infant's brain is merely 25% of adult size at birth and not until 6 years of age does it reach approximately 85% to 90% (Hublin, 2005; Stiles & Jernigan, 2010). In short, compared to chimpanzees, bonobos, and early hominins, *Homo sapiens* evolved to

Humans evolved to establish cultural communities across the globe, from the arctic to tropical rainforests, from deserts to mountains.

Source: Ton Koene/Alamy Stock Photo

Source: Don Mammoser/Shutterstock

Source: Sunsinger/Shutterstock

Source: Daniel Prudek/Shutterstock

have a remarkable brain capacity. Furthermore, the less mature brain of the human child at birth makes for a longer childhood, and for extensive brain maturation and learning within local physical and cultural environments (Bjorklund, 2007; Haun, 2015).

At some point between 125,000 and 60,000 years ago, *Homo sapiens* migrated out of Africa, and over time these humans replaced other hominin species (such as Neanderthals) who had left Africa earlier (Meredith, 2011). In contrast to their nearest primate relatives, who all still live close to the equator in Africa, humans adapted to life in highly different environments. For example, evidence indicates that at least 45,000 years ago humans lived in the Arctic (Gibbons, 2016). Successfully surviving in vastly different environments, from equatorial Africa to the Arctic, requires the highly flexible set of cognitive skills afforded by the human brain. As we will see next, successful human survival across the globe also requires the ability to form cultural communities and complex social institutions (Tomasello, 2010).

Early Cultures and Civilizations

LO 1.5 **Identify the major changes in human cultures since the Upper Paleolithic period.**

Physically, *Homo sapiens* have changed little from 200,000 years ago to the present. However, as shown in **Figure 1.4**, a dramatic change in the development of the human species took place during the *Upper Paleolithic period* from about 50,000 to 10,000 years ago (Ember et al., 2011; Wilson, 2012).

For the first time, cultural differences developed between human groups, as reflected in their art and tools. Humans also began to bury their dead, sometimes including art objects in the graves, indicating beliefs in an afterlife. Furthermore, there was a rapid acceleration in the development of tools. For example, the first boats were invented, allowing humans to reach and populate Australia and New Guinea. Also, trade now took place between human groups.

Although the causes of the revolutionary changes of the Upper Paleolithic remain a mystery (Wrangham, 2009), climate change was a key contributor to dramatic changes during the *Neolithic period*, from 10,000 years ago to about 5,000 years ago (Johnson, 2005). The Upper Paleolithic was the time of the last Ice Age, when glaciers covered Europe as far south as present-day Berlin, and in North America, as far south as what is now Chicago. By the Neolithic period the climate had become much warmer, resembling our climate today.

As the climate became warmer and wetter, new plants evolved that were good human food sources, and humans began to cultivate more of the ones they liked best. The huge animals (such as the mammoth and woolly rhinoceros) that had been hunted during the Upper Paleolithic became extinct, perhaps from overhunting, perhaps because the animals failed to adapt to the climate changes (Diamond, 1992). Domestication of animals may have developed as a food source to replace the extinct animals. Along with agriculture and animal care came new tools: mortars and pestles for processing plants into food, and the spindle and loom for weaving cotton and wool into clothing. Larger, sturdier dwellings were built (and furniture such as beds and tables) because people stayed in settled communities longer to tend their plants and animals.

The final major historical change that provides the basis for how children develop today began around 5,000 years ago with the development of **civilization** (Ridley, 2010). The characteristics that mark civilization include cities, writing, specialization into a variety of kinds of work, differences among people in wealth and status, and a centralized political system known as a *state*. The first civilizations developed around the same time in Egypt and Sumer (part of what is now Iraq). Because people in these civilizations kept written records and produced many goods, we have a lot of information about how they lived. We know they had laws and sewer systems and that their social classes included priests, soldiers, craftspeople, government workers, and slaves.

civilization
form of human social life, beginning about 5,000 years ago, that includes cities, writing, occupational specialization, wealth and status differences, and states

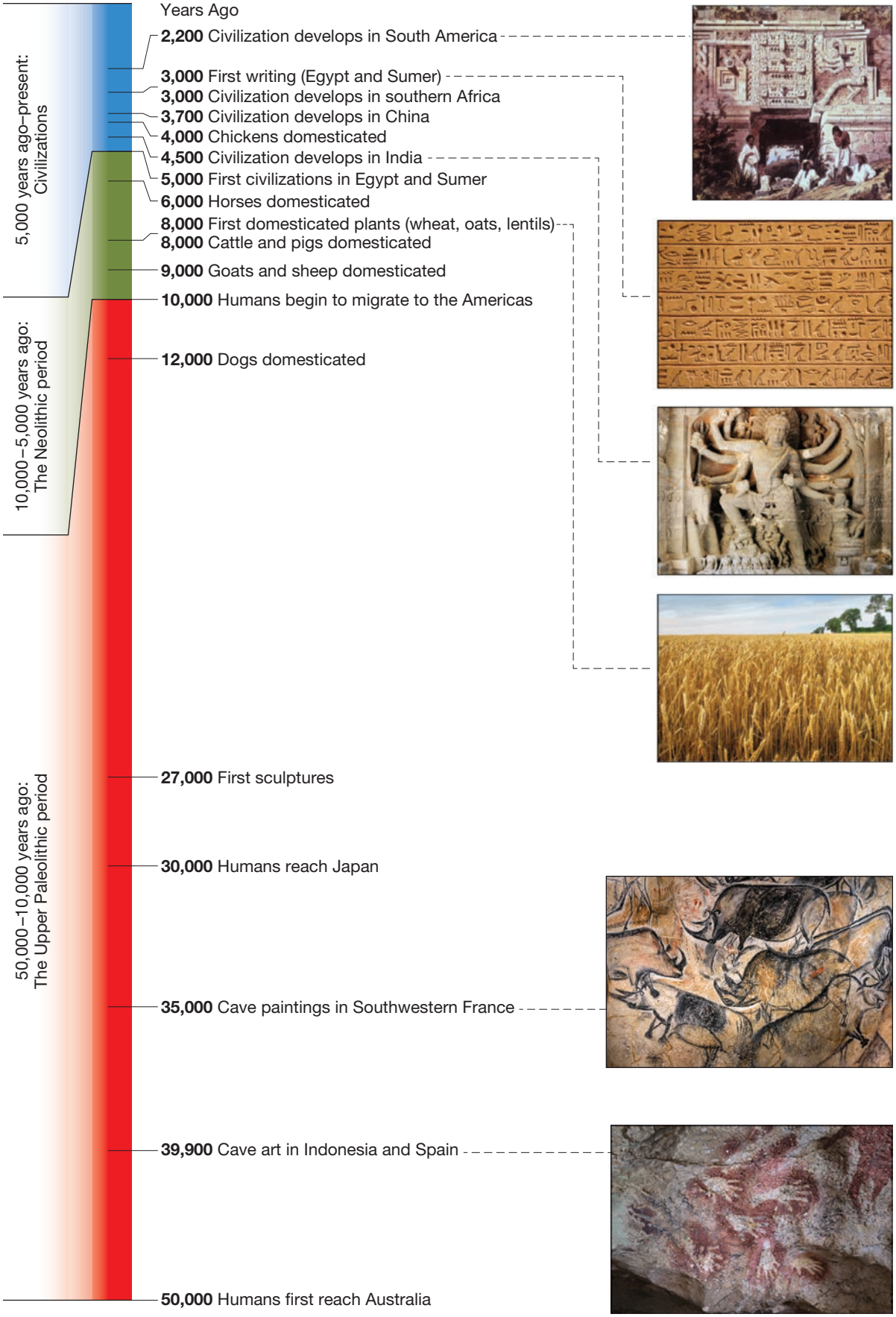


Figure 1.4 Key Changes in Human Species Development, Past 50,000 Years

Source: Pearson Education; Photos (top to bottom): Newberry Library/SuperStock/Alamy Stock Photo; Art Resource; Fadil Aziz/Alcibbum Photograph/Getty Images; Igor Strukov/Fotolia; Delmarty/Andia/Alamy Stock Photo; Fadil Aziz/Alcibbum Photograph/Corbis Documentary/Getty Images

We know they built monuments to their leaders, such as the pyramids that still stand today in Egypt. They produced a vast range of goods, including jewelry, sculpture, sailboats, wheeled wagons, and swords. Later civilizations developed in India (around 4,500 years ago), China (around 3,700 years ago), southern Africa (around 3,000 years ago), the Mediterranean area (Greece and Rome, around 2,700 years ago), and South America (around 2,200 years ago).

Why did civilizations and states arise? As agricultural production became more efficient, especially after the invention of irrigation, not everyone in a cultural group had to work on food production. This allowed some members of the group to be concentrated in cities, away from food-production areas, where they could specialize as merchants, artists, bureaucrats, and religious and political leaders. Furthermore, as the use of irrigation expanded, there was a need for a state to build and oversee the system, and as trade expanded, there was a need for a state to build infrastructure such as roadways. Trade also connected people in larger cultural groups that could be united into a common state (Ridley, 2010).

Evolution, Culture, and Child Development Today

LO 1.6 **Apply information about human evolution to how child development takes place today.**

evolutionary psychology
branch of psychology that examines how patterns of human functioning and behavior have resulted from adaptations to evolutionary conditions

How does the evolution of the human species pertain to child development today? First, it is important to recognize that how we develop and who we are as human beings is based partly on our evolutionary history. Researchers working in the field of **evolutionary psychology** argue that many characteristics of children are influenced by our evolutionary history, including aggressiveness, empathy, and the need for young children to play (Bjorklund, 2009; Crawford & Krebs, 2008; De Waal, 2009). We will examine their research in the course of this text.

A second important fact about our evolutionary history is that, as noted earlier, although biologically we have changed little since the origin of *Homo sapiens* about 200,000 years ago, how we live has changed in astonishing ways (Ridley, 2010; Wilson, 2012). Although we are a species that originated in the grasslands and forests of Africa, now we live in every environment on earth. Although we are a species that evolved to live in small groups of a few dozen persons, now most of us live in cities with millions of other people. Although human females are capable of giving birth to at least eight children in the course of their reproductive lives, and probably did so through most of history, now most women have one, two, or three children—or perhaps none at all. Although children transitioned into adult-like work at an early age for much of history, now that transition often occurs only during emerging adulthood in developed countries and among the urban middle and upper classes in developing countries.

As far as we can tell from the fossil record, all early hominins lived in the same way (Shreeve, 2010). Even different groups of early *Homo sapiens* seem to have lived more or less alike before the Upper Paleolithic period, as hunters and gatherers in small groups. Today there are hundreds of different cultures around the world, all part of the human community but each with its distinctive way of life. There are wide cultural variations in the lives children experience as they grow, such as how we care for infants, what we expect from children, how we respond to the changes of puberty, and whether we stretch the final entry to adulthood into the 20s. As members of the species *Homo sapiens*, we all share a similar biology, but cultures shape the raw material of biology into widely different developmental paths.

It is culture that makes us unique as a species. Other species have evolved in ways that are adaptive for a particular set of environmental conditions. They can learn during their lifetimes, certainly, but the scope of their learning is limited (Haun, 2015). When their environment changes, if they are to survive they will do so not by learning new skills required by a new environment but through a process of natural selection that will

enable those best-suited *genetically* to the new environmental conditions to survive long enough to reproduce, while the others do not.

In contrast, once humans developed the large brain we have now, it enabled us to survive in any environment by inventing and learning new skills and methods of survival, and then passing them on to children as part of a cultural way of life. We also became capable of altering our environments, so that it was no longer natural selection alone that would determine how we would live but the cultures we created. We can survive and thrive even in conditions that are vastly different from our environment of evolutionary adaptation, because our capacity for cultural learning is so large and, compared to other animals, there is relatively little about us that is fixed by instinct.

SUMMARY: CHILD DEVELOPMENT ACROSS THE GLOBE

LO 1.1 Describe the nature of the "global demographic divide" between developing and developed countries, and explain why the United States is following a different demographic path from other developed countries.

The *proportion* of children in the total human population is shrinking as the total fertility rate (TFR) worldwide declines, but the total *number* of children is still rising because the TFR in developing countries is still higher than the replacement rate of 2.1. There is a global demographic divide in that nearly all the population growth in the decades to come will take place in economically developing countries. Unlike most developed countries, the United States will experience an increase in population during the 21st century as a result of immigration.

LO 1.2 Distinguish between children in developing countries and developed countries in terms of income, education, and cultural values.

Most children in developing countries are poor and live in rural areas, but these countries are experiencing rapid economic development and a massive migration to urban areas. Only about 50% of children in developing countries are enrolled in secondary school, whereas almost all children in developed countries complete secondary education. In general, cultural values are more collectivistic in developing countries and more individualistic in developed countries. These are not mutually exclusive categories, and each country has some balance between the two kinds of values.

LO 1.3 Explain why socioeconomic status (SES), gender, and ethnicity are important aspects of child development within countries.

SES includes educational level, income level, and occupational status. Within both developing and developed countries, SES influences children's access to resources such as education and health care. Gender shapes expectations and opportunities for children in all cultures, although the strictness of gender roles varies across cultures. Ethnicity often includes a distinct cultural identity, and ethnic minorities within countries often have cultural patterns that are different from those of the ethnic majority.

LO 1.4 Summarize the evolution of characteristics that make modern humans distinct from other primate species.

Homo sapiens evolved to have a remarkable brain capacity. Furthermore, the less mature brain of the human child at birth makes for a longer period of dependency and for extensive brain maturation and learning within local physical and cultural environments. Compared to their nearest primate relatives, humans evolved to be a singularly cultural species capable of inhabiting almost any part of the globe.

LO 1.5 Identify the major changes in human cultures since the Upper Paleolithic period.

The Upper Paleolithic period (50,000–10,000 years ago) was the first time when human cultures became distinct from one another in their art and tools. During the Neolithic period (10,000–5,000 years ago), humans first domesticated plants and animals. The first civilizations around 5,000 years ago marked the origin of writing, specialized work, and a centralized state.

LO 1.6 Apply information about human evolution to how child development takes place today.

How children develop today is based partly on our evolutionary history. As a species, however, our large brains have enabled us to adapt to almost any environment by inventing new methods of survival and passing them on to children as part of a cultural way of life. We have also become capable of altering our environments, so that it is no longer natural selection alone but also the cultures we create that determine how we live.

SECTION 2 THE FIELD OF CHILD DEVELOPMENT: PAST AND PRESENT

Learning Objectives

1.7 Provide some reasons why the field of child development primarily focused on younger children until about the mid-20th century.

1.8 Specify when the field of child development began to address adolescence in a notable way, and explain why the age range that Hall had designated for adolescence has been moved downward by contemporary researchers.

1.9 Explain why the field of child development has recently expanded to encompass emerging adulthood.

1.10 Describe the cultural-developmental model that will provide the structure for this text.

The Emergence of a Science of Child Development

The field of child development emerged as a science around the turn of the 20th century (Collins & Hartup, 2013). In this section, we look at how the field of child development over the course of somewhat more than a century has moved from a predominant focus on children to encompass adolescents and emerging adults.

A Focus on Younger Children

LO 1.7 Provide some reasons why the field of child development primarily focused on younger children until about the mid-20th century.

Let's begin by examining two scholars who made long-lasting and memorable contributions to the emergence of the field of child development: G. Stanley Hall (1844–1924) and Sigmund Freud (1856–1939). They were not the only important contributors, but their work and its historical context elucidate why developmental researchers primarily studied younger children for many decades after the founding of the field.

G. STANLEY HALL AND THE CHILD STUDY MOVEMENT Psychology is widely viewed as beginning around 1880, with the establishment of research laboratories by Wilhelm Wundt in Germany and William James in the United States (Brennan & Houde, 2017; Schultz & Schultz, 2015). James's first Ph.D. student, G. Stanley Hall, turned his attention to children after obtaining his degree and became the leader of the **child study movement** in the 1880s and 1890s (Davidson & Benjamin, 2013; Young, 2016). At that time, attending school was becoming more common for children, and in some American states it had become mandatory. Hall's initial studies focused on what children knew upon entering school at around age 7.

Thereafter he broadened his studies to include a variety of topics, such as what children fear most (thunder and lightning, in his samples). He also became a widely known public figure advocating the scientific study of children, lecturing widely and writing

child study movement
organized effort around the turn of the 20th century that advocated scientific research on child and adolescent development and the improvement of conditions for children and adolescents in the family, school, and workplace

popular articles for newspapers and magazines. Soon other scholars joined the child study movement, and Hall established the first scholarly journal on child development research in 1883. By 1896 there was a large enough body of knowledge for Frederick Tracy (1896) to write a book on *The Psychology of Childhood*.

Source: Everett Historical/Shutterstock

By 1900, primary school attendance had become mandatory in many American states.

Hall advocated using parents and teachers as sources of data, given that they have close daily contact with children. However, this approach was criticized by other early psychologists who favored laboratory observations instead and viewed parents and teachers as unreliable informants (Ross, 1972). Hall was also criticized for his view that, in the course of their development, children re-enacted the phylogenetic history of humanity (Young, 2016). Like many others of his time, Hall feared that the comforts of city life were making children, in particular boys, too "soft," and that it was necessary for healthy development to subject them to the rougher conditions that we experienced in our species past, for example by giving them cold baths, teaching them to box, and avoiding giving them excessive attention. These notions may seem peculiar from a modern perspective, but Hall nevertheless merits credit for founding the field of child development.

FREUD'S FOCUS ON EARLY CHILDHOOD Around the same time as the child study movement was being formed, a theory of psychological development was devised by Sigmund Freud, who was a physician in Vienna, Austria, in the late 19th century (Breger, 2000). Freud's theory became the dominant view of psychological development throughout the first half of the 20th century (Robins et al., 1999), and its supremacy is one reason why the field for many decades focused overwhelmingly on children.

Working with persons suffering from various mental health problems, Freud concluded that a consistent theme across patients was that they seemed to have experienced some kind of traumatic event in childhood. The trauma then became buried, or *repressed*, in their unconscious minds and continued thereafter to shape their personality and their mental functioning even though they could no longer remember it. In an effort to address their problems, Freud developed the first method of psychotherapy, which he called *psychoanalysis*. The purpose of psychoanalysis was to bring patients' repressed memories from the unconscious into consciousness, through having them discuss their dreams and childhood experiences while guided by the psychoanalyst (Freud, 1901/1953). According to Freud, just making the repressed memories conscious would be enough to heal the patient.

Freud's (1905/1953) experiences as a psychoanalyst were the basis of his **psychosexual theory**. He believed that sexual desire was the driving force behind human behaviors throughout life, but that the locus of the sexual drive shifts around the body during the course of early development. He proposed five stages of child development:

psychosexual theory
Freud's theory proposing that sexual desire is the driving force behind psychological development

1. The *oral stage* of infancy is when sexual sensations are concentrated in the mouth. Infants derive pleasure from sucking, chewing, and biting.
2. The *anal stage*, beginning at about a year and a half, is when sexual sensations are concentrated in the anus. Toddlers derive their greatest pleasure from the act of elimination and are fascinated by feces.
3. The *phallic stage*, from about age 3 to 6, is when sexual sensations become located in the genitals, but the child's sexual desires are focused particularly on the other-sex parent.

Source: Keystone Pictures USA/Keystone Press/Alamy Stock Photo

Freud's focus on early child development had a major impact on the field.

4. The *latency stage*, lasting from about age 6 until puberty, is a period when the child experiences incestuous desires for the opposite-sex parent. Fearing punishment from these desires, the child represses them and instead identifies with the same-sex parent, and focuses on learning social and intellectual skills.
5. The *genital stage*, from puberty onward, is when the sexual drive re-emerges, but this time it is directed toward persons outside the family.

For Freud, everything important in development happens in childhood. In fact, Freud viewed the personality as complete by age 6. In his view, the motives underlying a person's behaviors could be traced back to events during the first three stages of development, especially the child's interactions with parents. Freud is the most popularly recognized psychologist of all time, but most features of his psychosexual theory have not stood the test of time (Breger, 2000). Sexuality is certainly an important part of human psychology, but child development is complex and cannot be reduced to a single motive. Also, family experiences influence children's development, no doubt, but the family is not the sole context of importance in child development. Nonetheless, throughout the first half of the 20th century, the popularity of Freud's theory contributed to the prevailing attention to children in the field of developmental psychology (Robins et al., 1999).

Expansions of the Field of Child Development

After a predominant focus on younger children for its first many decades, the field of child development has broadened to include adolescence and emerging adulthood. We now look at when and why each of these expansions took place.

The Inclusion of Adolescence

LO 1.8 **Specify when the field of child development began to address adolescence in a notable way, and explain why the age range that Hall had designated for adolescence has been moved downward by contemporary researchers.**

Theories and research specifically addressing the development of adolescents were sparse until about the mid-20th century. G. Stanley Hall, the main founder of the child study movement, also wrote the first textbook on adolescence, published in 1904 as a two-volume set ambitiously titled *Adolescence: Its Psychology and Its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion, and Education*. Hall defined the age range of adolescence as beginning at 14 and ending at 24 (Hall, 1904, vol. 1, p. xix)—an age range that the contemporary field has shifted downward, as you will see in just a moment. Hall's work heralded adolescence as a developmental period preceding adulthood and meriting scientific investigation. Nevertheless, the first many decades of the field of child development were characterized by theory and research centered on younger children.

Gradually, however, this began to change. For example, Anna Freud (1895–1982), Sigmund Freud's daughter, wrote extensively on adolescence between the 1940s and 1960s. She was a particularly strong advocate of Hall's idea that it is "natural" for

adolescents to go through emotional upheaval (1946, 1958, 1968, 1969). In her view, the absence of turmoil signified serious psychological problems: "To be normal during the adolescent period is by itself abnormal" (1958, p. 267). Like her father, however, she never carried out research to substantiate her claims. Also, from the 1950s to the 1970s, Erik Erikson (1902–1994) proposed a lifespan theory of development and singled out adolescence as the key period for establishing one's identity (1950, 1958, 1959, 1968). As a prerequisite to a healthy entry into adulthood, he proposed that adolescents must develop an awareness of who they are, what their capabilities are, and what their place is within society. Erikson was trained as a psychoanalyst in Freud's circle in Vienna but ended up departing from Freudian theory in important ways. As we will see later in this text, his theory and especially his ideas about adolescence have continued to inspire researchers (Clark, 2010).

By now, research on adolescence is thriving. Today's scholars consider the transition into adolescence to begin at about age 10, and the transition out of adolescence to occur in the late teens. Studies published in the major journals on adolescence rarely include samples with ages younger than 10 or older than 18 (Arnett, 2000). What happened between Hall's time and our own to move scholars' conceptions of adolescence forward chronologically in the life course?

Two changes stand out as explanations. One is the decline that took place during the 20th century in the typical age of the initiation of puberty. At the beginning of the 20th century, the median age of **menarche** (a girl's first menstruation) in Western countries was about 15 (Eveleth & Tanner, 1990). Because menarche takes place relatively late in the typical sequence of pubertal changes, this means that the initial changes of puberty would have begun around ages 13 to 15 for most girls and boys (usually earlier for girls than for boys), which is just where Hall designated the beginning of adolescence. However, the median age of menarche (and, by implication, other pubertal changes) declined steadily between 1900 and 1970 before leveling out, so that now the median age of menarche in Western countries is 12.5 (Nabi et al., 2014). The initial changes of puberty begin about 2 years earlier, thus age 10 is often considered a transitional age into adolescence. In developing countries, the average age of menarche remains somewhat higher. However, in countries that have undergone rapid economic development in recent decades, such as China and India, a corresponding decline in the average age of menarche has been reported (Graham et al., 1999; Rah et al., 2009; Rokade & Mane, 2008).

menarche
a girl's first menstrual period

As for when adolescence ends, the change in this age may have been inspired by a social change: the growth of secondary school attendance to a normative experience for adolescents in the United States and other developed countries. For example, only 5% of Americans age 14 to 17 were enrolled in high school in 1890. As you can see in **Figure 1.5**, however, this proportion rose steeply and steadily throughout the 20th century. Secondary education had become normative when Anna Freud and Erikson began to theorize about the distinctive psychological features of adolescence in the 1940s and 50s.

By 1985, enrollment in high school leveled out at 95% (National Center for Education Statistics [NCES], 2018). Because secondary education is now nearly universal among adolescents in developed countries and because it usually ends by about age 18, it makes sense for developmental researchers to place the end of adolescence at this time. Hall did not choose 18 as the end

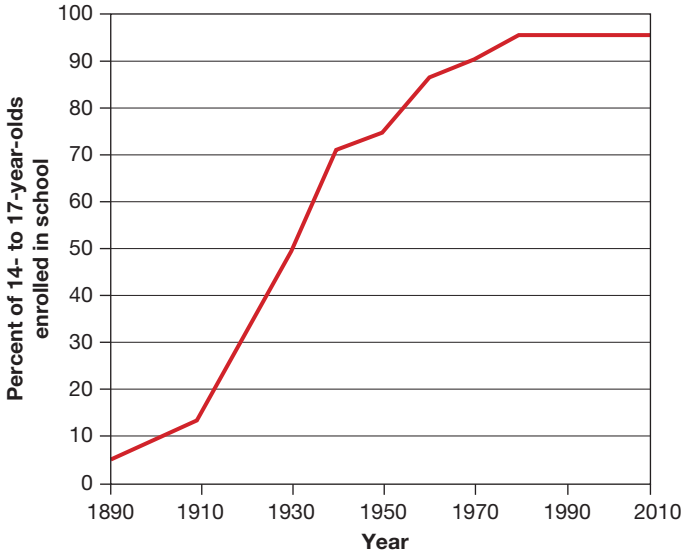


Figure 1.5 Enrollment in High School in the United States, 1890–2010

Source: Arnett & Taber (1994).

Table 1.2 Enrollment in Secondary School, Selected Developing Countries, 1980 and 2016

	1980		2016	
Country	Females (%)	Males (%)	Females (%)	Males (%)
Argentina	62	53	87	86
China	37	54	69	69
Egypt	41	66	90	90
India	20	39	77	72
Mexico	46	51	80	76
Nigeria	13	25	41	47

Source: UNESCO (2016).

of adolescence because for most adolescents of his time no significant transition took place at that age. Education ended earlier, work began earlier, and leaving home took place later. Marriage and parenthood did not take place for most people until their early to mid-20s (Arnett & Taber, 1994), which may have been why Hall designated age 24 as the end of adolescence.

In developing countries, even now a substantial proportion of adolescents do not attend secondary school. In those countries, education beyond childhood is mainly for the urban middle class (just as it was in developed countries a century ago). The labor of rural adolescents is needed by their families, and they can best learn the skills needed for adult work by working alongside adults rather than by attending school. However, these patterns are changing in many countries due to growing economic development. **Table 1.2** shows secondary school enrollment in various countries in 1980 and 2016 (UNESCO, 2016). In the space of less than 40 years, secondary education has risen rapidly in countries such as China, India, and Mexico. Economic development introduces agricultural technologies that make children's and adolescents' labor less necessary to the family, while staying in school brings increasing economic benefits because more jobs become available that require educational skills. Secondary education, then, is becoming normative across developing countries, and increasingly the end of it marks the end of adolescence in those countries as it long has in developed countries.

The Inclusion of Emerging Adulthood

emerging adulthood
new life stage in developed countries, lasting from the late teens through the mid-20s, in which people are gradually making their way toward taking on adult responsibilities in love and work

LO 1.9 **Explain why the field of child development has recently expanded to encompass emerging adulthood.**

In recent decades, the transition into adulthood has been pushed back again. Especially in developed countries, the end of adolescence no longer marks the entry into adulthood. Consequently, the field of child development has expanded anew. **Emerging adulthood** is a new stage of life between adolescence and young adulthood, lasting from about age 18 through the mid-20s (Arnett, 2000, 2011, 2015). This new life stage reflects the fact that most people in developed countries now continue their education into their 20s, and also take longer to find a stable job and enter marriage and parenthood (Padilla-Walker & Nelson, 2017; Schwartz, 2016; Syed, 2015). Take a look at **Table 1.3**. Gross enrollment rates in tertiary education are now above 50% in every developed country. Also, most people now enter marriage and parenthood in their late 20s rather than in their late teens or early 20s as was true half a century ago.

Table 1.3 Gross Enrollment Ratio in Tertiary Education, Selected Developed Countries

Country	Females	Males
Australia	102	72
Czech Republic	77	55
France	71	58
Germany	63	68
Greece	110	110
Italy	74	53
Japan	60	65
Lithuania	82	56
South Korea	81	108
Spain	96	82
United States	101	73

Note: Gross enrollment ratio is the number of students enrolled in tertiary education divided by the number of persons ages 18–22 in the population.

Source: Based on Arnett et al. (2014).

These demographic changes in developed countries demonstrate that the period from 18 to 25 years of age, which used to be a time of settling into adult responsibilities in work and family roles, is now something else entirely. Emerging adulthood is a life stage in developed countries in which most people are not as dependent on their parents as they were in childhood and adolescence but have not yet made commitments to the stable roles in love and work that structure adult life for most people. The *Education Focus* feature provides additional information on college enrollment and graduation in developed countries.

Unlike in developed countries, it is only a minority of young people in developing countries who currently experience anything resembling emerging adulthood (Arnett, 2015). The majority of the population still marries around age 20 and has long finished education by the late teens. For young people in

Education Focus: Falling Behind? College Graduation in the United States

While tertiary enrollment has grown markedly in developed countries in recent decades, the United States has slipped behind many other developed countries in college completion. A comprehensive report focused on the college graduation rates for 25- to 34-year-olds in 1995 and 2012 for 15 developed countries. (Researchers look at college graduation rates after the conventional age of college students in order to include the many people who take longer to complete their degree.) In 1995, the United States, together with New Zealand, led all countries with a 33% graduation rate. By 2012, however, only four countries were lower than the 39% graduation rate for the United States. The four countries were Germany and Switzerland at 31%, Spain at 29%, and Turkey at 27%. Among those with higher college graduation rates were Iceland at a remarkable 60%, New Zealand at 57%, Denmark at 49%, Japan and the Netherlands at 45%, and the Slovak Republic at 44%. Whereas the United States was in the vanguard in 1995, since that time American college graduation rates have grown at nearly the slowest rate among developed countries and many countries now surpass the United States.

In most of Europe, tertiary education is free or costs little; in northern European countries, the government also gives students a monthly stipend for living expenses. The cost of an American college education is the highest in the world at an average of US$26,000 a year. Although a college education can be expensive, especially in a country like the United States, a report by the Organisation for Economic Co-operation and Development (OECD, 2014) estimates that gross earnings benefits from tertiary education, compared with the income of a person with a secondary education, are US$350,000 for men and US$250,000 for women across all OECD countries.

Source: ESB Professional/Shutterstock

Today, more than half of emerging adults in developed countries pursue tertiary education.

Review Question:

Beyond the financial benefits to an individual of a college degree, what psychological benefits do you think there might be?

developing countries, emerging adulthood exists only for the wealthier segment of society, mainly the urban middle class, whereas the rural poor have no emerging adulthood and may even have little adolescence because they enter adultlike work at an early age and also begin marriage and parenthood relatively early. However, emerging adulthood is becoming more common in developing countries (Arnett, 2015; Jensen et al., 2012). The median ages of entering marriage and parenthood have been rising in recent decades, and an increasing proportion of young people have obtained tertiary education. Also, the urban middle class in developing countries is likely to continue to grow. It may be that a century from now, emerging adulthood will be a normative life stage worldwide, although it will continue to show variations within and between cultures, as childhood and adolescence do today.

Today's Field of Child Development

LO 1.10 Describe the cultural-developmental model that will provide the structure for this text.

As we take stock of the field of child development since its emergence more than a century ago, we see that it has steadily broadened. The field has moved from a predominant focus on children to encompass adolescents and emerging adults. This expansion

is reflected in the growth of professional organizations for instructors, researchers, and practitioners. For example, the Society for Research in Child Development (SRCD; srcd.org) was started in 1933. The Society for Research on Adolescence (SRA; s-r-a.org) and the European Association for Research on Adolescence (EARA; earaonline.org) were established in 1984 and 1988, respectively. The Society for the Study of Emerging Adulthood (SSEA; ssea.org) began in 2013. Also, as we will see in later chapters, major international organizations dedicated to the well-being of children, such as United Nations Children's Fund (UNICEF), have recently expanded their focus on children to include adolescents and emerging adults (Diers, 2013).

This text covers the full spectrum of the field of child development, from prenatal development through emerging adulthood. The following is a guide to common developmental terms and their corresponding ages that we will employ:

- *Prenatal development*, from conception until birth
- *Infancy*, birth to age 12 months
- *Toddlerhood*, ages 12–36 months
- *Early childhood*, ages 3–6 years
- *Middle childhood*, ages 6–9 years
- *Early adolescence*, ages 10–14 years
- *Late adolescence*, ages 15–18 years
- *Emerging adulthood*, ages 18–25 years

cultural-developmental model
the study of development within and across cultures in order to understand both what is universal and what is culturally distinctive

In addition to using these age periods as a conceptual framework, throughout this text we will examine child development based on a **cultural-developmental model** (Jensen, 2011, 2015). In essence, that means three things. First, we will continuously emphasize that the structure of developmental periods that children experience is profoundly affected by culture. As we have already seen, adolescence begins with the first evidence of puberty, but puberty may begin on average as early as age 9 or 10 or as late as age 15 or 16, depending on cultural conditions. To give another example, emerging adulthood exists in some cultures and not others, and consequently, adult responsibilities such as marriage and stable work may be taken on in the early teens or after the mid-20s.

Second, according to the cultural-developmental model, it is important to study child development across diverse cultures. Clearly, that is the only way to understand how development may occur in distinctive ways within cultures. But just as importantly, it is also the only way to know whether research findings from one culture generalize to other cultures. In other words, focusing on children across the globe renders the field of child development simultaneously more broadly valid across cultures *and* more attentive and applicable to local cultural conditions.

Third, the cultural-developmental model highlights that in today's globalizing world, cultural change can be quite rapid, migration and immigration are occurring on an unprecedented scale, and consequently it is not uncommon for children to identify with more than one culture. In this text, you will encounter theories and research that address this. For now, we will end this section with a small personal story to illustrate how this has been our experience. In 2005, we moved from the United States to Denmark with our 6-year-old twins for a sabbatical year. Some months into the year, we visited Copenhagen, where we were delighted to find an Indian restaurant. After ordering a selection of our favorite dishes, we were talking away in a mix of Danish and English when the waiter ambled back to our table. With a friendly smile he asked in English: "Where are you from?" Our son, Miles, explained that his mother is Danish and his father American. To which the waiter replied: "Oh, so you are half-Danish and half-American." Almost instantly Miles rejoined: "Oh no, I am 100% Danish and 100% American." This was not a math error. It was an enthusiastic affirmation that he does not consider himself half of anything, but rather a full member of both cultures.

SUMMARY: THE FIELD OF CHILD DEVELOPMENT: PAST AND PRESENT

LO 1.7 Provide some reasons why the field of child development primarily focused on younger children until about the mid-20th century.

The field of child development emerged in a historical context in which children's roles in society were changing dramatically. During the late 19th century, children in developed countries were increasingly required to attend primary school rather than working full-time alongside adults, and this change partly inspired the rise of the child study movement, led by G. Stanley Hall. Also, Sigmund Freud, whose psychosexual theory of development dominated the field until the mid-20th century, proposed that everything important in development happens in childhood.

LO 1.8 Specify when the field of child development began to address adolescence in a notable way, and explain why the age range that Hall had designated for adolescence has been moved downward by contemporary researchers.

Around 1900, G. Stanley Hall proposed that adolescence lasts from age 14 to 24. By the middle of 20th century, when developmental psychologists such as Anna Freud and Erik Erikson wrote extensively on adolescence, Hall's age range was shifted downward. One reason was the decline in the typical age for the onset of puberty that took place in the 20th century, and the other reason was the increase of secondary school attendance to become normative by mid-century in developed countries. Today's scholars consider the transition into adolescence to begin at about age 10 and the transition out of adolescence to occur in the late teens.

LO 1.9 Explain why the field of child development has recently expanded to encompass emerging adulthood.

Within recent decades, the transition into adulthood has been pushed back again. Emerging adulthood is a life stage in developed countries in which most people are not as dependent on their parents as they were in childhood and adolescence but have not yet made commitments to the stable roles in love and work that often structure adult life. Even though emerging adulthood is becoming more common in developing countries, only a minority of young people in these countries currently experiences this new stage of life, because most of them experience a relatively early entry into adult work, marriage, and parenthood.

LO 1.10 Describe the cultural-developmental model that will provide the structure for this text.

The cultural-developmental model recognizes that psychological development is profoundly affected by culture. Consequently, developmental psychology needs to study children from diverse cultures to understand both how they are similar and different. Furthermore, in a globalizing world, with record rates of migration and immigration, cultures can change rapidly, and children increasingly identify with more than one culture.

SECTION 3 HOW AND WHY WE STUDY CHILD DEVELOPMENT

Learning Objectives

1.11 Recall the five steps of the scientific method.

1.12 Identify some key ethical standards for child development research.

1.13 Summarize the main measurements used in research on child development.

1.14 Distinguish between different types of research designs.

1.15 Describe the two major types of research designs used in research on child development.

1.16 Name and define the three general levels at which child development contributes knowledge.

1.17 Give examples of how scientific knowledge can be applied across contexts to improve children's lives.

The Scientific Method and Research Ethics

The field of child development is based on the scientific method, and to understand the research presented in this text it is important to know the essential steps of this method. All investigators of child development follow the scientific method in some form. As they conduct their research, all are required to follow a standard set of ethical guidelines.

The Five Steps of the Scientific Method

LO 1.11 Recall the five steps of the scientific method.

scientific method
process of scientific investigations, involving a series of steps from identifying a research question through forming a hypothesis, selecting research measurements and designs, collecting and analyzing data, and drawing conclusions

In its classic form, the **scientific method** involves five basic steps: (1) identifying a research question, (2) proposing a hypothesis, (3) choosing a research measurement and a research design, (4) collecting data to test the hypothesis, and (5) drawing conclusions that lead to new questions and new hypotheses. **Figure 1.6** summarizes these steps.

STEP 1: IDENTIFY A RESEARCH QUESTION Every scientific study begins with an idea (Machado & Silva, 2007). A researcher wants to find an answer to a question that can be addressed using scientific methods. For example, in research on child development, the question might be "Why do cultures differ as to whether infants sleep with their mothers or alone?" or "Does daily physical activity in middle childhood affect cognitive development?" or "Do adolescent girls and boys have similar motives for playing electronic games?" The question of interest may be generated by a theory or previous research, or it may be something the researcher has noticed from personal observation or experience.

hypothesis
a researcher's idea about one possible answer to the question proposed for investigation

STEP 2: PROPOSE A HYPOTHESIS In seeking to answer the question generated in Step 1, the researcher proposes one or more hypotheses. A **hypothesis** is the researcher's idea about one possible answer to the question of interest. For example, in answer to the above question about adolescents' use of electronic games, a researcher might hypothesize

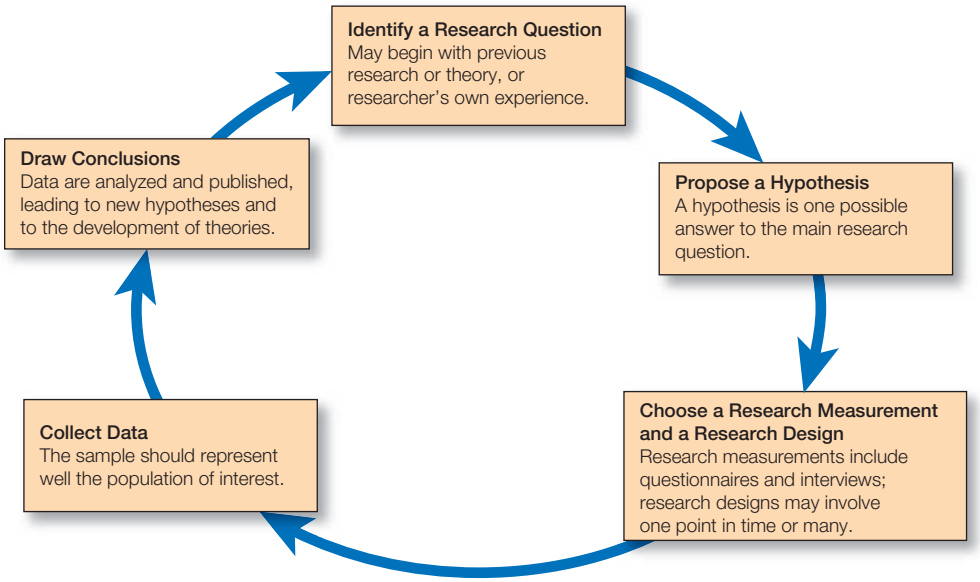


Figure 1.6 The Steps of the Scientific Method

that "Adolescent girls and boys are similar in their motives for playing electronic games, except that boys use the games more than girls as a way to relieve anger." The researcher would then design a study to test that hypothesis. The research questions and hypotheses of a study are crucial, because they influence the researcher's choices about the research measurements, research design, sampling, data analysis, and interpretation that follow.

STEP 3: CHOOSE A RESEARCH MEASUREMENT AND A RESEARCH DESIGN Once the hypothesis is proposed, the investigator must choose a research measurement and a design (Salkind, 2016). The **research measurement** is the approach to collecting data. Examples of common measurements in the field of child development are observations, questionnaires, and interviews. The **research design** is the master plan for when, where, and with whom to collect the data for the study, for example, the decision of whether to collect data at one time point or at more than one point. More detail on research measurements and designs will follow shortly.

STEP 4: COLLECT DATA After forming a hypothesis and choosing a research measurement and design, researchers who study child development seek to obtain a **sample**, which is a group of people who participate in a research study. The sample should represent the **population**, which is the entire category of people the sample represents. In the example of the researcher who wants to study adolescents' motives for playing electronic games, adolescents are the population and the specific adolescents who participate in the study comprise the sample.

The goal is to seek out a sample that will be *representative* of the population of interest (Cozby & Bates, 2015). To continue our example, if the population of interest is adolescents in general, it would be best to sample them through schools or through a telephone survey that selects households randomly from the community. On the other hand, if a researcher were particularly interested in motives for playing electronic games among the population of adolescents who are deeply committed to electronic gaming, then a gaming conference would be a good place to find a sample. It depends on the population the researcher wishes to study and on the questions the researcher wishes to address. Again, the sample should be *representative* of the population of interest. If it is, then the findings from the sample will be *generalizable* to the population. In other words, the findings from the sample will make it possible to draw conclusions about not just the sample itself but the larger population of people that the sample is intended to represent.

research measurement
the approach to collecting data; examples of common measurements in the field of child development are observations, questionnaires, and interviews

research design
the master plan for when, where, and with whom to collect the data for a study

sample
the people included in a given study, who are intended to represent the population of interest

population
the entire group of people the sample aims to represent

Source: Stephen Barnes/Entertainment/Alamy Stock Photo

If the sample is found at a gaming conference, what population is represented?

The **procedure** of the study is the step-by-step order in which the study is conducted and data are collected. For example, researchers must obtain participants' consent before data collection can begin. Also, researchers try to collect data in a way that will not be biased. For example, they must be careful not to phrase questions in an interview or a questionnaire in a way that seems to lead people toward a desired response.

STEP 5: DRAW CONCLUSIONS Once the data for a study have been collected, statistical analyses are often conducted to examine relationships between different parts of the data. Typically, the analyses are determined by the hypotheses that generated the study. For example, the researcher who hypothesized that "Adolescent girls and boys are similar in their motives for playing electronic games, except that boys use the games more than girls as a way to relieve anger," would test that hypothesis with a statistical analysis comparing girls and boys on motives that did and did not pertain to the relief of anger. Once the data are analyzed they must be interpreted. When scientists write up the results of their research for publication in a scientific journal, they interpret the results of the study in light of relevant theories and previous studies.

procedure
the step-by-step order in which a study is conducted and data are collected

After researchers write an article describing the hypotheses of the study, the methods used, the results of the statistical analyses, and the interpretation of the results, they typically submit the manuscript for the article to a professional journal. The editor of the journal then sends the manuscript out for review by other researchers. In other words, the manuscript is **peer-reviewed** for its scientific accuracy and credibility and for the importance of its contribution to the field. The editor typically relies on the reviews by the researchers' peers in deciding whether to accept the manuscript for publication. If the editor determines that the manuscript has passed the peer-review process successfully, the article is published in the journal. In addition to research articles, most journals publish occasional theoretical articles and review articles that integrate the findings from numerous other studies. Researchers studying child development also publish the results of their investigations in books, and often these books go through the peer-review process.

peer-review
in scientific research, the system of having other scientists review a manuscript to judge its merits and worthiness for publication

The results of research often lead to the development or modification of theories. A good **theory** is a framework that presents a set of interconnected ideas in an original way and inspires further research. Theories and research are intrinsically connected: A theory generates hypotheses that can be tested in research, and research leads to modifications of the theory, which generate further hypotheses and further research.

theory
framework that presents a set of interconnected ideas in an original way and inspires further research

Critical Thinking Question: Identify one question pertaining to child development that you would be interested in investigating. What would your population and your sample be?

Ethics in Child Development Research

LO 1.12 Identify some key ethical standards for child development research.

Imagine that you are a researcher interested in parent–child relations, and you design a laboratory situation where a parent leaves their toddler alone with a stranger for a brief period of time. You hypothesize that the toddler's reaction to the return of the parent is indicative of the quality of the relationship. Is this ethical?