

David R. Shaffer | Katherine Kipp

Developmental Psychology

Childhood & Adolescence

NINTH EDITION



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Developmental Psychology

9th
EDITION

Childhood and Adolescence

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David R. Shaffer and Katherine Kipp

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Dedicated to
David F. Bjorklund, PhD

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Preface

Our purpose in writing this book has been to produce a current and comprehensive overview of child and adolescent development that reflects the best theories, research, and practical advice that developmentalists have to offer. Our goal is for a substantive developmental text that is also interesting, accurate, up to date, and written in clear, concise language that an introductory student could easily understand. We believe a good text should talk “to” rather than “at” its readers, anticipating their interests, questions, and concerns, and treating them as active participants in the learning process. In the field of developmental psychology, a good text should also stress the processes that underlie developmental change so that students come away from the course with a firm understanding of the causes and complexities of development. Finally, a good text is a relevant text—one that shows how the theory and the research that students are asked to digest can be applied to real-life settings.

The present volume represents our attempt to accomplish all of these objectives. We have tried to write a book that is both rigorous and applied—one that challenges students to think about the fascinating process of developmental psychology, to share in the excitement of our young and dynamic discipline, and to acquire the knowledge of developmental principles that will serve them well in their roles as parents, teachers, nurses, day-care workers, pediatricians, psychologists, or in any other capacity by which they may one day influence the lives of developing persons.

Philosophy

Certain philosophical views underlie any systematic treatment of a field as broad as developmental psychology. Our philosophy can be summarized as follows:

Theoretical Eclecticism

There are many theories that have contributed to what we know about development, and this theoretical diversity is a strength rather than a weakness. Although some theories may do a better job than others of explaining particular aspects of development, we will see—time and time again—that *different theories emphasize different aspects of development* and that knowledge of many theories is necessary to explain the course and complexities of development. So this book does not attempt to convince its readers that any one theoretical viewpoint is “best.” The psychoanalytic, behavioristic, cognitive-development, ecological, sociocultural, social-cognitive, information-processing, ethological, evolutionary, and behavioral genetic viewpoints (as well as several less-encompassing theories that address selected aspects of development) are all treated with respect.

The Best Information about Human Development Comes From Systematic Research

To teach this course effectively, we believe that one must convince students of the value of theory and systematic research. Although there are many ways to achieve these objectives, we have chosen to discuss and illustrate many methodological approaches and specific examples. We examine how researchers use science to test their theories and answer important questions about development, children, and adolescents. We’ve taken

care to explain why there is no singular “best method” for studying development, and we’ve repeatedly stressed that our most reliable findings are those that can be replicated using a variety of methods.

A Strong “Process” Orientation

A major complaint with many developmental texts is that they describe development without adequately explaining why it occurs. In recent years, investigators have become increasingly concerned about identifying and understanding developmental processes—the biological and environmental factors that cause us to change. This book clearly reflects this emphasis. Our own process orientation is based on the belief that students are more likely to remember what develops and when if they know and understand the reasons *why* these developments take place.

A Strong “Contextual” Organization

One of the more important lessons that developmentalists have learned is that children and adolescents live in historical eras and sociocultural contexts that affect every aspect of their development. We have highlighted these contextual influences throughout the text. Cross-cultural comparisons are discussed throughout. Not only do students enjoy learning about the development of people in other cultures and ethnically diverse subcultures, but cross-cultural comparisons also helps them to see how beings can be so much alike, and at the same time so different from one another. Our contextual emphasis is also highlighted in Part Five, The Context of Development.

Human Development Is a Holistic Process

Although individual researchers may concentrate on specific topics such as physical development, cognitive development, or moral development, development is not piecemeal but *holistic*: human beings are at once physical, cognitive, social, and emotional creatures, and each of these components of “self” depends, in part, on the changes that are taking place in other areas of development. This holistic perspective is a central theme in the modern developmental sciences—and one that is emphasized throughout the text.

Organization

There are two traditional ways of presenting human development. In the *chronological*, or “ages and stages” approach, the coverage begins at conception and proceeds through the life span, using ages or chronological periods as the organizing principle. The *topical* approach is organized around areas of development and follows each from its origins to its mature forms. Each of the presentations has advantages and disadvantages.

We’ve chosen to organize this book topically to focus intently on developmental processes and to provide the student with an uninterrupted view of the sequences of change that children and adolescents experience within each developmental domain. This topical approach best allows the reader to appreciate the flow of development—the systematic, and often dramatic, transformations that take place over the course of childhood and adolescence, as well as the developmental continuities that make each individual a reflection of his or her past self. At the same time, we consider it essential to paint a holistic portrait of the developing person. To accomplish this aim, we’ve stressed the fundamental interplay among biological, cognitive, social, and cultural influences in our coverage of every aspect of development. So even though this text is topically organized, students will not lose sight of the whole person and the holistic character of development.

New to This Edition

This ninth edition has been thoroughly updated and revised to reflect the ever-changing field of developmental psychology as well as to continue the fresh approach adopted in the seventh and eighth editions to make the text more accessible to a larger audience. The text has been streamlined and the chapters condensed so that the book fits more seamlessly into a single-semester course format. The theories discussed in the second chapter in earlier editions have been moved to appear within the chapters relevant to each theory. This allows students to experience the theories when most relevant and cuts down on the repetitive presentation of theories. Returning to the organizational scheme of the seventh edition, the context of development has been organized into a chapter devoted to the family and development plus a chapter devoted to more distant contextual influences. The text brings emphasis and attention to a global society by highlighting issues of diversity and cross-cultural development with the use of diverse examples, art, research, and reflection. The ninth edition also contains numerous new photos and figures and an updated design to give it a readable, student-friendly look and feel.

In addition to these general changes, numerous changes have been made in each chapter. The following are some examples.

Chapter 1

- Removed sections and tables on family, which were compiled in Chapter 14.
- Streamlined descriptions throughout to eliminate wordiness.
- Moved the last section of the eighth edition's Chapter 2 (Themes in the Study of Human Development) to the end of Chapter 1, including a Concept Check, one figure, one table, and Key Terms.
- Changed photo captions for clarity.
- Updated Figure 1.6.
- Streamlined Table 1.5 on children's rights.

Chapter 2

- Updated examples to make them more relevant to today's college students.
- Streamlined Focus on Research: Crossing-Over and Chromosome Segregation During Meiosis boxed feature.
- Reduced Applying Research to Your Life box on ethical issues.
- Removed section titled "Parent Effects or Child Effects?"
- Added section titled "The Ethological and Evolutionary Viewpoints."
- Added numerous references throughout the chapter.

Chapter 3

- Deleted Focus on Research: Fetal Programming Theory boxed feature.
- Replaced cartoons and photos with more interesting and relevant images.

Chapter 4

- Deleted Applying Research to Your Life: Methods of Soothing a Fussy Baby boxed feature.
- Added an updated version of the Focus on Research: An Example of Observation Learning boxed feature from the eighth edition's Chapter 2.
- Added 15 new references throughout the chapter.

Chapter 5

- Deleted section titled “Psychological Impacts of Puberty” to reduce overall length and create a better flow within the chapter.

Chapter 6

- Added Focus on Research: Evaluating Piaget Through a Cross-Cultural Lens boxed feature.
- Revised Applying Research to Your Life: Cognitive Development and Children’s Humor boxed feature.
- Streamlined sections throughout the chapter, including boxed features. All sections are still well covered, but the overall length has been reduced.
- Added 29 new references throughout the chapter.

Chapter 7

- Deleted boxed features on ADHD and on educational applications.
- Deleted the section titled “Children as Eyewitnesses.”
- Shortened Applying Research to Your Life: What Happened to Our Early Childhood Memories? boxed feature.
- Added 22 new references throughout the chapter.

Chapter 8

- Significantly streamlined section titled “IQ as a Predictor of Health, Adjustment, and Life Satisfaction.”
- Updated Concept Checks.
- Deleted sections on family life, which are now covered in Chapter 14.
- Added numerous references throughout the chapter.

Chapter 9

- Added new example of syntax.
- Revised description of B.F. Skinner and the learning perspective.
- Added 24 new references throughout the chapter.

Chapter 10

- Significantly streamlined chapter, including sections on emotional expressivity, early temperamental profiles, and day care.
- Updated section on fathers and attachment.
- Updated section on long-term correlates of attachment.
- Added 23 new references throughout the chapter.

Chapter 11

- Reduced section on self-concept for easily readability.
- Deleted Applying Research to Your Life: Exploring Identity in an Online World boxed feature.
- Deleted Table 11.4 on ethnic self-identification.
- Streamlined section titled “Theories of Social-Cognitive Development.”
- Added 7 new references throughout the chapter.

Chapter 12

- Deleted Focus on Research: Do Gender Stereotypes Influence Children’s Memory? boxed feature.
- Deleted section titled “Media Influences.”
- Significantly reorganized sections on gender typing.
- Deleted section titled “Psychological Androgyny.”

Chapter 13

- Replaced Focus on Research: How Girls Are More Aggressive Than Boys boxed feature with an Applying Research to Your Life: Methods of Controlling Aggression in Young Children boxed feature.
- Updated section titled “The Affective Component of Moral Development.”
- Revised and streamlined section titled “Kohlberg’s Theory of Moral Development.”

Chapter 14

- New chapter on family as a context for development.
- Sections include the following:
 - The Ecological Systems Viewpoint
 - Understanding the Family
 - Parental Socialization During Childhood and Adolescence
 - The Influence of Siblings and Sibling Relationships
 - Diversity in Family Life
 - Applying Developmental Themes to Family Life, Parenting, and Siblings
- New boxed features include:
 - Focus on Research: Parenting Styles and Developmental Outcomes
 - Applying Research to Your Life: Renegotiating the Parent–Child Relationship During Adolescence
 - Focus on Research: Developmental Surprises from Affluent Parents

Chapter 15

- Removed sections covering family influences on development, which are now covered in Chapter 14.
- Added section about cultural influences on play development.
- Added section titled “Developmental Importance of Preschoolers’ Pretend Play.”
- Added section titled “Schooling and Cognitive Development.”
- Reorganized, updated, and streamlined section titled “Factors That Do Contribute to Effective Schooling.”
- Updated multiple sections on the effects of media on children’s development.

Writing Style

Our goal has been to write a book that speaks directly to its readers and treats them as active participants in an ongoing discussion. We have tried to be relatively informal and down to earth in our writing style and to rely heavily on questions, thought problems, concept checks, and a number of other exercises to stimulate students’ interest and involvement. Most of the chapters were “pretested” with our own students, who red-penciled whatever wasn’t clear to them and suggested several of the concrete examples, analogies, and occasional anecdotes that we’ve used when introducing and

explaining complex ideas. So, with the valuable assistance of our student-critics, we have attempted to prepare a manuscript that is substantive and challenging but that reads more like a dialogue or a story than like an encyclopedia.

Special Features

The pedagogical features of the text have been greatly expanded in this eighth edition. Among the more important features that are included to encourage student interest and involvement and make the material easier to learn are the following:

- **Four-color design.** An attractive four-color design brightens the book and makes photographs, drawings, and other illustrations come alive.
- **Outlines and chapter summaries.** An outline and brief introductory section at the beginning of each chapter provide the student with a preview of what will be covered. Each chapter concludes with a comprehensive summary, organized according to the major subdivisions of each chapter and highlighting key terms, which allows one to quickly review the chapter's major themes.
- **Subheadings.** Subheadings are employed very frequently to keep the material well organized and to divide the coverage into manageable bites.
- **Vocabulary/key terms.** More than 600 key terms appear in boldface type to alert the student that these are important concepts to learn.
- **Running glossary, key term lists, and comprehensive end-of-book glossary.** A running glossary provides on-the-spot definitions of boldfaced key terms as they appear in the text. At the end of each chapter is a list of key terms that appeared in the narrative, as well as the page number on which each term is defined. A complete glossary of key terms for the entire text appears at the end of the book.
- **Boxes.** Each chapter contains two to three boxes that call attention to important ideas, processes, issues, or applications. The aim of these boxes is to permit a closer or more personal examination of selected topics while stimulating the reader to think about the questions, controversies, practices, and policies under scrutiny. The boxes fall into two categories: **Focus on Research**, which discusses a classic study or contemporary research that has been highly influential in illuminating the causes of development, and **Applying Research to Your Life**, which focuses on applying what we know to optimize developmental outcomes. All of these boxes are carefully woven into the chapter narrative and were selected to reinforce central themes in the text.
- **Illustrations.** Photographs, tables, and figures are used extensively. Although the illustrations are designed, in part, to provide visual relief and to maintain student interest, they are not merely decorations. All visual aids, including the occasional cartoons, were selected to illustrate important principles and concepts and thereby enhance the educational goals of the text.
- **Concept checks.** The concept checks, introduced in the fourth edition, became an immediate hit. Many student comment cards indicated that these brief exercises (three or four per chapter) have the intended effects of being engaging, challenging, and permitting an active assessment of one's mastery of important concepts and developmental processes. Several students explicitly stated that concept checks helped them far more than the typical "brief summary" sections appearing in their other texts (which were perceived as too brief and too general). The concept checks have been written or substantially revised to incorporate the kinds of questions students find most useful and to reflect the new concepts and new understandings included in this edition. Answers to all concept checks can be found in the Appendix at the back of the book.

- **End-of-chapter practice quizzes.** End-of-chapter practice quizzes allow students to test their knowledge of the chapter. Each quiz consists of 10 multiple-choice questions that sample key concepts across the chapter, including concepts introduced in the boxes. The questions vary in difficulty and style: some are relatively easy definition-type questions, others are more difficult application and critical thinking questions that will challenge students to not only memorize, but to integrate the material from the chapter. Answers to all concept checks can be found in the Appendix at the back of the book.
- **Theme icons.** Icons help visually emphasize the four core themes of the text: Nature versus nurture, the active versus passive child, qualitative and quantitative changes, and the holistic nature of development.

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Acknowledgments

As is always the case with projects as large and as long-lasting as this one, there are many individuals whose assistance was invaluable in the planning and production of this book. The quality of any volume about developmental psychology depends to a large extent on the quality of the prepublication reviews from developmentalists around the world. Many colleagues (including several dozen or so interested, unpaid volunteers) have influenced this book by contributing constructive criticisms, as well as useful suggestions, references, and a whole lot of encouragement. Each of those experts has helped to make the final product a better one, and we thank them all.

The reviewers of this edition were Shirley Hensch, University of Wisconsin Colleges; Shaziela Ishak, Ramapo College of New Jersey; Lois Muir, University of Montana; Gregory Reynolds, University of Tennessee; Jessica Snowden Patel, Loyola University Chicago; and Christia Spears Brown, University of Kentucky.

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Finally, we owe especially important debts of gratitude to our past and present sponsoring editors. C. Deborah Laughton conceived this project many years ago, and was always there throughout the first and most of the second edition, answering questions, solving problems, and finding ways to get more work out of Dave than we believed was possible. Vicki Knight came on board for the third edition, and her dedication to the project would make one think that she had conceived it herself. Jim Brace-Thompson skillfully shepherded Dave through the fourth and fifth editions and is responsible for many of the improvements in the book's design and content. Edith Beard Brady presided over the sixth edition. Michele Sordi provided unending guidance, support, and enthusiasm to bring Katherine on board as coauthor for the seventh edition. Although different in their styles, each of these persons is a splendid editor who has taught us so much about the preparation of effective educational materials. We are indeed fortunate to have had their counsel over the years, and we wish to thank them sincerely for their innumerable efforts on our behalf.

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David R. Shaffer and Katherine Kipp

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Randall Fung/Corbis/Jupiter Images

Introduction to Developmental Psychology and Its Research Strategies

Introduction to Developmental Psychology

Research Strategies: Basic Methods and Designs

Focus on Research: A Cross-Cultural Comparison of Gender Roles

Research Strategies and Studying Development

Ethical Considerations in Developmental Research

Applying Research to Your Life: Becoming a Wise Consumer of Developmental Research

Themes in the Study of Human Development

ONE AFTERNOON as I cycled home after attempting to bike 25 miles to the local mountain, I spotted a lemonade stand, where several children and a couple of adults were gathered. I was in the process of deciding whether it was worth stopping for a taste, when a small boy about 4 years old screamed at me, “Lem-nade! Fif-fy cents!”

His sales technique convinced me—I stopped. The boy and an older sister who was 9 or 10 approached me. “I’ll take some,” I told them. By now the 4-year-old had walked up so close to me that I almost fell over him. He waved an empty cup and yelled at me again. I was baffled by his blabber and asked him to repeat himself. I was able to make out “Pink or yellow?” and I inquired which he thought was best. “Pink,” he answered without hesitation. I told him that I’d take his recommendation. His sister, who had not said a word, immediately went to pour my glass. In the meantime, I gave the 4-year-old a dollar and said, “I’ll have two.”

The 4-year-old galloped off with my money. His sister returned with the lemonade. I took the cup and began to drink. The sister continued to stand in front of me expectantly. When she finally realized that I did not understand her behavior, she very politely extended her hand. “Oh,” I said as I pointed to the 4-year-old, “I already paid him.”

The girl smiled and skipped back toward the table loaded with pitchers, cups, and money box. The *cha-ching* of money filling the till had clearly excited her, but she composed herself and returned to stand in her spot behind the table.

As I sipped my lemonade, I noticed that other children were present. Two boys, who by garb and demeanor appeared to be late-stage middle schoolers, were sprawled on the grass by the sidewalk, conversing in hushed tones. Two girls, heads taller than the boys but apparently preteens as well, stood a few feet behind the stand. The girls were standing with their heads together, chatting and giggling. They at least had selected a position that implied they intended to help with the lemonade enterprise, even

though they were currently ignoring it. In fact, only three people seemed to be actively engaged in the lemonade project: the 4-year-old salesman, his more reserved sister, and an adult woman, who I assumed was their mother.

Standing on the grass beyond the commotion was a brightly smiling man. He was clearly enjoying the whole event and struck up a conversation with me. As I suspected, this was Dad. The 4-year-old was already back at the street, hollering at potential customers. “He’s our top salesman,” Dad told me. “What’s the reason for the lemonade stand?” I asked. “What will you use the money for?” The friendly and gregarious father started to answer me, but he managed to stop himself and, instead, fielded the question to the diligent 9-year-old. “Megan, would you like to explain what we’re doing?” His daughter, still standing very politely behind the sales table, told me about the people that the money would benefit: The money would be given to the local homeless shelter to provide toiletries for the residents. I was amazed at how much her demeanor differed from her brother’s. I commended their efforts and pedaled homeward.

My experience at the lemonade stand was an interactive reminder of the kinds of behavior and contrasts among individuals and age groups that evoke questions about human development. What processes transform excited 4-year-olds and diligent 9-year-olds into self-absorbed preteens? Why were the boys able to blow off their responsibilities without feeling guilty, whereas the girls were compelled to at least appear to be helping? Are the temperament differences in siblings due to age, genetics, or the influence of their same-sex role models? If adults are capable of interpreting the jabber of a toddler, why does that child’s diction ever improve? Can parents effectively foster altruism and enterprise in their offspring? When do young children begin to grasp the concept of number correspondence (I never received my second cup of lemonade)? Do children who live in impoverished communities pass through the same social and developmental milestones as those who live in healthier communities? For that matter, why does a woman who is approaching 50 get on a bicycle and ride 25 miles uphill?

Introduction to Developmental Psychology

The aim of this book is to seek answers for these and many other fascinating questions about developing persons by reviewing the theories, methods, discoveries, and many practical accomplishments of the modern developmental sciences. This introductory chapter lays the groundwork for the remainder of the book by addressing important issues about the nature of human development and how knowledge about development is gained. What does it mean to say that people “develop” over time? How is your experience of development different from that of developing persons in past eras or in other cultures? Why are scientific studies of human development necessary? And what strategies, or research methods, do scientists use to study the development of children and adolescents? Let’s begin by considering the nature of development.

What Is Development?

Development refers to systematic continuities and changes in the individual that occur between conception (when the father’s sperm penetrates the mother’s ovum, creating a new organism) and death. By describing *changes* as “systematic,” we imply that they are orderly, patterned, and relatively enduring, so that temporary mood swings and other transitory changes in our appearances, thoughts, and behaviors are therefore excluded. We are also interested in “**developmental continuities**,” or ways in which we remain the same or continue to reflect our past.

If development represents the continuities and changes an individual experiences from “womb to tomb,” the developmental sciences refer to the study of these

development

systematic continuities and changes in the individual over the course of life.

developmental continuities

ways in which we remain stable over time or continue to reflect our past.

developmental psychology

the branch of psychology devoted to identifying and explaining the continuities and changes that individuals display over time.

developmentalist

any scholar, regardless of discipline, who seeks to understand the developmental process (such as psychologists, biologists, sociologists, neuroscientists, anthropologists, educators).

maturation

developmental changes in the body or behavior that result from the aging process rather than from learning, injury, illness, or some other life experience.

learning

a relatively permanent change in behavior that results from one's experiences or practice.



© Michael Newman/PhotoEdit

Developmental psychology has provided research to identify methods that could be used to assist learning-disabled children with their schoolwork, such as smaller classes, more individual attention, and special computer programs designed for children with learning disabilities.

normative development

developmental changes that characterize most or all members of a species; typical patterns of development.

ideographic development

individual variations in the rate, extent, or direction of development.

phenomena and are a multidisciplinary enterprise. Although **developmental psychology** is the largest of these disciplines, many biologists, sociologists, anthropologists, educators, physicians, neuroscientists, and even historians share an interest in developmental continuity and change and have contributed in important ways to our understanding of both human and animal development. Because the science of development is multidisciplinary, we use the term **developmentalist** to refer to any scholar—regardless of discipline—who seeks to understand the developmental process.

What Causes Us to Develop?

To grasp the meaning of development, we must understand two important processes that underlie developmental change: maturation and learning. **Maturation** refers to the biological unfolding of the individual according to species-typical biological inheritance and an individual person's biological inheritance. The human maturational (or species-typical) biological program calls for us to become capable of walking and uttering our first meaningful words at about 1 year of age, to reach sexual maturity between ages 11 and 15, and then to age and die on roughly similar schedules. Maturation is partly responsible for psychological changes such as our increasing ability to concentrate, solve problems, and understand another person's thoughts or feelings. So one reason that we humans are so similar in many important respects is that our common species heredity guides all of us through many of the same developmental changes at about the same points in our lives.

The second critical developmental process is **learning**—the process through which our *experiences* produce relatively permanent changes in our feelings, thoughts, and

behaviors. Let's consider a very simple example. Although a certain degree of physical maturation is necessary before a grade-school child can become proficient at dribbling a basketball, careful instruction and many, many hours of practice are essential if this child is ever to approximate the ball-handling skills of a professional basketball player. Many of our abilities and habits do not simply unfold as part of maturation; we often learn to feel, think, and behave in new ways from our observations of and interactions with parents, teachers, and other important people in our lives, as well as from events that we experience. This means that we change in response to our *environments*—particularly in response to the actions and reactions of the people around us. Of course, most developmental changes are the product of *both* maturation and learning. And as we will see throughout this book, some of the more lively debates about human development are arguments about which of these processes contributes most to particular developmental changes.

What Goals Do Developmentalists Pursue?

Three major goals of the developmental sciences are to describe, to explain, and to optimize development (Baltes,

Reese, & Lipsitt, 1980). In pursuing the goal of *description*, human developmentalists carefully observe the behavior of people of different ages, seeking to catalog how people change over time. Although there are typical pathways of development that virtually all people follow, no two persons are exactly alike. Even when raised in the same home, children often display very different interests, values, abilities, and behaviors. Thus, to adequately describe development, it is necessary to focus both on typical patterns of change (or **normative development**) and on individual variations in patterns of change (or **ideographic development**). So, developmentalists seek to understand

the important ways that developing humans resemble each other and how they are likely to differ as they proceed through life.

Adequate description provides us with the “facts” about development, but it is only the starting point. Developmentalists next seek to explain the changes they have observed. In pursuing this goal of *explanation*, developmentalists hope to determine *why* people develop as they typically do and *why* some people develop differently than others. Explanation centers both on normative changes *within* individuals and variations in development *between* individuals. As we will see throughout the text, it is often easier to describe development than to conclusively explain how it occurs.

Finally, developmentalists hope to *optimize* development by applying what they have learned in attempts to help people develop in positive directions. This is a practical side to the study of human development that has led to such breakthroughs as ways to

- promote strong affectional ties between fussy, unresponsive infants and their frustrated parents;
- assist children with learning difficulties to succeed at school; and
- help socially unskilled children and adolescents to prevent the emotional difficulties that could result from having no close friends and being rejected by peers.

Many believe that such *optimization* goals will increasingly influence research agendas in the 21st century (Fabes et al., 2000; Lerner, Fisher, & Weinberg, 2000) as developmentalists show greater interest in solving real problems and communicating the practical implications of their findings to the public and policymakers (APA Presidential Task Force on Evidence-Based Practice, 2006; Kratochwill, 2007; McCall & Groark, 2000; Schoenwald et al., 2008). Yet, this heavier focus on *applied* issues in no way implies that traditional descriptive and explanatory goals are any less important, because optimization goals often cannot be achieved until researchers have adequately described and explained normative and ideographic pathways of development (Schwebel, Plumert, & Pick, 2000).

Some Basic Observations About the Character of Development

Now that we have defined development and talked very briefly about the goals that developmentalists pursue, let’s consider some of the conclusions they have drawn about the character of development.

A Continual and Cumulative Process Although no one can specify precisely what adulthood holds in store from even the most meticulous examination of a person’s childhood, developmentalists have learned that the first 12 years are extremely important years that set the stage for adolescence and adulthood. Who

we are as adolescents and adults also depends on the experiences we have later in life. Obviously, you are not the same person you were at age 10 or at age 15. You have probably grown somewhat, acquired new academic skills, and developed very different interests and aspirations from those you had as a fifth grader or a high school sophomore. And the path of such developmental change stretches ever onward, through middle age and beyond, culminating in the final change that occurs when we die. In sum, human development is best described as a *continual* and *cumulative* process. The one constant is change, and the changes that occur at each major phase of life can have important implications for the future.

Table 1.1 presents a chronological overview of the life span as developmentalists see it. Our focus in this text is on development during the first five periods of life: prenatal development, infancy and toddlerhood, preschool, middle childhood, and adolescence. By examining how



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The series of photos on the following pages depict the physical development of a single child. Developmentalists label the first year of life *infancy*.

TABLE 1.1 A Chronological Overview of Human Development

Period of Life	Approximate Age Range
1. Prenatal period	Conception to birth
2. Infancy	Birth to 18 months old
3. Toddlerhood	18 months old to 3 years old
4. Preschool period	3 to 5 years of age
5. Middle childhood	5 to 12 or so years of age (until the onset of puberty)
6. Adolescence	12 or so to 20 years of age (many developmentalists define the end of adolescence as the point at which the individual begins to work and is reasonably independent of parental sanctions)
7. Young adulthood	20 to 40 years of age
8. Middle age	40 to 65 years of age
9. Old age	65 years of age or older

Note: The age ranges listed here are approximate and may not apply to any particular individual. For example, some 10-year-olds have experienced puberty and are properly classified as adolescents. Some adolescents are fully self-supporting, with children of their own, and are best classified as young adults.



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Developmentalists label 18-month-olds to 3-year-olds *toddlers*.



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Developmentalists label 3- to 5-year-olds *preschoolers*.

children develop from the moment they are conceived until they reach young adulthood, we will learn about ourselves and the determinants of our behavior. Our survey will also provide some insight as to why no two individuals are ever exactly alike. Our survey won't provide answers to every important question you may have about developing children and adolescents; the study of human development is still a relatively young discipline with many unresolved issues. But as we proceed, it should become quite clear that developmentalists have provided an enormous amount of very practical information about young people that can help us to become better educators, child/adolescent practitioners, and parents.

A Holistic Process It was once fashionable to divide developmentalists into three camps: (1) those who studied *physical growth* and development, including bodily changes and the sequencing of motor skills; (2) those who studied *cognitive* aspects of development, including perception, language, learning, and thinking; and (3) those who concentrated on *psychosocial* aspects of development, including emotions, personality, and the growth of interpersonal relationships. Today we know that this classification system is misleading, for researchers who work in any of these areas have found that changes in one aspect of development have important implications for other aspects. Let's consider an example.

What determines a person's popularity with peers? If you were to say that social skills, part of the psychosocial aspect of development, are important, you would be right. Social skills such as warmth, friendliness, and willingness to cooperate are characteristics that popular children typically display. Yet there is much more to popularity than meets the eye. We now have some indication that the age at which a child reaches puberty, a physical development, has an effect on social life. For example, boys who reach puberty early enjoy better relations with their peers than



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Developmentalists label the period from about 5 years old to the onset of puberty *middle childhood*.



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Developmentalists label the period from the onset of puberty to about 20 years old *adolescence*.

holistic perspective

a unified view of the developmental process that emphasizes the important interrelationships among the physical, mental, social, and emotional aspects of human development.

plasticity

capacity for change; a developmental state that has the potential to be shaped by experience.

do boys who reach puberty later (Livson & Peskin, 1980). On the cognitive side, it has been observed that children who do well in school also tend to be more popular with their peers than children who perform somewhat less well in school.

We see, then, that popularity depends not only on the growth of social skills but also on various aspects of both cognitive and physical development. As this example illustrates, development is not piecemeal but *holistic*—humans are physical, cognitive, and social beings, and each of these components of self depends, in part, on changes taking place in other areas of development. This **holistic perspective** is incorporated by many researchers into their theories and research (for example, Halpern et al., 2007) and is the perspective around which this book is organized.

Plasticity Plasticity refers to a capacity for change in response to positive or negative life experiences. Although we have described development as a continual and cumulative process and noted that past events often have implications for the future, developmentalists know that the course of development can change abruptly if important aspects of one's life change. For example, somber babies living in barren, understaffed orphanages often become quite cheerful and affectionate when placed in socially stimulating adoptive homes (Rutter, 1981). Highly aggressive children who are intensely disliked by peers often improve their social status after learning and practicing the social skills that popular children display (Mize & Ladd, 1990; Shure, 1989). It is indeed

fortunate that human development is so plastic, for children who have horrible starts can often be helped to overcome their deficiencies.

Historical/Cultural Context No single portrait of development is accurate for all cultures, social classes, or racial and ethnic groups. Each culture, subculture, and social class transmits a particular pattern of beliefs, values, customs, and skills to its younger generations, and the content of this cultural socialization has a strong influence on the attributes and competencies that individuals display. Development is also influenced by societal changes: historical events such as wars, technological breakthroughs such as the development of the Internet, and social causes such as the gay and lesbian rights movement. Each generation develops in its own way, and each generation changes the world for succeeding generations.

So we should not assume that developmental patterns observed in North American or European children (the most heavily studied populations) are optimal, or even

CONCEPT CHECK 1.1

Introduction to Developmental Psychology

Check your understanding of the science and history of developmental psychology by answering the following questions. Answers to objective questions appear in the Appendix.

Multiple Choice: Select the best answer for each question.

- _____ 1. According to developmentalists, the *primary* cause of developmental change is
 - a. maturation.
 - b. learning.
 - c. experience.
 - d. the product of both maturation and learning.
 - e. the product of both learning and experience.
- _____ 2. Among the following, who would *not* be considered a “developmentalist”?
 - a. A sociologist
 - b. An anthropologist
 - c. A historian
 - d. *All* of the above might be considered developmentalists.
 - e. *None* of the above would be considered developmentalists.
- _____ 3. The goals of the developmental sciences discussed in the text include
 - a. the description of development.
 - b. the explanation of development.
 - c. the optimization of development.
 - d. all of the above.
- _____ 4. Enrique is a developmental psychologist. He studies children’s adjustment following their parents’ divorce and remarriage. He finds that sullen children who become withdrawn and isolated after their parents’ divorce can be helped to become happier and more social through play therapy. Which aspect of developmental change does Enrique’s research most reflect?
 - a. Development is a continual and cumulative process.

- b. Development is marked by plasticity.
- c. Development is a holistic process.
- d. Development depends on the historical and cultural context in which it occurs.

Fill in the Blank: Fill in the blank with the appropriate word or phrase.

5. In the developmental sciences, typical patterns of change are called _____, whereas individual variations in patterns of change are called _____.

Matching: Match the area of developmental science with the specific aspects of development that are studied.

Area of Developmental Science	Aspects of Development
6. cognitive	a. bodily changes and sequencing of motor skills
7. physical growth	b. emotions, personality, and relationships
8. psychosocial	c. perception, language, learning, and thinking

Short Answer: Briefly answer the following question.

9. Explain the difference between maturation and learning.

Essay: Provide a more detailed answer to the following question.

10. Describe differences in the historical and cultural context between your generation and your parents’ generation. How might these differences have affected your development compared to that of your parents?