EIGHTH EDITION

CHILD DEVELOPMENT

JOHN W. SANTROCK

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JOHN W. SANTROCK

UNIVERSITY OF TEXAS AT DALLAS

Boston, Massachusetts Burr Ridge, Illinois Dubuque, Iowa
Madison, Wisconsin New York, New York San Francisco, California St. Louis, Missouri

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CHILD DEVELOPMENT

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With special appreciation to my wife Mary Jo, my children Tracy and Jennifer, and my granddaughter Jordan.

PREFACE

The first edition of *Child Development* was published in 1978. With this, the eighth edition, the book now spans more than 20 years. The child's developmental journey continues to grow in fascination for me. This is an exciting time to study and write about children's development. Scholars around the world are making new discoveries and developing new insights about virtually every domain of child development at a much faster pace than in previous decades. The field of child development is maturing to the point at which the knowledge that is being gained can be applied to children's lives to improve their adaptation, health, and well-being.

The eighth edition of *Child Development* continues to follow a topical format. The core knowledge of the field has been retained, but, as in the seventh edition, I carefully added to, subtracted from, integrated, and simplified the material for this new edition. The significant changes involved updating the research knowledge base that is the foundation of what we know about children's development and refining and applying what we know to improve the lives of children.

Summary of Main Changes in *Child Development*, Eighth Edition

The most important changes in the eighth edition of *Child Development* are these:

1. New Explorations in Child Development chapter endpieces.
2. Extensive research updating and individual chapter content reviews by expert consultants.
3. Significant expansion and updating of the discussions of sensory and perceptual development.
4. Increased emphasis on critical thinking about children's development.

Explorations in Child Development Chapter Endpieces

The new Explorations in Child Development chapter endpieces consist of two parts: (1) Research in Child Development and (2) Improving the Lives of Children. These two parts provide students with expanded treatments of research and applications in child development.

The Research in Child Development section provides students with an opportunity to see how scientists who study child development actually conduct research studies. In the first two chapters, students learn why research in child development is important and how the journal process works. In subsequent chapters, students will read a minisimulation of a journal article that focuses on one of the chapter's topics.

The section on Improving the Lives of Children gives students an opportunity to see how information about children's development can be applied to the real worlds of children to improve their lives. The topics in this section include parenting strategies, prevention/intervention when children have problems, and better educational techniques.

Extensive Research Updating and Individual Chapter Content Reviews by Expert Consultants

Approximately 30 percent of the references in the eighth edition of *Child Development* are new. More than 300 come from 1995, 1996, 1997, and in-press sources.

The dramatic expansion of research in many areas of child development makes it virtually impossible for authors to provide a completely up-to-date rendering of content in all areas. To considerably improve the research content in many areas, the eighth edition of *Child Development* underwent the most extensive review process of all of the book's editions.

For the first time in the book's history, a different expert consultant was obtained for each chapter of *Child*

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Development. The eighteen expert consultants are among the world's leading figures in their respective areas. They went over individual chapters with a fine-tooth comb, making detailed recommendations on what to add, what to delete, and how to interpret issues. The following are the leading expert consultants for the eighth edition of *Child Development:*

Chapter One: Marc Bornstein *National Institute of Child Health and Human Development*
Chapter Two: Glen Elder, Jr. *University of North Carolina*
Chapter Three: Kevin MacDonald *California State University, Long Beach*
Chapter Four: Tiffany Field *University of Miami (Florida)*
Chapter Five: Herb Pick *University of Minnesota*
Chapter Six: Cynthia Graber *Columbia University*
Chapter Seven: Mary Gauvaign *University of California, Riverside*
Chapter Eight: Deanna Kuhn *Columbia University*
Chapter Nine: Steven Ceci *Cornell University*
Chapter Ten: Nan Ratner *University of Maryland*
Chapter Eleven: Michael Lamb *National Institute of Child Health and Human Development*
Chapter Twelve: Daniel Hart *Rutgers University*
Chapter Thirteen: Janet Spence *University of Texas, Austin*
Chapter Fourteen: Lawrence Walker *University of British Columbia*
Chapter Fifteen: Dante Cicchetti *University of Rochester*
Chapter Sixteen: Janice Kupersmidt *University of North Carolina*
Chapter Seventeen: Alice Honig *Syracuse University*
Chapter Eighteen: Cynthia Garcia Coll *Wellesley College*

In addition to the eighteen expert consultants for *Child Development*, other leading researchers have also sent me valuable feedback that has influenced my thinking about material that is included in this eighth edition. These leading researchers who have served as expert consultants on my writing projects include:

Diana Baumrind *University of California, Berkeley*
Paul Baltes *Max Planck Institute, Berlin*
Florence Denmark *Pace University*
Rosalind Charlesworth *Weber State University*
Daniel Schacter *Harvard University*
Richard Brislin *University of Hawaii*
James Jones *University of Delaware*
John Harvey *University of Iowa*
Lilian Comaz-Diaz *Transcultural Institute*
Helen Tager-Flusberg *University of Massachusetts*
Sandra Graham *UCLA*

Significant Expansion and Updating of the Discussions of Perceptual and Motor Development

In the seventh edition of *Child Development*, the chapter on information processing was significantly upgraded through the efforts of one of the world's leading experts, Robert Siegler of Carnegie-Mellon University. To continue the research upgrading of *Child Development*, the material on perceptual and motor development was expanded and extensively revised. Research on perceptual and motor development in infancy has grown dramatically, and the increased space given to this important topic was needed. In addition to its increased emphasis on perceptual and motor development, chapter 6 also includes an important new section on brain development, reflecting the increased interest in this important area.

Critical Thinking About Children's Development

I continue to strive to improve the pedagogical system in *Child Development*. To this end, I have significantly expanded the critical-thinking sections of the book. To help me with this expansion, Jane Halonen of Alverno College, one of the leading experts on critical thinking in the teaching of psychology, served as an advisor and consultant.

Critical Thinking About Children's Development boxes appear twice in each chapter. Students will be encouraged to stretch their thinking about an aspect of child development related to the chapter material. In addition, the nature of critical thinking about children's development is introduced in the main body of the text toward the end of chapter 1.

Student Friendliness

I remember having to read some poorly written, uninteresting textbooks when I was an undergraduate student. I have worked at length to make *Child Development*, eighth edition, a very student-friendly book. I continue to ask college students of all ages to give me feedback about which strategies for presenting material they like best and which they like least.

Student friendliness begins with writing, and students tell us that this text is written in a clear, organized manner. Examples of concepts are given at every step of the way, and the conversational writing style engages students to think about their own childhood and the lives of other children. The book also has cartoons, beautiful photographs and artpieces, and many applied features. If students enjoy this book and feel they have considerably

more knowledge about both the scientific and the applied worlds of children's development upon finishing it, then I will have reached my goals for the book's eighth edition.

The book's student friendliness includes the visual preface titled **To the Student,** which follows. In this student preface, the book's learning system is visually presented along with information about how to use it effectively. Students who read the seventh edition of *Child Development* told us time after time that the learning system was extremely valuable in helping them to organize and learn about the different content domains of child development.

Ancillary Materials

The following materials are also available. For more information please contact your local Sales Representative.

Annual Editions®

Magazines, newspapers, and journals of the public press play an important role in providing current, first-rate, relevant educational information. If in your child development course you are interested in exposing your students to a wide range of current, well-balanced, carefully selected articles from some of the most important magazines, newspapers, and journals published today, you may want to consider *Annual Editions: Child Growth and Development,* published by Dushkin/McGraw-Hill. *Annual Editions: Child Growth and Development* is a collection of over 40 articles on topics related to the latest research and thinking in child development. *Annual Editions* is updated on an annual basis, and there are a number of features designed to make it particularly useful, including a topic guide, an annotated table of contents, and unit overviews. Consult your Sales Representative for more details.

Taking Sides®

Are you interested in generating classroom discussion? In finding a tool to more fully involve your students in their experience of your course? Would you like to encourage your students to become more active learners? To develop their critical thinking skills? Lastly, are you yourself intrigued by current controversies related to issues in childhood and development? If so, you should be aware of a new publication from Dushkin/McGraw-Hill. *Taking Sides: Clashing Views on Controversial Issues in Childhood and Society,* edited by Professors Robert L. DelCampo and Diane S. DelCampo of New Mexico State University. *Taking Sides,* a reader that takes a pro/con approach to issues, is designed to introduce students to controversies in childhood and development. The readings, which represent the arguments of leading child behaviorists and social commentators, reflect a variety of viewpoints and have been selected for their liveliness, currency, and substance. Consult your Sales Representative for more details.

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Ancillary Materials for the Instructor

The publisher and ancillary team have worked together to produce an outstanding integrated teaching package to accompany *Child Development*. The authors of the ancillaries are all experienced teachers in the child development course. The ancillaries have been designed to make it as easy as possible to customize the entire package to meet the unique needs of professors and students.

Instructor's Manual

The key to this teaching package was created by Allen H. Keniston and Blaine F. Peden of the University of Wisconsin–Eau Claire. Allen and Blaine are both award-winning teachers and active members of The Council of Teachers of Undergraduate Psychology. This flexible manual provides a variety of useful tools to enhance your teaching efforts, reduce your workload, and increase your enjoyment. For each chapter of the text, the manual provides an outline and overview. The manual also contains lecture suggestions, classroom activities, discussion questions, integrative essay questions, a film list, and a transparency guide. It contains an abundance of handouts and exercises for stimulating classroom discussion and encouraging critical thinking.

The **Test Bank** was constructed by Lynne Blesz Vestal. This comprehensive test bank includes over 1,800 multiple-choice test questions that are keyed to the text and learning objectives. Each item is designated factual, conceptual, or applied as defined by the first three levels of Benjamin Bloom's *Taxonomy of Educational Objectives* (1956).

The questions in the Test Bank are available on **MicroTest III,** a powerful but easy-to-use test-generating program by Chariot Software Group. MicroTest is available for Windows and Macintosh. With MicroTest, you can easily select questions from the Test Bank and print a test and an answer key. You can customize questions, headings, and instructions, you can add or import questions of your own, and you can print your test in a choice of fonts if your printer supports them.

The **Student Study Guide** was created by Blaine F. Peden and Allen H. Keniston of the University of Wisconsin–Eau Claire. For each chapter of the text, the student is provided with learning objectives and key terms, a guided review, and two self-tests. One covers key terms and key persons, and the other entails multiple choice questions (with answers provided for self-testing). The study guide includes the section "How to Be a Better Student" to help students study more effectively and efficiently.

Resources for Improving Children's Development is a new course supplement that was created by author John Santrock. It includes telephone numbers, agencies, brochures, and books that can be used to improve the lives of children. This course supplement can be packaged with *Child Development,* Eighth Edition.

Guide to Life-Span Development for Future Nurses and **Guide to Life-Span Development for Future Educators** are new course supplements that help students apply the concepts of human development to the education and nursing professions. Each supplement contains information, exercises, and sample tests designed to help students prepare for certification and understand human development from these professional perspectives.

The **Human Development Transparency/Slide Set,** Second Edition, consists of 141 newly developed acetate transparencies or slides. These full-color transparencies, selected by author John Santrock and Janet Simons, include graphics from the text and various outside sources and were expressly designed to provide comprehensive coverage of all major topic areas generally covered in life-span development. A comprehensive annotated guide provides a brief description for each transparency and helpful suggestions for use in the classroom.

The **Human Development Electronic Image Bank CD-ROM** contains more than 100 useful images and a computer projection system divided into two separate programs: The Interactive Slide Show and the Slide Show Editor. The Interactive Slide Show allows you to play a preset slide show containing selected images. The Slide Show Editor allows you to customize and create your own slide show. You can add slides anywhere you like in the presentation and incorporate any audio or visual files you'd like, as well as create title screens. You also may use the CD-ROM images with your own presentation software (PowerPoint, etc.). (Images are available in both PICT and BMP formats, Macintosh and Windows compatible.)

A large selection of **Videotapes,** including *Seasons of Life,* is also available to instructors, based upon the number of textbooks ordered by your bookstore.

The **AIDS Booklet,** Third Edition, by Frank D. Cox of Santa Barbara City College, is a brief but comprehensive introduction to the Acquired Immune Deficiency Syndrome which is caused by HIV (Human Immunodeficiency Virus) and related viruses.

The **Critical Thinker,** written by Richard Mayer and Fiona Goodchild of the University of California, Santa Barbara, uses excerpts from introductory psychology textbooks to show students how to think critically about psychology. Either this or the AIDS booklet are available at no charge to first-year adopters of our textbook or can be purchased separately.

The **Human Development Interactive Videodisc Set** produced by Roger Ray of Rollins College, brings life-span development to life with instant access to over 30 brief video segments from the highly acclaimed *Seasons of Life* series. The 2-disc set can be used alone for selecting and sequencing excerpts, or in tandem with a Macintosh computer to add interactive commentary capability, as well as extra video and search options. Consult your Sales Representative for details.

Acknowledgments

The eighth edition of *Child Development* benefited from the ideas of a very carefully selected group of expert consultants, who were listed earlier in this preface. In addition to those reviewers, I thank the following reviewers of previous editions:

Ruth L. Ault *Davidson College*
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Marilyn Shea *University of Maine, Farmington*
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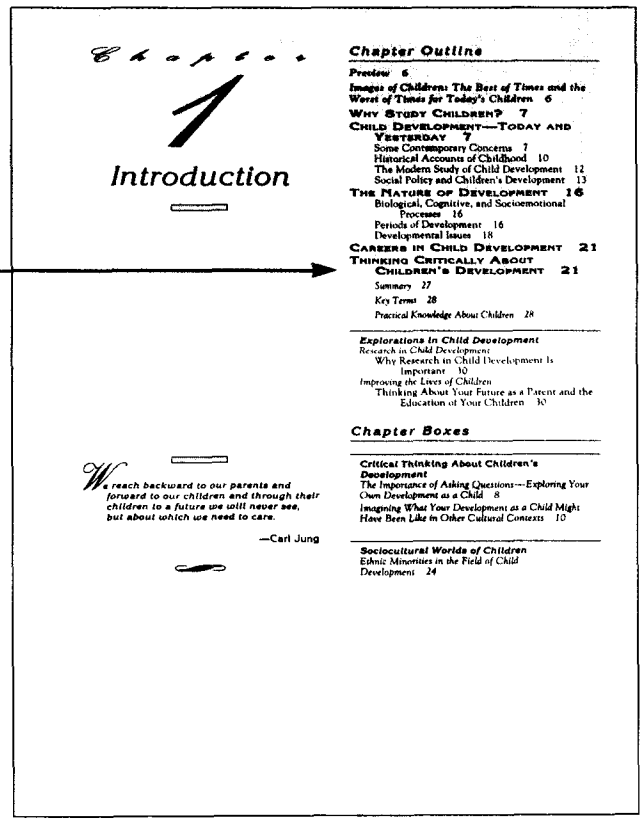
Dorothy Justus Sluss *Virginia Polytechnic Institute and State University*
Melanie Spence *University of Texas at Dallas*
Mark S. Strauss *University of Pittsburgh*
Cherie Valeithian *Kent State University*
Kimberlee L. Whaley *Ohio State University*
Belinda M. Wholeben *Northern Illinois University*

A final note of thanks goes to my family. Mary Jo Santrock has lived through eight editions of *Child Development* and continues to provide outstanding support. When the first edition of *Child Development* was written, my daughters—Tracy and Jennifer—were young children. Through the years, they have provided me with first-hand experience in watching children develop. They have helped me render a treatment of children's development that captures its complexity, its subtlety, and its humanity.

TO THE STUDENT

How the Learning System Works

This book contains a number of learning devices each of which presents the field of child development in a meaningful way. The learning devices in *Child Development* will help you learn the material more effective.



Chapter 1

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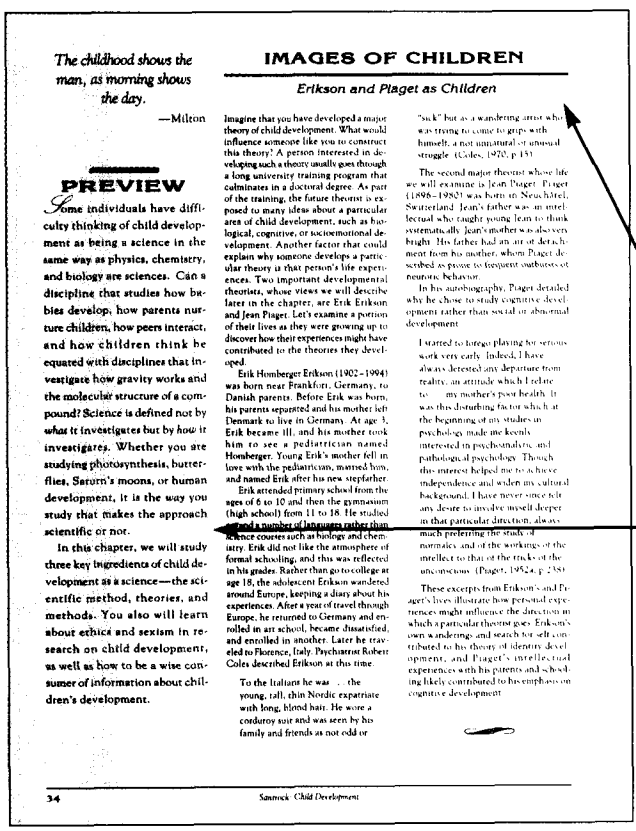
We reach backward to our parents and forward to our children and through their children to a future we will never see, but about which we need to care.

—Carl Jung

Chapter Outline

Each chapter begins with an outline, showing the organization of topics by heading levels. The outline functions as an overview to the arrangement and structure of the chapter.



The childhood shows the man, as morning shows the day.

—Milton

PREVIEW

Some individuals have difficulty thinking of child development as being a science in the same way as physics, chemistry, and biology are sciences. Can a discipline that studies how babies develop, how parents nurture children, how peers interact, and how children think be equated with disciplines that investigate how gravity works and the molecular structure of a compound? Science is defined not by *what* it investigates but by *how* it investigates. Whether you are studying photosynthesis, butterflies, Saturn's moons, or human development, it is the way you study that makes the approach scientific or not.

In this chapter, we will study three key ingredients of child development as a science—the scientific method, theories, and methods. You also will learn about ethics and sexism in research on child development, as well as how to be a wise consumer of information about children's development.

IMAGES OF CHILDREN

Erikson and Piaget as Children

Imagine that you have developed a major theory of child development. What would influence someone like you to construct this theory? A person interested in developing such a theory usually goes through a long university training program that culminates in a doctoral degree. As part of the training, the future theorist is exposed to many ideas about a particular area of child development, such as biological, cognitive, or socioemotional development. Another factor that could explain why someone develops a particular theory is that person's life experiences. Two important developmental theorists, whose views we will describe later in the chapter, are Erik Erikson and Jean Piaget. Let's examine a portion of their lives as they were growing up to discover how their experiences might have contributed to the theories they developed.

Erik Homberger Erikson (1902–1994) was born near Frankfurt, Germany, to Danish parents. Before Erik was born, his parents separated and his mother left Denmark to live in Germany. At age 3, Erik became ill, and his mother took him to see a pediatrician named Homberger. Young Erik's mother fell in love with the pediatrician, married him, and named Erik after his new stepfather.

Erik attended primary school from the ages of 6 to 10 and then the gymnasium (high school) from 11 to 18. He studied art and a number of languages rather than science courses such as biology and chemistry. Erik did not like the atmosphere of formal schooling, and this was reflected in his grades. Rather than go to college at age 18, the adolescent Erikson wandered around Europe, keeping a diary about his experiences. After a year of travel through Europe, he returned to Germany and enrolled in art school, became dissatisfied, and enrolled in another. Later he traveled to Florence, Italy. Psychiatrist Robert Coles described Erikson at this time:

> To the Italians he was . . . the young, tall, thin Nordic expatriate with long, blond hair. He wore a corduroy suit and was seen by his family and friends as not odd or "sick" but as a wandering artist who was trying to come to grips with himself, a not unnatural or unusual struggle. (Coles, 1970, p. 151)

The second major theorist whose life we will examine is Jean Piaget. Piaget (1896–1980) was born in Neuchâtel, Switzerland. Jean's father was an intellectual who taught young Jean to think systematically. Jean's mother was also very bright. His father had an air of detachment from his mother, whom Piaget described as prone to frequent outbursts of neurotic behavior.

In his autobiography, Piaget detailed why he chose to study cognitive development rather than social or abnormal development:

> I started to forego playing for serious work very early. Indeed, I have always detested any departure from reality, an attitude which I relate to . . . my mother's poor health. It was this disturbing factor which at the beginning of my studies in psychology made me keenly interested in psychoanalysis and pathological psychology. Though this interest helped me to achieve independence and widen my cultural background, I have never since felt any desire to involve myself deeper in that particular direction, always much preferring the study of normalcy and of the workings of the intellect to that of the tricks of the unconscious. (Piaget, 1952a, p. 238)

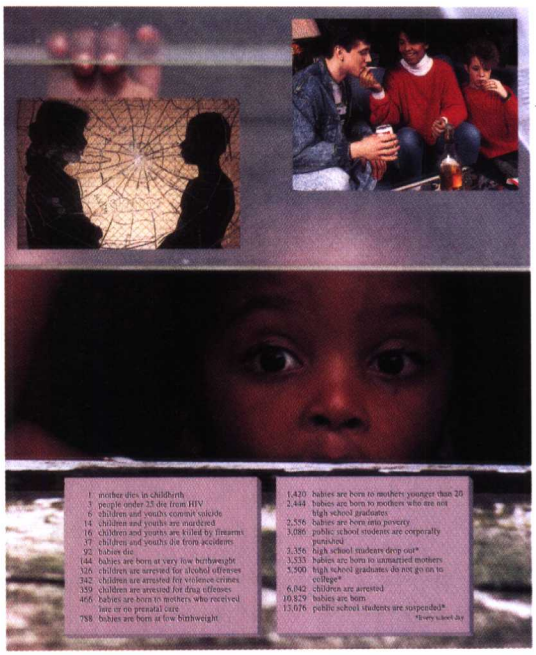
These excerpts from Erikson's and Piaget's lives illustrate how personal experiences might influence the direction in which a particular theorist goes. Erikson's own wanderings and search for self contributed to his theory of identity development, and Piaget's intellectual experiences with his parents and schooling likely contributed to his emphasis on cognitive development.

Images of Children

Opening each chapter is an imaginative, high-interest piece, focusing on a topic related to the chapter's content.

Preview

This brief section describes the chapter's main points.



Figure–1.4

One Day in the Lives of Children in the United States

Visual Figures

Visual figures combine a description of important content information with a photograph(s) to illustrate the content. In a number of instances, the visual figures represent summaries of key ideas in the text to enhance your retention.

Key Terms Definitions

Key terms appear in boldface type with their definitions immediately following in italic type. This provides you with a clear understanding of important concepts.

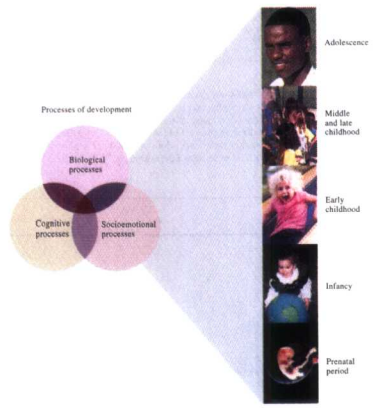
(following instructions, identifying letters), and spend many hours in play and with peers. First grade typically marks the end of this period.

Middle and late childhood *is the developmental period that extends from about 6 to 11 years of age, approximately corresponding to the elementary school years; sometimes this period is called the elementary school years.* Children master the fundamental skills of reading, writing, and arithmetic, and they are formally exposed to the larger world and its culture. Achievement becomes a more central theme of the child's world, and self-control increases.

Adolescence *is the developmental period of transition from childhood to early adulthood, entered at approximately 10 to 12 years of age and ending at 18 to 22 years of age.* Adolescence begins with rapid physical changes—dramatic gains in height and weight; changes in body contour; and the development of sexual characteristics such as enlargement of the breasts, development of pubic and facial hair, and deepening of the voice. At this point in development, the pursuit of independence and an identity are prominent. Thought is more logical, abstract, and idealistic. More and more time is spent outside the family during this period.

Today, developmentalists do not believe that change ends with adolescence (Baltes, Lindenberger, & Staudinger, 1997; Santrock, 1997). They describe development as a lifelong process. However, the purpose of this text is to describe the changes in development that take place from conception through adolescence.

The periods of development from conception through adolescence are shown in figure 1.6, along with the processes of development—biological, cognitive, and socioemotional. The interplay of biological, cognitive, and socioemotional processes produces the periods of development.



Figure–1.6

Processes and Periods of Development

Development moves through the prenatal, infancy, early childhood, middle and late childhood, and adolescence periods. These periods of development are the result of biological, cognitive, and socioemotional processes. Development is the creation of increasingly complex forms.

Developmental Issues

A number of issues generate spirited debate among developmentalists: To what extent is development influenced by maturation and experience (nature and nurture)? To what extent is it characterized by continuity and discontinuity? To what degree does it involve early versus later experiences?

Maturation and Experience (Nature and Nurture)

We can think of development as produced not only by the interplay of biological, cognitive, and socioemotional processes but also by the interplay of maturation and experience. **Maturation** *is the orderly sequence of changes dictated by the genetic blueprint we each have.* Just as a sunflower grows in an orderly way—unless flattened by an unfriendly environment—so does a human being grow in an orderly way, according to the maturational view. The range of environments can be vast, but the maturational approach argues that the genetic blueprint produces

CRITICAL THINKING ABOUT CHILDREN'S DEVELOPMENT

Imagining What Your Development as a Child Might Have Been Like in Other Cultural Contexts

Imagine what your development as a child might have been like in a culture that offered few choices compared to the Western world—Communist China during the Cultural Revolution. Young people could not select a job or a mate in rural China. They also were not given the choice of migrating to the city.

Imagine also another cultural context, this one in the United States. Supposing that you did not grow up in such circumstances, what might your life as a child have been like if you had grown up in the inner city, where most services have moved out, schools are inferior, poverty is extreme, and crime is common? (Unfortunately, some of you did grow up in such contexts.) By imagining what your development might have been like in these cultural contexts, you are *engaging in perspective taking and identifying sociohistorical and cultural factors that influence children's development.*

> *Our most basic link is that we all inhabit the same planet. We all breathe the same air. We all cherish our children's future.*
>
> —John F. Kennedy

Ethnicity *(the word* ethnic *comes from the Greek word for "nation") is based on cultural heritage, nationality characteristics, race, religion, and language.* Ethnicity is central to the development of an **ethnic identity,** *which is a sense of membership in an ethnic group based upon shared language, religion, customs, values, history, and race.* Each of you is a member of one or more ethnic groups. Your ethnic identity reflects your deliberate decision to identify with an ancestor or ancestral group. If you are of Native American and African slave ancestry, you might choose to align yourself with the traditions and history of Native Americans, although an outsider might believe that your identity is African American.

Recently, some individuals have voiced dissatisfaction with the use of the term *minority* in the phrase *ethnic minority group.* What is the nature of such dissatisfaction and objections? The term *minority* has traditionally been associated with inferiority and deficits. Further, the concept of minority implies that there is a majority. Indeed, it can be argued that there really is no majority in the United States, because Whites are actually composed of many different ethnic groups, and Whites are not a majority in the world. When we use the term *ethnic minority* in this text, the use is intentional. Rather than implying that ethnic minority children should be viewed as inferior or deficient in some way, we want to convey the impact that minority status has had on many ethnic minority children. The circumstances of each ethnic group are not solely a function of its own culture. Rather, many ethnic groups have experienced considerable discrimination and prejudice. For example, patterns of alcohol abuse among Native American adolescents cannot be fully understood unless the exploitation that has accompanied Native Americans' history is also considered (Sue, 1990).

A third very important aspect of sociocultural contexts that is receiving increased attention is gender (Beal, 1994; Ruble & Martin, 1997). **Gender** *is the sociocultural dimension of being female or male. Sex refers to the biological dimension of being female or male.* Few aspects of children's development are more central to their identity and to their social relationships than their sex or gender. Society's gender attitudes are changing. But how much? Is there a limit to how much society can determine what is appropriate behavior for males and females? These are among the provocative questions about gender that we explore in *Child Development.*

Historical Accounts of Childhood

Childhood has become such a distinct period that it is hard to imagine that it was not always thought of in that way. However, in medieval times, laws generally did not distinguish between childhood and adult offenses. After analyzing samples of art along with available publications, historian Philippe Ariès (1962) concluded that European societies did not accord any special status to children prior to 1600. In the paintings, children were often dressed in smaller versions of adult clothing (see figure 1.2).

Were children actually treated as miniature adults with no special status in medieval Europe? Ariès' interpretation has been criticized. He primarily sampled aristocratic, idealized subjects, which led to the overdrawn conclusion that children were treated as miniature adults and not accorded any special status. In medieval times,

Critical Thinking About Children's Development Boxes

These boxes are inserted periodically in each chapter to encourage you to stretch your mind about a topic in that particular section of the chapter.

Quotations

Quotations are sprinkled through each chapter to stimulate further thought about a topic.

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According to a report by the Children's Defense Fund (1990), the United States does not fare well in caring for children, compared with other nations. In this report, the Children's Defense Fund gave the United States an A for capacity to care for children but an F for performance on many key markers of children's well-being. Eighteen other countries have lower infant mortality rates than the United States does. An African American child born in inner-city Boston has less chance of surviving the first year of life than does a child born in Panama, North or South Korea, or Uruguay.

children did often work, and their emotional bond with parents may not have been as strong as it is for many children today. However, in medieval times, childhood probably was recognized as a distinct phase of life more than Ariès believed. We know that rich conceptions of children's development were held in ancient Egypt, Greece, and Rome.

Figure 1.2

Artistic Rendition of Children as Miniature Adults
These artistic impressions show how children were viewed as miniature adults earlier in history. Artists' renditions of children as miniature adults may have been too stereotypical.

Throughout history, philosophers have speculated at length about the nature of children and how they should be reared. Three such philosophical views involve the notions of original sin, *tabula rasa*, and innate goodness. In the **original sin view,** *especially advocated during the Middle Ages, children were perceived as basically bad, being born into the world as evil beings.* The goal of child rearing was to provide salvation, to remove sin from the child's life. Toward the end of the seventeenth century, the ***tabula rasa* view** *was proposed by English philosopher John Locke. He argued that children are not innately bad but instead are like a "blank tablet,"* a tabula rasa. Locke believed that childhood experiences are important in determining adult characteristics. He advised parents to spend time with their children and to help them become contributing members of society. In the eighteenth century, the **innate goodness view** *was presented by Swiss-born philosopher Jean-Jacques Rousseau, who stressed that children are inherently good.* Because children are basically good, said Rousseau, they should be permitted to grow naturally, with little parental monitoring or constraint.

In the past century and a half, our view of children has changed dramatically. We now conceive of childhood as a highly eventful and unique period of life that lays an important foundation for the adult years and is highly differentiated from them. In most approaches to childhood, distinct periods are identified, in which children master special skills and confront new life tasks.

Photographs and Legends

Special attention was given to the selection of photographs for *Child Development*. In a number of places, experts on child development sent photographs to be included in the text. Legends were carefully written to clarify and elaborate concepts.

Sociocultural Worlds of Children Boxes

Child Development gives special attention to the cultural, ethnic, and gender worlds of children. Each chapter has one or more boxed inserts that highlight the sociocultural dimensions of life-span development.

SOCIOCULTURAL WORLDS OF CHILDREN

The Human Species Is a Culture-Making Species

Unlike all other animal species, which evolve mainly in response to random changes in their environment, humans have more control over their own evolution. This change occurs through *cultural evolution*. For example, we've made astonishing accomplishments in the past 10,000 years or so, ever since we developed language. Biological (Darwinian) evolution continues in our species, but its rate, compared with cultural evolution, is so slow that its impact seems almost negligible. There is no evidence, for example, that brain size or structure has changed in our species since *Homo sapiens* appeared on the fossil record about 50,000 years ago.

As humans evolved, we acquired knowledge and passed it on from generation to generation. This knowledge, which originally instructed us in how to hunt, make tools, and communicate, became our culture. The accumulation of knowledge has gathered speed—from a slow swell to a meteoric rise. Hunter-gatherer tribes, characteristic of early human society, changed over thousands of years into small agricultural communities. With people rooted in one place, cities grew and flourished. Life within those cities remained relatively unchanged for generations. Then industrialization put a dizzying speed on cultural change. Now technological advances in communication and transportation—computers, fax machines, the space shuttle—transform everyday life at a staggering pace.

Whatever one generation learns, it can pass to the next through writing, word of mouth, ritual, tradition, and a host of other methods humans have developed to assure their culture's continuity (Gould, 1981). By creating cultures, humans have built, shaped, and carved out their own environments.

Evolutionists believe that humans shape culture to achieve evolutionary goals. Consider the gene for lactose tolerance. It spreads among some groups because it enables humans to eat dairy foods. This in turn has a strong effect on human culture through a shift to dairy farming and larger populations.

More than 99 percent of all humans now live in a different kind of environment from that in which the species evolved. By creating cultures, humans have, in effect, built, shaped, and carved out their own environments.

Although no dramatic evolutionary changes have occurred since *Homo sapiens* appeared on the fossil record 50,000 years ago, there have been sweeping cultural changes. Biological evolution shaped human beings into a culture-making species. More information about the human species as a culture-making species appears in Sociocultural Worlds of Children.

Sociobiology

Sociobiology *is a theory that relies on the principles of evolutionary biology to explain social behavior.* Sociobiologists believe that psychologists have a limited understanding of social behavior because they primarily study only one mammalian species—*Homo sapiens*. Sociobiology derives its information from comparisons of any among the tens of thousands of animal species that have evolved some form of social life.

According to E. O. Wilson (1975, 1995), the purpose of sociobiology is not to make crude comparisons between animal species or between animals and humans, such as simply comparing wolf and human aggression. Rather, sociobiology's purpose is to develop general laws of the evolution and biology of social behavior. The hope also is to extend the principles of sociobiology to assist in the explanation of human behavior.

Let's consider a sociobiological inquiry. In some species of birds, the young born in one year might not breed the second year, but instead help their parents

CONCEPT TABLE 1.2

The Nature of Development, Developmental Issues, Careers in Child Development, and Critical Thinking About Children's Development

Concept	Processes/ Related Ideas	Characteristics/Description
The Nature of Development	What is development?	Development is the patter of movement or change that occurs throughout the life span.
	Biological, cognitive, and socioemotional processes	Development is influenced by an interplay of biologocial, cognitive, and socioemotional processes.
	Periods of development	Development is commonly divided into the following periods from conception through adolescence: the prenatal period, infancy, early childhood, middle and late childhood, and adolescence.
Developmental Issues	Maturation and experience (nature and nurture)	The debate over whether development is due primarily to maturation or to experience is another version of the nature-nurture controversy.
	Continuity and discontinuity	Some developmentalists describe development as continuous (gradual, cumulative change), others as discontinuous (abrupt, sequence of stages).
	Early and later experience	This hotly debated issue focuses on whether early experiences (especially in infancy) are more important in development than later experiences are.
	Evaluating the developmental issues	Most developmentalists recognize that extreme positions of the nature-nurture, continuity-discontinuity, and early-later experience issues are unwise. Despite this consensus, spirited debate still occurs on these issues.
Careers in Child Development	Their nature	A wide range of opportunities are available to individuals who want to pursue a career related to child development. These opportunities include jobs in college and university teaching, child clinical psychology and counseling, school teaching and school psychology, nursing, pediatrics, psychiatry, and social work. A special interest is the history of ethnic minority individuals in the field of child development, and the current educational status of ethnic minority individuals.
Thinking Critically About Children's Development	Its nature	Critical thinking about children's development involves such strategies as applying a developmental framework to understand behavior, making accurate observations and inferences, applying developmental concepts to enhance personal adaptation, pursing alternative explanations, evaluating the quality of conclusions and strategies, engaging in perspective taking, demonstrating an appreciation of individual differences, and developing arguments based on developmental concepts.

Concept Tables

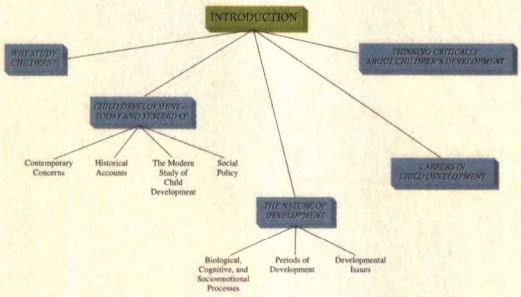
Two times in each chapter we review what has been discussed so far in that chapter by displaying the information in concept tables. This learning device helps you get a handle on material several times a chapter so you don't wait until the end of the chapter and have too much information to digest.

Summary

Children should have a special place in any society, for they are the society's future. An important concern is that too many children today will not reach their full potential because of inadequate rearing conditions. Far too many children live in poverty, have parents who do not adequately care for them, and go to schools where learning conditions are far from optimal.

In this chapter, you were introduced to the field of child development. You read about how today is both the best of times and the worst of times for children and why it is important to study children. You learned about the nature of child development through history, some contemporary concerns, the modern study of child development, and social policy issues. You also studied the nature of development by exploring biological, cognitive, and socioemotional processes; periods of development; and developmental issues. You read about a number of careers in child development and how to think critically about children's development.

To obtain a summary of the chapter, go back and again study the two concept tables on pages 17 and 26. In the next chapter, we will turn our attention to the field of child development as a science. You will learn about the importance of the scientific method, theories, and methods in studying children.



Summary

At the end of each chapter, the Summary section provides you with a framework for reviewing the entire chapter. It includes a cognitive map that visually organizes the chapter's main topics.

Explorations in Child Development

Research in Child Development

This end-of-chapter feature lets you see how scientists who study children's development actually conduct their research investigations.

Improving the Lives of Children

This applied feature provides information that will help to improve the lives of children.

Explorations in Child Development

To fully understand the field of child development today, it is important to explore both its research side and its applied side. Thus, each chapter will conclude with this endpiece, which has two parts: first a discussion of some aspect of research on child development, and second, a description of issues and programs that focus on improving the lives of children. The research discussion provides you with an opportunity to see how the scientists who study children's development actually conduct research studies. The Applications discussion will give you a sense of how professionals who work with children seek solutions to help children reach their full potential.

Research in Child Development

Why Research in Child Development Is Important

Knowledge in the field of child development rests heavily on the generation of a broad, competent research base. Over the last several decades, research in child development has grown enormously as increasing numbers of investigators have become intrigued by issues and questions that involve children's lives. The importance of research in child development is reflected in the large number of research journals in the field and the growth in the membership of the Society for Research in Child Development, the main professional organization for scholars who conduct research on children's development.

In discussing child development and social policy earlier in this chapter, we said that a current trend is to conduct research that is relevant to social policy. The question of whether child development researchers should conduct research that is relevant to social policy touches on a long-standing issue: Should research be basic or applied?

Basic research, sometimes called pure research, is the study of issues to obtain knowledge for its own sake rather than for practical applications. Basic research is often conducted to test a theory or to follow up on other research. Rarely is basic research conducted as a response to a pressing social problem. Basic research might or might not eventually be applied to social policy or practical problems. In contrast, *applied research* is the study of issues that have direct practical significance, often with the intent of changing behavior. Thus, social policy research is applied research, not basic research.

A developmentalist who conducts basic research might ask: How does cognitive development change during childhood? In contrast, a developmentalist who conducts applied research might ask: How can knowledge about change in children's cognitive development be used to educate them more effectively or to help them cope with stress?

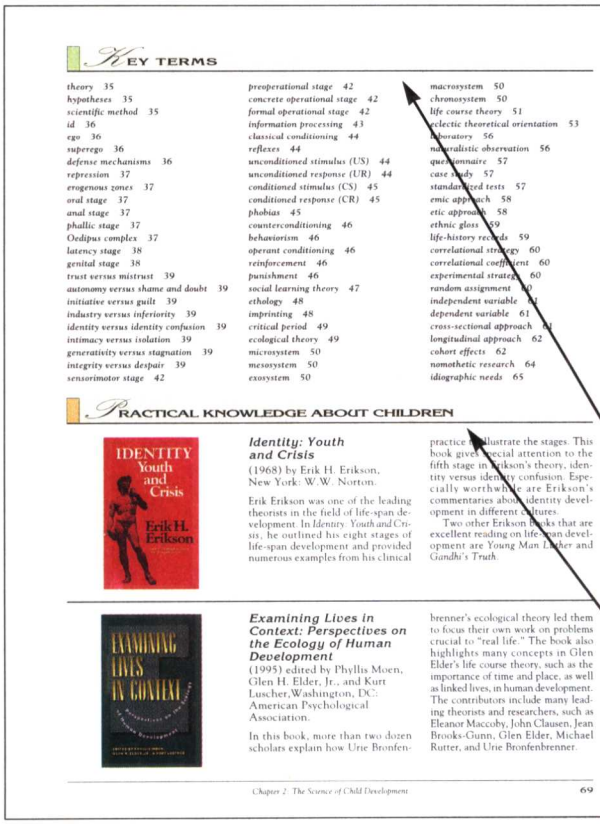
Most developmentalists believe that basic and applied research are both important. Basic research can sometimes produce information that can be used to improve children's well-being, but it does not guarantee this application. Insisting that research always be relevant is like trying to grow new flowers by dealing only with the blossoms and not tending to the roots. Basic research is root research. Without the discovery of basic scientific principles, we would have little knowledge to apply. Today, research on child development includes a wealth of both basic and applied studies.

Improving the Lives of Children

Thinking About Your Future as a Parent and the Education of Your Children

Famous playwright George Bernard Shaw once commented that while parenting is a very important profession, no test of fitness for it is ever imposed. If a test were imposed, some parents would turn out to be more fit than others. Most parents do want their children to grow into socially mature individuals, but they often are not sure about what to do as a parent to help their children reach this goal (Stenhouse, 1996). One reason for parents' frustration is that they often get conflicting messages about how to deal with their children. One "expert" might urge them to be more permissive with their children; another might tell them to place stricter controls on them or they will grow up to be spoiled brats.

Most of you taking this course will be a parent someday; some of you already are. I hope that each of you will take seriously the importance of rearing your children, because they are the future of our society. Good parenting takes a considerable amount of time. If you choose to become a



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Practical Knowledge About Children

Identity: Youth and Crisis
(1968) by Erik H. Erikson, New York: W.W. Norton.

Erik Erikson was one of the leading theorists in the field of life-span development. In *Identity: Youth and Crisis*, he outlined his eight stages of life-span development and provided numerous examples from his clinical practice to illustrate the stages. This book gives special attention to the fifth stage in Erikson's theory, identity versus identity confusion. Especially worthwhile are Erikson's commentaries about identity development in different cultures.

Two other Erikson books that are excellent reading on life-span development are *Young Man Luther* and *Gandhi's Truth*.

Examining Lives in Context: Perspectives on the Ecology of Human Development
(1995) edited by Phyllis Moen, Glen H. Elder, Jr., and Kurt Luscher, Washington, DC: American Psychological Association.

In this book, more than two dozen scholars explain how Urie Bronfenbrenner's ecological theory led them to focus their own work on problems crucial to "real life." The book also highlights many concepts in Glen Elder's life course theory, such as the importance of time and place, as well as linked lives, in human development. The contributors include many leading theorists and researchers, such as Eleanor Maccoby, John Clausen, Jean Brooks-Gunn, Glen Elder, Michael Rutter, and Urie Bronfenbrenner.

Key Terms

Listed and page-referenced at the end of each chapter are key terms that are defined throughout the chapter. They are listed and page-referenced again in an end-of-book glossary, where they are also defined.

Practical Knowledge About Children

These inserts appear at the end of each chapter. They consist of book recommendations that contain valuable information to help children reach their full potential.

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