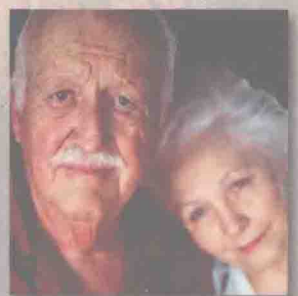


Human Development

Ninth Edition



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Diane E. Papalia Sally Wendkos Olds Ruth Duskin Feldman

Human Development

9th Edition



Diane E. Papalia

Sally Wendkos Olds

Ruth Duskin Feldman

in consultation with

Dana Gross



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About the Authors



As a professor, **Diane E. Papalia** taught thousands of undergraduates at the University of Wisconsin-Madison. She received her bachelor's degree, majoring in psychology, from Vassar College and both her master's degree in child development and family relations and her Ph.D. in life-span developmental psychology from West Virginia University. She has published numerous articles in such professional journals as *Human Development*, *International Journal of Aging and Human Development*, *Sex Roles*, *Journal of Experimental Child Psychology*, and *Journal of Gerontology*. Most of these papers have dealt with her major research focus, cognitive development from childhood through old age. She is especially interested in intelligence in old age and factors that contribute to the maintenance of intellectual functioning in late adulthood. She is a Fellow in the Gerontological Society of America. She is the coauthor of *A Child's World*, now in its ninth edition, with Sally Wendkos Olds and Ruth Duskin Feldman; of *Adult Development and Aging*, now in its second edition, with Harvey L. Sterns, Ruth Duskin Feldman, and Cameron J. Camp; of *Psychology* with Sally Wendkos Olds; and of *Child Development: A Topical Approach* with Dana Gross and Ruth Duskin Feldman.

Sally Wendkos Olds is an award-winning professional writer who has written more than 200 articles in leading magazines and is the author or coauthor of seven books addressed to general readers, in addition to the three textbooks she has coauthored with Dr. Papalia. Her newest book, *A Balcony in Nepal: Glimpses of a Himalayan Village*, describes her encounters with the people and way of life in a remote hill village in eastern Nepal. The updated and expanded third edition of her classic book *The Complete Book of Breastfeeding* was published in 1999. She is also the author of *The Working Parents' Survival Guide* and *The Eternal Garden: Seasons of Our Sexuality* and the coauthor of *Raising a Hyperactive Child* (winner of the Family Service Association of America National Media Award) and *Helping Your Child Find Values to Live By*. She has spoken widely on the topics of her books and articles to both professional and lay audiences, in person and on television and radio. She received her bachelor's degree from the University of Pennsylvania, where she majored in English literature and minored in psychology. She was elected to Phi Beta Kappa and was graduated summa cum laude.

Ruth Duskin Feldman is an award-winning writer and educator. With Diane E. Papalia and Sally Wendkos Olds, she coauthored the fourth, seventh, and eighth editions of *Human Development* and the eighth and ninth editions of *A Child's World*. She also is coauthor of *Adult Development and Aging* and of *Child Development: A Topical Approach*. A former teacher, she has developed educational materials for all levels from elementary school through college and has prepared ancillaries to accompany the Papalia-Olds books. She is author or coauthor of four books addressed to general readers, including *Whatever Happened to the Quiz Kids? Perils and Profits of Growing Up Gifted*, republished in 2000 by iUniverse. She has written for numerous newspapers and magazines, has lectured extensively, and has made national and local media appearances throughout the United States on education and gifted children. She received her bachelor's degree from Northwestern University, where she was graduated with highest distinction and was elected to Phi Beta Kappa.





To all those who have had an impact
on our own development—
our families and friends and teachers
who have nurtured us, challenged us,
taught us by their example,
provided support and companionship,
and been there for us over the years.



Dana Gross, chief consultant to this edition, is an associate professor of psychology at St. Olaf College. She received her bachelor's degree, majoring in psychology, from Smith College and her Ph.D. in child psychology from the Institute of Child Development at the University of Minnesota. Her broad teaching and research interests include perception, language, cognition, and social cognition, as well as cross-cultural child development. She has published articles in such professional journals as *Child Development*, *Cognitive Development*, *Educational Gerontology*, and the *International Journal of Behavioral Development* and has presented her work at numerous conferences. She has also published chapters in edited books, including *Developing Theories of Mind* and *Play & Culture Studies* (Vol. 5). In addition to membership in several national professional societies, Dr. Gross serves on the Governing Council of the Minnesota Psychological Association and is a founding member of its Division of Academic Psychology. Dr. Gross has prepared instructor's manuals and test banks for several McGraw-Hill textbooks and served as chief consultant on the previous edition of *Human Development* and the eighth and ninth editions of *A Child's World*. She is coauthor, with Dr. Papalia and Ruth Duskin Feldman, of *Child Development: A Topical Approach*.

Preface



In the previous, eighth edition, of *Human Development* we completely revamped the entire book—its design, content, and pedagogical features. In this ninth edition we have built on the innovations of the last edition, updating, consolidating, and fine-tuning. At the same time, we have sought to retain the engaging qualities of tone, style, and substance that have contributed to this book's popularity over the years.

Our Aims for This Edition



The primary aims of this ninth edition are the same as those of the first eight: to emphasize the continuity of development throughout the life span; to highlight the interrelationships among the physical, cognitive, and psychosocial realms of development; and to integrate theoretical, research-related, and practical concerns.

A special goal for this edition has been to *enhance coverage of the adult years while reducing overall length*. We have striven to make each chapter as concise and readable as possible, while still doing justice to the vast scope and significance of current theoretical and research work.

The Ninth Edition: What's New?



Organizational Changes

There are two major approaches to the study of human development: the *chronological approach* (describing all aspects of development at each period of life) and the *topical approach* (focusing on one aspect of development at a time). For this book we have chosen the *chronological approach*, which provides a sense of the multifaceted sweep of human development, as we get to know first the developing person-to-be in the womb, then the infant and toddler, then the young child, the schoolchild, the adolescent, the young adult, the adult at midlife, and the person in late adulthood.

In line with our chronological approach, we have divided this book into nine parts. After Part One, which introduces the study of human development, Parts Two through Eight discuss physical, cognitive, and psychosocial development during each of the periods of the life span, concluding with Part Nine, the end of life.

In this edition, we have given special consideration to the *opening and concluding sections*. To make sure that students pay proper attention to important concepts formerly covered in a prologue, we have integrated this material into appropriate sections of Chapter 1. And we have extended our coverage of death and bereavement, from an epilogue to a full chapter.

New Pedagogical Features

In addition to the engaging biographical “*Focus*” vignettes that begin each chapter (see the Visual Walk-Through following this preface), we now end each chapter with a “*Refocus*” feature. This series of interpretive questions encourages students to think back over major chapter themes and their application to the famous person described in the opening vignette. We have also replaced a few of the vignettes with more contemporary or more appropriate subjects.

In the unique *Learning System* introduced in the eighth edition, we have changed the periodic marginal “Consider this . . .” feature to “What’s Your View?” The new title more sharply challenges students to think critically or to apply what they have learned. Also, *marginal definitions* of key terms have been shortened and simplified, where necessary, for ease of retention.

Content Changes

Because we believe that all parts of life are important, challenging, and full of opportunities for growth and change, we provide evenhanded treatment of all periods of the life span, taking care not to overemphasize some and slight others. In line with the growing recognition of human development as a rigorous scientific enterprise, we have *broadened the research base* of each chapter, especially the chapters on adulthood, more extensively than ever before, taking special pains to draw on the most recent information available. We have added many tables and figures and have updated statistics throughout.

This edition continues to expand our *cultural* and *historical* coverage, reflecting the diversity of the population in the United States and around the world and how cultures change across time. Our photo illustrations show an ever greater commitment to depicting this diversity.

Among the important topics given new or greatly revised or expanded coverage, chapter by chapter, are the following:

Chapter 1

- New section on historical contexts of development
- Revised section on the science of human development, including methodological advances
- Expansion of six principles of Baltes’s life-span developmental approach, placed at end of chapter for emphasis and summation

Chapter 2

- Revised explanation of mechanistic and organismic models
- Revised discussion of Bandura’s social learning (social cognitive) theory
- Ethological approach now discussed as part of broader evolutionary/sociobiological perspective
- Expanded discussion of cognitive neuroscience perspective
- Inclusion of qualitative research methods

Chapter 3

- Revised discussions of genetic imprinting, the nonshared environment, and autism, including Asperger’s syndrome
- Updated discussion of prenatal environmental influences
- New Digging Deeper box on fetal welfare versus mothers’ rights

Chapter 4

- Revised discussions of cesarean sections, low birthweight, infant mortality, sudden infant death syndrome, and infant feeding

Chapter 5

- Updated discussions of HOME (Home Observation for Measurement of the Environment) and infant information processing

Chapter 6

- New “Focus” vignette on the anthropologist Mary Catherine Bateson
- Revised and expanded material on emotions, including nonorganic failure to thrive
- Inclusion of Rothbart’s Infant Behavior Questionnaire and Children’s Behavior Questionnaire for measuring temperament
- Expanded discussion of the father’s role, including factors contributing to “responsible fathering”
- Revised information on infant attachment
- New information on implications of infants’ reactions to the “still-face” procedure
- New discussion of the “I-self” and “me-self”
- New information on effects of child care from the NICHD Early Child Care Research Network

Chapter 7

- Revised material on nutrition and obesity
- Updated information on the relationship between socioeconomic status and health
- Revised and updated information on causality, theory of mind, and Early Head Start

Chapter 8

- New “Focus” vignette on the writer Isabel Allende
- Updated material on cultural factors in parenting styles
- New Digging Deeper box on the case against corporal punishment

Chapter 9

- New “Focus” vignette on the polar explorer Ann Bancroft
- Updated information on obesity and asthma
- New Practically Speaking box on the homework debate
- Material on methods of teaching reading moved from box to text

Chapter 10

- New information on effects of joint custody, relational aggression, and sibling relationships in various cultures
- Revised discussion of bullies and of living with gay and lesbian parents
- Revised discussion of stress, including children’s reactions to the September 11 terrorist attacks

Chapter 11

- New information on pubertal development and how family relations may affect it
- Updated information on nutrition, obesity, body image, eating disorders, and drug use
- New section on teenage suicide plus new Practically Speaking box on suicide prevention
- New section on implications of adolescents’ time use
- Updated information on high school dropouts
- New Window on the World box on “pubilect” (teenage dialect)
- Material on working part time moved from box to text

Chapter 12

- Revised discussion of adolescent sexuality, with updated statistics
- Revised discussion of sex education, including abstinence programs
- Updated statistics on sexually transmitted diseases
- Revised information on adjustment to parental divorce, including the role of genetic factors

Chapter 13

- Updated health statistics
- New section on genetic influences on health
- Revised material on lifestyle factors and health

- Updated information on sexually transmitted diseases, assisted reproduction (moved from box to text), and college and work experiences
- New Practically Speaking box on sleep deprivation

Chapter 14

- Updated information on sexual attitudes and behaviors, marital and nonmarital lifestyles, and becoming parents

Chapter 15

- Updated material on health and influences on it
- Updated discussion of hormone replacement therapy and phytoestrogens
- New material on breast cancer and hysterectomy
- Revised material on stress, including New Yorkers' reactions to the September 11 terrorist attacks

Chapter 16

- Revised information on parents' relationships with grown children, including the "cluttered nest"
- Critique of the presumed prevalence of the "sandwich generation"

Chapter 17

- Updated information on the aging population and on life expectancy, including regional, ethnic, and gender differences; material on centenarians moved from box to text
- Updated research findings on effects of dietary restriction on life extension
- Updated information on health status, influences on health, and health-threatening conditions, including Alzheimer's disease
- New Digging Deeper box: "Do 'Anti-Aging' Remedies Work?"

Chapter 18

- Updated material on religion and well-being in late adulthood
- Updated discussions of trends in late-life work, retirement, and living arrangements

Chapter 19

- New "Focus" vignette on Louisa May Alcott
- Expanded coverage of all topics
- New section on mourning a miscarriage
- New Digging Deeper box on "ambiguous loss"
- New Window on the World box on organ donation

Supplementary Materials

Human Development, ninth edition, is accompanied by a complete learning and teaching package, keyed into the Learning System. Each component of this package has been thoroughly revised and expanded to include important new course material.

For the Instructor

Instructor's Manual

Saundra K. Ciccarelli, Gulf Coast Community College

Designed specifically for the ninth edition, this manual contains materials and resources for the instructor's use in teaching topics from each of the nineteen chapters of the text. Each chapter in the *Instructor's Manual* begins with the Total Teaching Package Outline, a table that coordinates subject matter within the chapter with the various features in the manual, including the Guideposts for Study, lecture suggestions, classroom activities and demonstrations, film and video suggestions, and web resources. Also included is a detailed Chapter Outline with key terms and definitions as stated in the text; Guideposts for Study, which are also in the main text, as well as in the test bank and study guide; lecture openers; critical thinking exercises; essay questions and answers; activities; and ideas for independent study. Updated audio/visual

resources, suggested readings, and web resources are also included. New to this edition of the *Instructor's Manual* are activities that are specifically geared to education majors and future nurses and health care workers. Also new to this edition is a section of observation, lab, and interview projects, which relate to each chapter's content. The *Instructor's Manual* is available on the instructor's side of the Online Learning Center (<http://www.mhhe.com/papaliah9>) and on the Instructor's Resource CD-ROM. It is also available in hard copy on request from your local McGraw-Hill representative.

Test Bank

Barbara Lane Radigan, Community College of Allegheny County

This comprehensive test bank includes a wide range of multiple-choice, fill-in-the-blank, critical thinking, and essay questions. Each chapter has approximately 100–125 test questions per chapter. Questions are organized around the Guideposts for Study, as presented in the main text. Each item is designated as factual, conceptual, or applied, and includes the answer, the appropriate Guidepost designation, the page in the main text where the information is located, and the question's level of difficulty.

The test bank is available in both printed and computerized format. The computerized test bank is available on the Instructor's Resource CD-ROM (IRCD), and is compatible with both Macintosh and Windows platforms. The program provides an editing feature that enables instructors to integrate their own questions, scramble items, and modify questions, as well as offering the instructor the option of implanting the following features unique to this program: Online Testing Program, Internet Testing, and Grade Management.

Instructor's Resource CD-ROM

This CD-ROM offers instructors the opportunity to customize McGraw-Hill materials to prepare for and create their lecture presentations. Among the resources included on the CD-ROM are the instructor's manual; the test bank in computerized, Word, and Rich Text formats; PowerPoint slides; as well as a link to the Online Learning Center, interactive exercises, and other useful features.

Visual Asset Database

Jasna Jovanovic, University of Illinois–Urbana-Champaign

McGraw-Hill's Visual Assets Database is a password-protected online database of hundreds of multimedia resources for use in classroom presentations, including original video clips, audio clips, photographs, and illustrations—all designed to bring to life concepts in developmental psychology. In addition to offering ready-made multimedia presentations for every stage of the lifespan, the VAD's search engine and unique "My Modules" program allows instructors to select from the database's resources to create their own customized presentations, or "modules." These customized presentations are saved in an instructor's folder on the McGraw-Hill site, and the presentation is then run directly from the VAD to the Internet-equipped classroom.

Annual Editions: Human Development (03/04)

Karen L. Freiberg, University of Maryland

This annually updated reader is a compilation of carefully selected articles from magazines, newspapers, and journals. This title is supported by Dushkin Online, a student website that provides study support and tools and links to related sites. An *Instructor's Manual* and *Using Annual Editions in the Classroom* are available as support materials for instructors.

Sources: Notable Selections in Human Development (2/e)

Rhett Diessner and Jacquelyne K. Tiegs, Lewis Clark State College

This book includes more than forty book excerpts, classic articles, and research studies that have shaped the study of human development and our contemporary understanding of it. Students of human development will appreciate the broad range

of coverage and the accessibility of the material within this volume. An accompanying *Instructor's Manual* is also available.

Online Learning Center

<http://www.mhhe.com/papaliah9>

This extensive website, designed specifically to accompany *Human Development*, offers a variety of resources for both instructors and students. The password-protected instructor side of the site includes the *Instructor's Manual*, PowerPoint slides, links to professional resources, and interactive activities. The Online Learning Center also includes PowerWeb. PowerWeb is a password-protected website that includes current articles, weekly updates with assessment, informative and timely world news, web links, interactive exercises, and much more.

For the Student

Study Guide

Saundra K. Ciccarelli, Gulf Coast Community College

This comprehensive study guide is organized by chapter and integrates the Guideposts for Study found in the main text. It is designed to help students make the most of their time when reviewing the material in the text and studying for exams. The study guide includes a variety of self-tests, including true/false, multiple-choice, and essay questions.

Online Learning Center

<http://www.mhhe.com/papaliah9>

This extensive website, designed to accompany *Human Development*, offers a wide variety of resources for both instructors and students. The student side of the website includes the Guideposts for Study, chapter outlines, and a variety of self-quizzes. The site also includes a glossary of the key terms in the book, a list of helpful and informative websites related to topics highlighted in the text, an Internet guide, a guide to doing electronic research, and a study skills primer. The Online Learning Center also includes PowerWeb. PowerWeb is a password-protected website that includes current articles, weekly updates with assessment, informative and timely world news, web links, interactive exercises, and much more. A PowerWeb access card is free with each copy of the text.

Multimedia Courseware for Child Development

Charlotte J. Patterson, University of Virginia

This interactive CD-ROM covers central phenomena and classic experiments in the field of child development. Included are hours of video footage of classic and contemporary experiments, detailed viewing guides, challenging follow-up and interactive feedback, graduated developmental charts, a variety of hands-on projects, and related websites and navigation aids.

Multimedia Courseware for Adult Development

Carolyn Johnson, Pennsylvania State University

This interactive CD-ROM showcases video clips central to phenomena in adult development. The CD-ROM includes hours of video footage of classic and contemporary experiments, detailed viewing guides, challenging follow-up and interactive feedback, graphics, graduated developmental charges, a variety of hands-on projects, and related websites and navigation aids.

Acknowledgments



Once again, Dana Gross, Ph.D., associate professor of psychology at St. Olaf College in Northfield, Minnesota, has served as consultant for this edition, helping us keep up with the latest findings in a rapidly expanding field. Dr. Gross not only

uncovered many new references, but also participated in the planning of this revision and read and commented on the manuscript. She also prepared the links to relevant websites for material related to boxes in each chapter, to be found on the Online Learning Center. Her current classroom experience provides a valuable perspective on the needs of students today. In addition, as a parent of two young children, she rounds out an author team that consists of the parent of an adolescent and two grandparents whose children are now young and middle-aged adults. (Detailed information about Dr. Gross's career can be found on the dedication page.)

We would like to express our gratitude to the many friends and colleagues who, through their work and their interest, helped us clarify our thinking about human development. We are especially grateful for the valuable help given by those who reviewed the eighth edition of *Human Development* and the manuscript drafts of this ninth edition, whose evaluations and suggestions helped greatly in the preparation of this new edition. These reviewers, who are affiliated with both two- and four-year institutions are as follows:

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As always, we welcome and appreciate comments from readers, which help us continue to improve *Human Development*.

Diane E. Papalia
Sally Wendkos Olds
Ruth Duskin Feldman

Visual Walk-Through

Chapter 1

The Study of Human Development



There is nothing permanent except change.

—Heracitus, fragment (sixth century B.C.)

Focus: Victor, the Wild Boy of Aveyron*



Victor

On January 8, 1800, a naked boy appeared on the outskirts of the village of Saint-Sernin in the province of Aveyron in south-central France. The boy, who was only four and a half feet tall but looked about 12 years old, had been spotted several times during the previous two and a half years, climbing trees, running on all fours, drinking from streams, and foraging for acorns and roots.

When the dark-eyed boy came to Saint-Sernin, he neither spoke nor responded to speech. Like an animal accustomed to living in the wild, he spurned prepared foods and tore off the clothing people tried to put on him. It seemed clear that he had either lost his parents or been abandoned by them, but how long ago this had occurred was impossible to tell.

The boy appeared during a time of intellectual and social ferment, when a new, scientific outlook was beginning to replace mystical speculation. Philosophers debated questions about the nature of human beings—questions that would become central to the study of child development. Are the qualities, behavior, and ideas that define what it means to be human inborn or acquired, or both? How important is social contact during the formative years? Can its lack be overcome? A study of a child who had grown up in isolation might provide evidence of the relative impact of “nature” (innate characteristics) and “nurture” (upbringing, schooling, and other societal influences).

After initial observation, the boy, who came to be called Victor, was sent to a school for deaf-mutes in Paris. There, he was turned over to Jean-Marc-Gaspard Itard, an ambitious 26-year-old practitioner of the emerging science of psychiatry. Itard believed that Victor's development had been limited by isolation and that he simply needed to be taught the skills that children in society normally acquire.

*Sources of information about the wild boy of Aveyron were Frith (1989) and Lane (1976).

OUTLINE

FOCUS:

Victor, the Wild Boy of Aveyron

How the Study of Human Development Evolved

Early Approaches
Studying the Life Span

Human Development Today: An Introduction to the Field

Developmental Processes:
Change and Stability
Domains of Development:
Periods of the Life Span

Influences on Development

Heredity, Environment, and
Maturation
Major Contextual Influences:
Normative and Nonnormative
Influences
Timing of Influences: Critical or
Sensitive Periods

Bates's Life-Span Developmental Approach

BOXES

1-1
Digging Deeper: Studying the
Life Course: Growing Up in
Hard Times


1-2
Practically Speaking: How
Important Is Timing in
Language Acquisition?

A special goal for this edition, like the previous one, has been to increase its pedagogical value. The single-column format has made it possible to introduce a comprehensive, unified Learning System, which will help students focus their reading and review and retain what they learn.

As always, we seek to make the study of human development come alive by telling illustrative stories about actual incidents in the lives of real people. In this edition, each chapter opens with a fascinating biographical vignette from a period in the life of a well-known person (such as Elvis Presley, Isabel Allende, Anne Frank, Jackie Robinson, John Glenn, and Mahatma Gandhi) or a classic case (such as the Wild Boy of Aveyron and Charles Darwin's diary of his son's first year). The subjects of these vignettes are people of diverse national and ethnic origins, whose experiences dramatize important themes in the chapter. We believe students will enjoy and identify with these stories, which lead directly into the body of the chapter, are woven into its fabric, and are revisited in the new Refocus feature at the end of each chapter. These vignettes, along with the shorter true anecdotes that appear throughout the book—some of them about the author's own children and grandchildren—underline the fact that there is no “average” or “typical” human being, that each person is an individual with a unique personality and a unique set of life circumstances. They are reminders that whenever we talk about human development, we talk about real people in a real world.

Learning System

The Learning System forms the conceptual framework of each chapter and is carried through all text supplements. It has the following four parts.



Guideposts for Study

1. What are the distinguishing features of middle age?
2. What physical changes generally occur during the middle years, and what is their psychological impact?
3. What factors affect health at midlife?
4. What cognitive gains and losses occur during middle age?
5. Do mature adults think differently than younger people do?
6. What accounts for creative achievement, and how does it change with age?
7. How have work patterns changed, and how does work contribute to cognitive development?
8. What is the value of education for mature learners?

Middle Age: A Cultural Construct

Until recently, middle adulthood was the least studied part of the life span. The middle years were considered a relatively uneventful hiatus between the more dramatic changes of young adulthood and old age. Now that the baby-boom generation is in middle age, research on that period is booming (Lachman, 2001; Lachman & James, 1997; Moen & Wethington, 1999). In the United States, by 2015, the 45- to 64-year-old population is expected to reach 80 million, 72 percent more than in 1990. This is the best educated and most affluent cohort ever to reach middle age anywhere, and it is changing our perspective on the importance and meaning of that time of life (Willis & Reid, 1999).

The term "middle age" came into use in Europe and the United States around the turn of the twentieth century as life expectancy began to lengthen. Today, in industrial societies, middle adulthood is considered to be a distinct stage of life with its own societal norms, roles, opportunities, and challenges. Thus, some scholars describe middle age as a socially constructed concept, with culturally ascribed meaning (Gullette, 1998; Menon, 2001; Moen & Wethington, 1999). Some traditional societies, such as upper-caste Hindus in rural India (Menon, 2001) and the Gusi in Kenya (see Box 16-1 in Chapter 16), do not recognize a middle stage of adulthood between youth and old age at all. In other parts of India and in Japan, maturation and aging are thought of primarily as social processes involving relationships and roles, rather than in terms of chronological years and biological changes (Menon, 2001).

Ironically, as medical and nutritional advances have opened up an unprecedented second half of life in more developed societies, anxiety about physical and other losses has become a major theme in popular descriptions of middle age. In a youth-oriented culture, adults' expectations for these years may be influenced more by images in literature and the media than by what is going on in their own bodies and minds (Gullette, 1998). A life-span developmental perspective (refer back to Chapter 1) presents a more balanced, more complex picture. Middle age can be a time, not only or

Guidepost

1. What are the distinguishing features of middle age?

Chapter 15 Physical and Cognitive Development in Middle Adulthood 527

Guideposts for Study

These topical questions, similar to Learning Objectives, are first posted near the beginning of each chapter to capture students' interest and motivate them to look for answers as they read. The questions are broad enough to form a coherent outline of each chapter's content, but specific enough to invite careful study. Each Guidepost is repeated in the margin at the beginning of the section that deals with the topic in question and is repeated in the Chapter Summary to facilitate study.

Checkpoints

These more detailed marginal questions, placed at or near the end of major sections of text, enable students to test their understanding of what they have read. Students should be encouraged to stop and review any section for which they cannot answer one or more Checkpoints.

sports are important but that she is not athletic, she will lose self-esteem no matter how much praise she gets from others.

Children who are socially withdrawn or isolated may be overly concerned about their performance in social situations. They may attribute rejection to their own personality deficiencies, which they believe they are helpless to change. Rather than trying new ways to gain approval, they repeat unsuccessful strategies or just give up. (This is similar to the "helpless pattern" in younger children, described in Chapter 8.) Children with high self-esteem, by contrast, tend to attribute failure to factors outside themselves or to the need to try harder. If initially unsuccessful, they persevere, trying new strategies until they find one that works (Erdley et al., 1997).

Emotional Growth

As children grow older, they are more aware of their own and other people's feelings. They can better regulate their emotional expression in social situations, and they can respond to others' emotional distress (Saarni et al., 1998).

By age 7 or 8, shame and pride, which depend on awareness of the implications of their actions and on what kind of socialization children have received, affect their opinion of themselves (Harter, 1993, 1996). Increasingly, children can verbalize conflicting emotions (see Table 10-1). As Lisa says, "Most of the boys at school are pretty yucky. I don't feel that way about my little brother Jason, although he does get on my nerves. I love him but at the same time, he also does things that make me mad. But I control my temper. I'd be ashamed of myself if I didn't" (Harter, 1996, p. 208).

Children become more empathic and more inclined to prosocial behavior in middle childhood. Prosocial behavior is a sign of positive adjustment. Prosocial children tend to act appropriately in social situations, to be relatively free from negative emotion, and to cope with problems constructively (Eisenberg, Fabes, & Murphy, 1996).

Control of negative emotions is an aspect of emotional growth. Children learn what makes them angry, fearful, or sad and how other people react to a display of these

- Can you . . .**
- ✓ Discuss how the self-concept develops in middle childhood?
 - ✓ Compare Erikson's and Harter's findings about sources of self-esteem?
 - ✓ Describe how the "helpless pattern" can affect children's reactions to social rejection?

Guidepost

3. How do school-age children show emotional growth?

Table 10-1 Levels of Understanding of Conflicting Emotions

Level	Approximate Age	What Children Understand	What a Child Might Say
Level 0	3-4 years	Children do not understand that any two feelings can coexist. They cannot even acknowledge feeling two similar emotions at once (such as mad and sad).	Carlos says, "You can't have two feelings at the same time because you only have one mind!"
Level 1	6-7 years	Children are developing separate categories for positive and negative emotions. They can be aware of two emotions at the same time, but only if both are either positive or negative and are directed toward the same target.	Kyle says, "If my brother hit me, I would be mad and sad."
Level 2	7-8 years	Children can recognize having two feelings of the same kind directed toward different targets. However, they cannot acknowledge holding contradictory feelings.	Dominic says, "I was excited about going to Mexico and glad to see my grandparents. I wasn't scared; I couldn't feel glad and scared at the same time; I would have to be two people at once!"
Level 3	8-10 years	Children can integrate sets of positive and negative emotions. They can understand having contrary feelings at the same time, but only if they are directed toward different targets.	Ashley can express a negative feeling toward her baby brother ("I was mad at Tim, so I punched him") and a positive feeling toward her father ("I was happy my father didn't speak me"), but she cannot recognize that she has positive and negative feelings (anger and love) toward both.
Level 4	11 years	Children can describe conflicting feelings toward the same target.	Lisa says, "I'm excited about going to my new school, but I'm a little scared too."

Source: Harter, 1996.

What's Your View?

If you or your partner were infertile, would you seriously consider or undertake one of the methods of assisted reproduction described here? Why or why not?

Can you . . .
Discuss ways to control the spread of STDs?
Identify several causes of male and female infertility?
Describe several means of assisted reproduction, and discuss issues they raise?

3. What is distinctive about adult thought and intelligence?

In *surrogate motherhood*, a fertile woman is impregnated by the prospective father, usually by artificial insemination. She carries the baby to term and gives the child to the father and his mate. Surrogate motherhood is in legal limbo; courts in most states view surrogacy contracts as unenforceable, and some states have either banned the practice or placed strict conditions on it. The American Academy of Pediatrics (AAP) Committee on Bioethics (1992) recommended that surrogacy be considered a tentative pre-conception adoption agreement in which the surrogate is the sole decision maker before the birth. The AAP committee also recommends a prebirth agreement on the period of time in which the surrogate may assert her parental rights.

Perhaps the most objectionable aspect of surrogacy, aside from the possibility of forcing the surrogate to relinquish the baby, is the payment of money. The creation of a "breeder class" of poor and disadvantaged women who carry the babies of the well-to-do strikes many people as wrong. Similar concerns have been raised about payment for donor eggs. Exploitation of the would-be parents is an issue, too (Gabriel, 1996).

How do children conceived by artificial means turn out? Among babies born in Western Australia between 1993 and 1997, those conceived by IVF or ICSI were twice as likely to show major birth defects during the first year as infants conceived naturally (Hansen, Kurinczuk, Bower, & Webb, 2002). It is not known whether these increased risks are due to the fertility procedures themselves or to characteristics connected with infertility. There is no evidence of adverse cognitive effects from IVF, other than those associated with the increased risk of premature or multiple births (Saunders, Spensley, Munro, & Halasz, 1996). Socially and emotionally, artificially conceived children tend to be well adjusted. Two longitudinal studies—one of 34 children conceived by IVF (but genetically related to both parents) and the other of 37 children conceived by DJ—found little or no difference in sociocognitive development at age 12 between these children and naturally conceived or adopted children (Golombok, MacCallum, & Goodman, 2001; Golombok, MacCallum, Goodman, & Rutter, 2002).

One thing seems certain: as long as there are people who want children but are unable to conceive or bear them, human ingenuity and technology will come up with ways to satisfy their need.

COGNITIVE DEVELOPMENT

Perspectives on Adult Cognition

Common sense tells us that adults think differently from children or adolescents. They hold different kinds of conversations, understand more complicated material, and use their broader experience to solve practical problems. Is common sense correct? Developmental theorists and researchers have studied adult cognition from a variety of perspectives. Some investigators, such as K. Warner Schaie, take a stage approach, seeking to identify what is distinctive about the way adults think, as Piaget did for children's thinking. Other investigators, such as Robert Sternberg, focus on types or aspects of intelligence, overlooked by psychometric tests, that tend to come to the fore in adulthood. One current theory highlights the role of emotion in intelligent behavior.

Beyond Piaget: The Shift to Postformal Thought

Although Piaget described the stage of formal operations as the pinnacle of cognitive achievement, some developmental scientists maintain that changes in cognition extend beyond that stage. According to Piaget's critics, formal reasoning is not the only, and perhaps not even the most important, capability of mature thought (Moshman, 1998). Research and theoretical work since the 1970s suggest that mature thinking may

What's Your View?

These periodic marginal questions challenge students to interpret, apply, or critically evaluate information presented in the text.

Summary and Key Terms

As in previous editions, the Chapter Summaries are organized by the major topics in the chapter. In this edition, the Guidepost questions appear under the appropriate major topics. Each Guidepost is followed by a series of brief statements restating the most important points that fall under it, thus creating a self-testing question-answer format. Students should be encouraged to try to answer each Guidepost question before reading the summary material that follows. Key Terms are now listed under each Guidepost summary with the pages on which their definitions can be found.

SUMMARY AND KEY TERMS

The Search for Identity

Guidepost 1. How do adolescents form an identity?

- A central concern during adolescence is the search for identity, which has occupational, sexual, and values components. Erik Erikson described the psychosocial conflict of adolescence as *identity versus identity confusion*. The "virtue" that should arise from this crisis is *fidelity*.
- James Marcia, in research based on Erikson's theory, described four identity statuses with differing combinations of crisis and commitment: *identity achievement*, *foreclosure*, *moratorium*, and *identity diffusion*.
- Researchers differ on whether girls and boys take different paths to identity formation. Although some research suggests that girls' self-esteem tends to fall in adolescence, later research does not support that finding.
- Ethnicity is an important part of identity. Minority adolescents seem to go through stages of ethnic identity development much like Marcia's identity statuses.

Identity (425)
Identity versus identity confusion (425)
identity statuses (427)
crisis (427)
commitment (427)
identity achievement (427)
foreclosure (428)
moratorium (428)
identity diffusion (428)

Sexuality

Guidepost 2. What determines sexual orientation?

- Sexual orientation appears to be influenced by an interaction of biological and environmental factors and may be at least partly genetic.

sexual orientation (430)

Guidepost 3. What sexual practices are common among adolescents, and what leads some teenagers to engage in risky sexual behavior?

- Sexual behaviors are more liberal than in the past. Teenage sexual activity involves risks of pregnancy and sexually transmitted disease. Adolescents at greatest risk are those who begin sexual activity early, have multiple partners, do not use contraceptives, and are ill-informed about sex.
- Regular condom use is the best safeguard for sexually active teens.
- Comprehensive sex education programs delay sexual initiation and encourage contraceptive use. Abstinence-only programs have not been effective.
- Many teenagers get misleading information about sexuality from the media.

sexually transmitted diseases (STDs) (433)

Guidepost 4. How common are sexually transmitted diseases and teenage pregnancy, and what are their usual outcomes?

- Rates of sexually transmitted diseases (STDs) in the United States are among the highest in the industrialized world; one in three cases occurs in adolescents. STDs can be transmitted by oral sex as well as intercourse. They are more likely to develop undetected in girls than in boys.
- Teenage pregnancy and birthrates in the United States have declined but are still highest in the industrialized world. Most of the pregnancies are unintended, and most of the births are to unmarried mothers.
- Teenage childbearing often has negative outcomes. Teenage mothers and their families tend to suffer ill health and financial hardship, and the children often suffer from ineffective parenting.

Relationships with Family, Peers, and Adult Society

Guidepost 5. How typical is "adolescent rebellion"?

- Although relationships between adolescents and their parents are not always smooth, full-scale adolescent rebellion is unusual.

adolescent rebellion (440)

Guidepost 6. How do adolescents relate to parents, siblings, and peers?

- Adolescents in the United States, who have a large amount of discretionary time, spend an increasing amount of it with peers, but relationships with parents continue to be close and influential, especially among some ethnic minorities.
- Family interactions change during the teenage years. There is more intimacy, but also more conflict over issues of autonomy. Conflict with parents tends to be most frequent during early adolescence and most intense during mid-adolescence. Authoritative parenting is associated with the most positive outcomes.
- Effects of divorce and single parenting on adolescents' development depend on the way they affect family atmosphere. Genetic factors may affect the way young adolescents adapt to divorce.
- Effects of maternal employment depend on such factors as the presence or absence of the other parent, how closely parents monitor adolescent's activity, and the mother's workload. A mother's working may help shape attitudes toward gender roles.
- Economic stress affects relationships in both single-parent and two-parent families.
- Relationships with siblings tend to become more equal and more distant during adolescence.
- The peer group can have both positive and negative influences. Adolescents who are rejected by peers tend to have the greatest adjustment problems.
- Friendships, especially among girls, become more intimate and supportive in adolescence.

Guidepost 7. What are the root causes of antisocial behavior and juvenile delinquency, and what can be done to reduce these and other risks of adolescence?

- Chronic delinquency is associated with multiple interacting risk factors, including ineffective parenting, school failure, peer influence, neighborhood influences, and low socioeconomic status. Programs that attack such risk factors from an early age have had success.



Practically Speaking

Sleep Deprivation

If you have ever experienced jet lag—fatigue due to rapid time change during a cross-country or overseas flight—you know how it feels to have your circadian rhythms disrupted. Circadian rhythms are daily cycles of physiological and behavioral changes (such as falling asleep and waking up) that are linked to the cycles of light and dark in nature. These rhythmic cycles are governed by a biological clock in the brain, which may be genetically based. They go on even in the absence of natural external cues—for example, in a windowless room that is kept constantly light or constantly dark (Vitaterna, Takahashi, & Turek, 2001).

Human beings can override their circadian rhythms by choosing when and how long they will sleep (for example, by setting an alarm clock). Normally, when the light-dark cycle changes (as in daylight savings time or travel across time zones), the internal clock will adjust. But when the sleep-wake cycle is seriously and chronically out of phase with circadian rhythms, health, safety, and productivity may suffer (Vitaterna et al., 2001).

Adverse health effects may include gastrointestinal and cardiovascular problems, altered hormonal functioning, and depression (Monk, 2000; Vitaterna et al., 2001). In a large-scale poll by the National Sleep Foundation (2001), respondents said they were more likely to make mistakes, to become impatient or aggravated when waiting, or to get upset with their children or others when they had not had enough sleep the night before. Sleep deprivation can be lethal on the road; drowsy drivers cause an estimated 3.6 percent of all fatal crashes (Peters et al., 1994). Sleep deprivation may even lead to premature aging. In one study, 36 hours of sleep deprivation in young adults produced effects on the prefrontal cortex—a part of the brain heavily involved in working memory and verbal fluency—similar to those found in non-sleep-deprived 60-year-olds (Harrison, Horne, & Rothwell, 2000).

Many young adults, especially those who work abnormal hours, go without adequate sleep. Night shift workers may find it difficult to fall asleep in the daytime, when it is light out and family activities are going on (Monk, 2000). Furthermore, not everyone has the same pattern of circadian rhythms. Some people call themselves “morning people” or “evening people” because they are more alert at one time or the other. Chronobiologists—scientists who study circadian rhythms—call such people “larks” and

“owls.” If work or school schedules force an “owl” to get up early every morning or a “lark” to regularly burn the midnight oil, trouble can ensue (McEnany & Lee, 2000).

Adequate sleep improves learning of complex motor skills (Walker, Brakefield, Morgan, Hobson, & Stickgold, 2002) and consolidates previous learning. Even a short nap can prevent burnout—overstimulation of the brain’s perceptual processing systems (Mednick et al., 2002). Sleep deprivation tends to impair verbal learning (Horne, 2000), some aspects of memory (Harrison & Horne, 2000b), and speech articulation (Harrison & Horne, 1997), and to increase distractibility (Bisgrove, Alexander, & Horne, 1993). Impairment seems to be selective, mainly affecting dull, monotonous tasks. Complex tasks that involve decisions tend to call forth greater motivation and effort to make up for lost sleep (Horne, 2000). However, high-level decision making can be impaired, especially in emergency situations that require innovation, flexibility, avoidance of distraction, realistic risk assessment, metacognition, and communication skills (Harrison & Horne, 2000a).

Brain imaging studies show how compensatory changes in the brain can help maintain initial cognitive performance after short-term loss of sleep. In an experiment on 13 healthy young adults, the prefrontal cortex was more responsive during verbal memory tasks after 35 sleepless hours than after normal sleep. In addition, while sleep-deprived participants showed reduced verbal recall, activation of the parietal lobes, not normally involved in verbal tasks, tended to lessen the impairment (Drummond et al., 2000). However, chronic sleep deprivation (less than six hours a night for three or more nights) can seriously worsen cognitive performance even when a person is not aware of it (Van Dongen, Madsin, Mullington, & Dinges, 2003).

What’s Your View?
Do the findings about sleep deprivation and circadian rhythms suggest desirable changes in the workplace?

Check It Out:
For more information on this topic, go to <http://www.mhhe.com/papalah1>, where you’ll find links to information on sleep and sleep deprivation.

Nutrition and Cholesterol The saying “You are what you eat” sums up the importance of nutrition for physical and mental health. What people eat affects how they look, how they feel, and how likely they are to get sick.

Eating habits play an important part in heart disease—which, as Arthur Ashe’s story shows, is not necessarily limited to later life. People who eat a variety of fruits and vegetables, especially those rich in carotenoids (such as carrots, sweet potatoes,

“Practically Speaking” Boxes

These boxes build bridges between academic study and everyday life by showing ways to apply research findings on various aspects of human development. Among the new, expanded, or substantially updated topics are the homework debate, suicide prevention, and sleep deprivation.

We also provide a number of other new and/or enhanced teaching and learning aids:

Part Overviews

At the beginning of each part, an overview introduces the period of life discussed in the chapters that follow.

Linkups to look for

The part overviews include bulleted lists that point to examples of the interaction of physical, cognitive, and psychosocial aspects of development.

PART 3



Linkups to look for

- As muscles come under more conscious control, children can tend to more of their own personal needs, such as dressing and toileting, and thus gain a greater sense of competence and independence.
- Eating and sleep patterns are influenced by cultural attitudes.
- Even the common cold can have emotional and cognitive implications. Occasional minor illnesses not only build immunity; they help children learn to cope with physical distress and understand its causes.
- Social interaction plays a major role in the development of preliteracy skills, memory, and measured intelligence.
- Cognitive awareness of gender has far-reaching psychosocial implications, affecting children’s sense of self and their attitudes toward the roles the two sexes play in their society.
- Environmental influences, including the parent’s life circumstances, affect health and safety. The link between developmental realms is especially evident in the tragic results of child abuse and neglect; although the most obvious effects may be physical, these conditions can stunt cognitive growth and can leave lasting emotional scars.





During the years from 3 to 6, often called the preschool years, children make the transition from toddlerhood to childhood. Their bodies become sturdier, their motor and mental abilities sharper, and their personalities and relationships more complex.

The 3-year-old is no longer a baby, but a sturdy adventurer, at home in the world and eager to explore its possibilities as well as the developing capabilities of his or her own body and mind. A child of this age has come through a relatively dangerous time of life—the years of infancy and toddlerhood—to enter a healthier, less threatening phase.

Growth and change are less rapid in early childhood than in infancy and toddlerhood, but, as we see in Chapters 7 and 8, all aspects of development—physical, cognitive, emotional, and social—continue to intertwine.

Beginnings

PREVIEW

CHAPTER 3  Forming a New Life	CHAPTER 4  Physical Development During the First Three Years	CHAPTER 5  Cognitive Development During the First Three Years	CHAPTER 6  Psychosocial Development During the First Three Years
<p>Conception occurs. The genetic endowment interacts with environmental influences from the start.</p> <p>Basic body structures and organs form.</p> <p>Brain growth spurt begins.</p> <p>Physical growth is the most rapid in the life span.</p> <p>Vulnerability to environmental influences is great.</p> <p>Abilities to learn and remember and to respond to sensory stimuli are developing.</p> <p>Fetus responds to mother's voice and develops a preference for it.</p>	<p>A method and setting for childbirth are chosen, and the progress of the birth is monitored.</p> <p>The newborn emerges and is assessed for immediate health, developmental status, and any complications of childbirth.</p> <p>All senses and body systems operate at birth to varying degrees.</p> <p>The brain grows in complexity and is highly sensitive to environmental influence.</p> <p>Physical growth and development of motor skills are rapid.</p>	<p>Abilities to learn and remember are present, even in early weeks.</p> <p>Use of symbols and ability to solve problems develop by the end of the second year.</p> <p>Comprehension and use of language develop rapidly.</p>	<p>Attachments to parents and others form.</p> <p>Self-awareness develops.</p> <p>Shift from dependence to autonomy occurs.</p> <p>Interest in other children increases.</p>

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Part Preview Tables

These tables, visually keyed to each chapter of the text, preview the main features of each period of development. The contents of the part preview tables are coordinated with Table 1-1 in Chapter 1, which summarizes major developments of each period of the life span.

Chapter-Opening Outlines

At the beginning of each chapter, an outline previews the major topics included in the chapter.


Chapter-Opening Vignettes

Biographical vignettes from the lives of well-known people illustrate chapter themes.

What we must remember above all in the education of our children is that their love of life should never weaken.

—Natalia Ginzburg, *The Little Prince*, 1985

Focus:
Ann Bancroft, Polar Explorer



Ann Bancroft is the first woman in history to reach both the North and South Poles by nonmotorized means. In 1986, she dog-sledded 1,000 miles from the Northwest Territories in Canada to the North Pole as the only female member of an international expedition. After surviving eight months of grueling training and enduring temperatures as low as -70 degrees for 56 days, Bancroft stood on top of the world. Seven years later she led three other women in a 67-day, 660-mile ski trek to the South Pole, reaching it on January 14, 1993. For these exploits, she was inducted into the National Women's Hall of Fame. In 2000, she and Liv Arneson of Norway became the first team of women to ski across the land-mass of Antarctica; and in 2002 the two women reunited for a kayaking voyage from the north shore of Lake Superior to the St. Lawrence Seaway.

How did this five-foot-three-inch, 125-pound woman achieve these remarkable feats? The answers go back to her childhood in Mendota Heights, Minnesota.

Born September 29, 1955, into what she calls a family of risk takers, Ann showed her climbing instincts as soon as she could walk. As a toddler, she would climb her grandmother's bookcase to reach things on top. Instead of trying to stop her from climbing, her parents said, "Go ahead and try; you might just get what you want."

Ann was an outdoor girl. She and her two brothers and two sisters spent hours roaming the fields surrounding their farmhouse. Ann would "pretend she was a pirate building rafts to float down the creek, or an adventurer canoeing in the far north. During the winter she would build snow forts, sleeping shacks, and tunnels" (Wenzel, 1990, p. 15).

Her father often took the family on camping and canoe trips in the wilds of northern Minnesota. When she was 8, Ann started camping out in her backyard in winter with her cousins and the family dog. When she was 10, her parents went to Africa as missionaries. Ann's two years in Kenya kindled her thirst to see other parts of the world.

In school Ann was a poor student and had to be tutored to keep up. A natural athlete, her favorite class was gym. Not until seventh grade did she learn that she had dyslexia, a reading disability. Around that time Ann came across a book about Sir Ernest Shackleton's unsuccessful effort to reach the South Pole.

"Biographical information about Ann Bancroft came primarily from Nourse (2000), Wenzel (1990), and Bancroft's website: <http://www.polarexplorer.com>. Other sources were "Ann Bancroft, 1955-": (1998), "Ann Bancroft, 1955-": (1999), "Ann Bancroft, Explorer" (undated), "First Woman to South Pole": (1997), and "Minnesota Explorer Ann Bancroft" (2002).

OUTLINE

FOCUS:
Ann Bancroft, Polar Explorer

PHYSICAL DEVELOPMENT

Aspects of Physical Development

- Growth
- Nutrition
- Motor Development

Health and Safety

- Medical Problems
- Accidental Injuries

COGNITIVE DEVELOPMENT

Piagetian Approach: The Concrete Operational Child

- Cognitive Advances
- Moral Reasoning

Information Processing and Intelligence

- Memory and Other Processing Skills
- Psychometric Approach: Testing Intelligence

Language and Literacy

- Vocabulary, Grammar, and Syntax
- Pragmatics: Knowledge about Communication
- Literacy

The Child in School

- Entering First Grade
- Influences on School Achievement
- Second-Language Education
- Children with Learning Problems
- Gifted Children

BOXES

- 9-1 Digging Deeper: Children's Understanding of Illness
- 9-2 Practically Speaking: The Homework Debate

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