

The background of the cover is a child's drawing on white paper. It features a winding river drawn with thick, expressive brushstrokes in shades of blue and green. A pink fish is drawn in the upper left section of the river. In the lower middle section, a small red house with a white roof is visible. To the right, a hand is shown holding a blue paper bow. The overall style is that of a young child's artwork.

# A Child's World

INFANCY THROUGH ADOLESCENCE

UPDATED NINTH EDITION

Diane E. Papalia

Sally Wendkos Olds

Ruth Duskin Feldman

*Updated Ninth Edition*

# A Child's World

## Infancy Through Adolescence

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A CHILD'S WORLD: INFANCY THROUGH ADOLESCENCE, UPDATED NINTH EDITION

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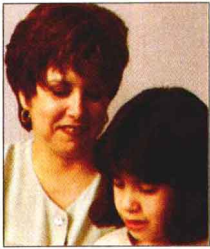
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# About the Authors



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 intellectual development and factors that contribute to the maintenance of intellectual functioning. She is a Fellow in the Gerontological Society of America. She is the coauthor, with Sally Wendkos Olds and Ruth Duskin Feldman, of *Human Development*, now in its ninth edition; of *Adult Development and Aging*, with Harvey L. Sterns, Ruth Duskin Feldman, and Cameron J. Camp, now in its second edition; 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, eighth, and ninth 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 *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 as an Authors Guild Backinprint edition of Universe). She has written for numerous newspapers and magazines and has lectured extensively and 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 our parents,*

Madeline and Edward Papalia,  
Leah and Samuel Wendkos,  
and Boris and Rita Duskin,  
for their unfailing love, nurturance, and  
confidence in us, and for their abiding conviction  
that childhood is a wondrous time of life.

*And to our children,*

Anna Victoria,  
Nancy, Jennifer, and Dorri,  
Steven, Laurie, and Heidi,  
and our grandchildren,  
Stefan, Maika, Anna, Lisa, and Nina,  
Daniel, Emmett, Rita, Carol, Eve, Isaac, and Delilah  
who have helped us revisit childhood  
and see its wonders and challenges  
with new eyes.



**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 eighth and ninth editions 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

With the publication of the eighth edition, *A Child's World* received a new lease on life. Virtually the entire book was revamped—its design, content, and pedagogical features. In the ninth edition, our author team—again with the inclusion of Dana Gross, Ph.D., as chief consultant (see biographical note on dedication page)—built on the foundation laid in the eighth edition. We introduced important pedagogic enhancements and, in response to reader requests, substantially streamlined the text while retaining the engaging qualities of tone, style, and substance that have contributed to the book's popularity over the years. This ninth edition update includes much new and revised material and newer references, as compared with the ninth edition published two years ago.

## Our Aims For This Edition

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

## The Ninth Edition Update: What's New?

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### Pedagogical Features

In the ninth edition, we introduced a new, comprehensive Learning System that consists of a coordinated set of marginal features to guide and check students' learning. The Visual Walk-Through following this preface previews the Learning System and other pedagogical features in detail.

In addition to the engaging biographical “Focus” vignettes that begin each chapter (see the Visual Walk-Through), in this updated edition we end each chapter with the “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 replaced two vignettes with more contemporary or more appropriate subjects. We also have incorporated opportunities for using the World Wide Web; each of the boxes in each chapter contains references to relevant links on the Online Learning Center to accompany *A Child's World*, updated ninth edition, at <http://www.mhhe.com/papaliacw9u>.

### 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). 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, and the adolescent on the brink of adulthood.

In line with our chronological approach, we have divided this book into six parts (indicated by color-coded footers at the bottom of each left-hand page). After Chapters 1 and 2, which introduce the study of child development, Chapters 3 to 5 describe the beginnings of life: conception, the influences of heredity and environment, pregnancy and prenatal development, birth, and the newborn baby. The next twelve chapters cover physical, cognitive, and psychosocial development during each of the four age-based periods from infancy through adolescence.

## Content Changes

In this update, we have taken special pains to draw on the most recent information available. In line with the growing recognition of child development as a rigorous scientific enterprise, we have broadened the research base of each chapter even more extensively than before and have updated throughout, using the most current available statistics. We have striven to make our coverage as concise and readable as possible, while still doing justice to the vast scope and significance of current theoretical and research work.

This updated 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 through time. Our photo illustrations show an even greater commitment to depicting this diversity.

Among the topics given new, reorganized, or revised coverage in this updated ninth edition are the following:

### *Chapter 1*

- Major contextual influences
- Critical and sensitive periods

### *Chapter 2*

- Bandura's social learning (social cognitive) theory
- Ethological approach (now discussed as part of broader evolutionary/sociobiological perspective)
- Cognitive neuroscience perspective
- Qualitative research methods
- Ethics of research

### *Chapter 3*

- Genetic testing and engineering
- The nonshared environment
- Autism, including Asperger's syndrome
- Assisted reproduction

### *Chapter 4*

- Prenatal environmental influences
- Prenatal care

### *Chapter 5*

- Cesarean delivery
- Low birthweight

## *Chapter 6*

- Studies of Romanian orphans
- Motor development and perception
- Infant mortality and Sudden Infant Death Syndrome (SIDS)
- Immunization

## *Chapter 7*

- HOME (Home Observation for Measurement of the Environment)
- Development of categorization and number

## *Chapter 8*

- Early emotional development
- Father's role
- Grandparents' roles
- Influences on attachment
- Mutual regulation and still-face paradigm
- I-self and Me-self
- Effects of child care

## *Chapter 9*

- Nutrition and obesity
- Socioeconomic status and health

## *Chapter 10*

- Causality
- Number
- Theory of mind
- Memory development
- Early Head Start

## *Chapter 11*

- New "Focus" vignette on Isabel Allende
- Cultural factors in parenting styles
- Aggression

## *Chapter 12*

- New "Focus" vignette on Ann Bancroft
- Malnutrition
- Asthma
- Safety skills

## *Chapter 13*

- Piaget's stages of moral development
- Teaching reading
- Influences on school achievement

## *Chapter 14*

- Family structure
- Divorce
- Single parenthood
- Stepfamilies
- Living with gay or lesbian parents
- Aggression and bullying
- Play therapy
- Stress, including reactions to 9/11



## Chapter 15

- Body image and eating disorders
- Trends in drug use
- Depression

## Chapter 16

- Implications of time use
- High school dropouts

## Chapter 17

- Sexual behavior
- Sex education and pregnancy prevention
- Family relationships
- Antisocial behavior and delinquency

A *Child's World*, updated ninth edition, is accompanied by a complete learning and teaching package, keyed into the new Learning System. Each component of this package has been thoroughly revised and expanded to include important new course material. Annotated lists of *recommended readings* for students who want to explore issues in greater depth will be found on the McGraw-Hill website at <http://www.mhhe.com/papaliacw9u>.

## Supplementary Materials

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A *Child's World*, updated ninth edition, is accompanied by a complete learning and teaching package, including both print and media supplements. Please contact your McGraw-Hill representative for more information.

## For the Instructor

### *Instructor's Manual*

*Leslie A. Grout and Ron Mulson, Hudson Valley Community College*

Designed specifically for this updated edition, this manual contains materials and resources for the instructor's use in teaching topics from each of the chapters in the text. Each chapter 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 and discussion topics, classroom and homework activities, and video and text resources. Each chapter contains a comprehensive chapter outline, a transparency-ready outline to guide classroom instruction, and stand-alone activities ready to photocopy and hand out to students. Also new to this edition of the *Instructor's Manual* is the addition of a "Ten-Minute Test" to each chapter. These quick assessments help to encourage student preparation for class, while making ongoing evaluation simple for the instructor. The *Instructor's Manual* is available on the Instructor Site of the Online Learning Center (<http://www.mhhe.com/papaliacw9u>) 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*

*Ron Mulson, Hudson Valley Community College*

The *Test Bank* has been extensively revised for this update. The *Test Bank* is organized by chapter, with each chapter organized by the "Guideposts for Study" that appear in the main text. There are approximately 100 multiple choice questions per chapter and 10 to 15 essay questions per chapter. Each multiple choice question includes the answer, the "Guidepost for Study" the question addresses, the page number where the content can be found in the

main text, the type of question (factual, conceptual, or applied), and the difficulty level of the question.

### *Dual Platform Computerized Test Bank on CD-ROM*

The computerized *Test Bank* on CD-ROM, a version of the printed *Test Bank*, is compatible with both Macintosh and Windows platforms. The CD-ROM provides an editing feature that enables instructors to integrate their own questions, scramble items, and modify questions. The CD-ROM also offers 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; and PowerPoint slides, as well as a link to the Online Learning Center, interactive exercises, and other useful features.

### *Online Learning Center*

<http://www.mhhe.com/papaliacw9u>

This extensive website, designed specifically to accompany this update of *A Child's World*, 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, video clips, book-specific and generic child development images, 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, interactive exercises, and much more.

### *PageOut*

Build your own course website in less than an hour. You don't have to be a computer whiz to create a website, especially with an exclusive McGraw-Hill product called PageOut. It requires no prior knowledge of HTML, no long hours of coding, and no design skills on your part. With PageOut, even the most inexperienced computer user can quickly and easily create a professional-looking course website. Fill in templates with your information and with content provided by McGraw-Hill, choose a design, and you've got a website specifically designed for your course. Best of all, it's FREE! Visit us at <http://www.pageout.net> to find out more.

Populated WebCT and Blackboard course cartridges are available. Contact your McGraw-Hill sales representatives for details.

### *McGraw-Hill's Visual Asset Database (VAD) for Lifespan Development*

*Jasna Jovanovic, University of Illinois—Urbana-Champaign*

McGraw-Hill's Visual Asset 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 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.



## For the Student

### *Study Guide*

**Wendy J. Micham, Chapman University**

This comprehensive *Study Guide* has been extensively revised for this update. The *Study Guide*, organized by chapter, integrates the “Guideposts for Study” found in the main text, as well as in the *Test Bank* and *Instructor’s Manual*. It is designed to help students review the material in the text, study for exams, and think critically about the issues presented. The *Study Guide* includes a chapter summary, multiple choice and true/false quizzes with answer keys, discussion topics, ideas for independent projects and papers, suggestions for further reading, including journals, books, and websites, and an extensive outline which includes all important terms, people, theories, and concepts mentioned in the text.

### *Student CD-ROM*

This CD-ROM, packaged free with the text, gives students an opportunity to test their knowledge of the course material. It offers multiple choice and true/false quizzes with feedback and scoring, so that students can assess their comprehension of each chapter’s content. The CD contains video clips, chapter summaries, interactive activities, and the “Guideposts for Study.” This valuable study tool also includes a Learning Styles Assessment, an Internet Primer, a Guide to Electronic Research, and a Study Skills Primer.

### *Online Learning Center*

<http://www.mhhe.com/papaliacw9u>

This text-specific website, designed to accompany this update of *A Child’s World*, 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, video clips, 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 new 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 development charts, a variety of hands on projects, and related websites and navigation aids.

## Annual Editions: Child Growth and Development

**Ellen N. Junn and Chris J. Boyatzis, Bucknell University**

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.

## Taking Sides: Clashing Views on Controversial Issues in Childhood and Society

**Diane S. DelCampo and Robert L. DelCampo, New Mexico State University—Las Cruces**

*Taking Sides* is a debate-style reader designed to introduce students to controversial viewpoints on some of the most critical issues in the field. Each issue is framed for the student,

and the pro and con essays represent the arguments of leading scholars and commentators in their fields.

## Acknowledgments

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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 child development. We are especially grateful for the valuable help given by those who reviewed the ninth edition of *A Child's World*, whose evaluations and suggestions helped greatly in the preparation of this updated edition. These reviewers, who are affiliated with both two- and four-year institutions, are as follows.

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As before, we wish to thank Dana Gross, Ph.D., who served admirably as chief consultant for the ninth edition, helping us keep up with the latest findings in a rapidly expanding field. Her current classroom experience provides a valuable perspective on the needs of students today. In addition, as a parent of two preschoolers, she rounds out our author team, which consists of the parent of an adolescent and two grandparents of children of various ages.

As always, we welcome and appreciate comments from readers, which help us continue to improve *A Child's World*.

***Diane E. Papalia***

***Sally Wendkos Olds***

***Ruth Duskin Feldman***



# Visual Walk-Through

A comprehensive, unified **Learning System** will help students focus their reading and review and retain what they learn. It forms the conceptual framework for each chapter, is carried across all text supplements, and contains five parts:

## Checkpoint

Can you . . .

- ✓ Trace highlights in the evolution of the study of child development?
- ✓ Name some pioneers in that study and summarize their most important contributions?
- ✓ Give examples of practical applications of research on child development?

## Checkpoints

These detailed marginal questions, placed at 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.

## Guideposts for Study

These topical questions, similar to learning objectives, are first posed 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.



### Guideposts for Study

1. What is child development, and how has its study evolved?
2. What are six fundamental points on which consensus has emerged?
3. What do developmental scientists study?
4. What are the three major aspects and five periods of child development?
5. What kinds of influences make one child different from another?

## What's Your View?

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

### What's your view ?

- Why do you think various societies divide the periods of development differently?

## Refocus

New in this update, this series of interpretive questions near the end of each chapter encourages students to think back over major chapter themes and their application to the famous person described in the opening vignette.

### Refocus

- Which approach to cognitive development seems closest to the one Darwin took in observing and describing his son's development? Why?
- How might a behaviorist, a Piagetian, a psychometrician, an information-processing researcher, a cognitive neuroscientist,

and a social contextual theorist attempt to study and explain the developments Darwin described?

- Did Doddy's early linguistic development seem more consistent with Skinner's or Chomsky's theory of language development? How does it illustrate the role of social interaction?

Social interaction in reading aloud, play, and other daily activities is a key to much of childhood development. Children call forth responses from the people around them and, in turn, react to those responses. In Chapter 8, we look more closely at these bidirectional influences as we explore early psychosocial development.

### Summary and Key Terms

#### Studying Cognitive Development: Classic Approaches

**Guidepost 1** How do infants learn, and how long can they remember?

- Two simple types of learning that behaviorists study are classical conditioning and operant conditioning.
- Rovee-Collier's research suggests that infants' memory processes are much like those of adults, and their memories can be jogged by periodic reminders.

intelligent behavior (145) behaviorist approach (145)  
psychometric approach (145) classical conditioning (146)  
operant conditioning (146)

**Guidepost 2** Can infants' and toddlers' intelligence be measured, and how can it be improved?

- Psychometric tests measure presumed factors in intelligence.
- Developmental tests, such as the Bayley Scales of Infant Development, can indicate current functioning but are generally poor predictors of later intelligence.
- Socioeconomic status, parenting practices, and the home environment may affect measured intelligence.
- If the developmental priming mechanisms are not present, early intervention may be needed.

Bayley Scales of Infant Development (148) Home Observation for Measurement of the Environment (HOME) (150) early intervention (150) developmental priming mechanisms (150)

## Chapter Summaries

The Chapter Summaries are organized by the major topics in the chapter. The Guideposts for Study 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. In this edition, key terms are listed for review under relevant topics, in the order in which they first appear, and are cross-referenced to pages where they are defined.

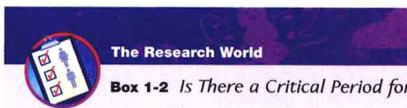


# Other Special Features in This Edition

This edition includes four different types of boxed material. Each box contains a critical-thinking What's Your View question, as well as Check It Out website links, which direct students to further information located on the Online Learning Center.

## "The Research World" Boxes

These boxes report on exciting new developments or current controversies in the field of child development. These include new treatments of such contemporary topics as whether there is a critical period for language acquisition; whether early temperament can predict adult personality; the case against corporal punishment; and the homework debate.



### The Research World

#### Box 1-2 Is There a Critical Period for Language Acquisition?

In 1970, a 13½-year-old girl called Genie (not her real name) was discovered in a suburb of Los Angeles (Curtiss, 1977; Fromkin, Krashen, Curtiss, Rigler, & Rigler, 1974; Pines, 1981; Rymer, 1993). The victim of an abusive father, she had been confined for nearly twelve years to a small room in her parents' home, tied to a potty chair and cut off from normal human contact. She weighed only 59 pounds, could not straighten her arms or legs, could not chew, had no bladder or bowel control, and did not speak. She recognized only her own name and the word *sorry*.

Only three years before, Eric Lenneberg (1967, 1969) had proposed that there is a critical period for language acquisition, beginning in early infancy and ending around puberty. Lenneberg argued that it would be difficult, if not impossible, for a child who had not yet acquired language to do so after that age.

The discovery of Genie offered the opportunity for a test of Lenneberg's hypothesis. Could Genie be taught to speak, or was it too late? The National Institutes of Mental Health (NIMH) funded a study, and a series of researchers took over Genie's care and gave her intensive testing and language training.

Genie's progress during the next few years (before the NIMH withdrew funding and her mother regained custody and cut her off from contact with the professionals who had been teaching her) both challenges and supports the idea of a critical period for language acquisition. Genie did learn some simple words and could string them together into primitive, but rule-governed, sentences. She also learned the fundamentals of sign language. But she never used language normally, and "her speech remained, for the most part, like a somewhat garbled telegram" (Pines, 1981, p. 29). When her mother, unable to care for her, turned her over to a series of abusive foster homes, she regressed into total silence.

What explains Genie's initial progress and her inability to sustain it? The fact that she was just beginning to show signs of puberty at age 13½ may indicate that she was still in the critical period, though near its end. The fact that she apparently had learned a few words before being locked up at the age of 20 months may mean that her language-learning mechanisms may have been triggered early in the critical period, allowing later learning to occur. On the other hand, the fact that she was so abused and neglected may have retarded her so much—emotionally, socially, and cognitively—that, like Victor, the wild boy of Aveyron, she cannot be considered a true test of the critical period (Curtiss, 1977).

Case studies like those of Genie and Victor dramatize the difficulty of acquiring language after the early years of life; but, because there are too many complicating factors, they do not

permit conclusive judgments about whether such acquisition is possible. Brain imaging research has found that even if the parts of the brain best suited to language processing are damaged early in childhood, nearly normal language development can continue as other parts of the brain take over (Boatman et al., 1999; Hertz-Pannier et al., 2002; M. H. Johnson, 1998). In fact, shifts in brain organization and use occur throughout the course of normal language learning (M. H. Johnson, 1998; Neville & Bavelier, 1998). Neuroscientists also have observed different patterns of brain activity during language processing in people who learned American Sign Language (ASL) as a native language and those who learned it as a second language after puberty (Newman, Bavelier, Corina, Jezzard, & Neville, 2002). It is possible to learn a second language, signed or spoken, even in adulthood, but typically not as easily or as well as in early childhood (Newport, 1991).

Because of the brain's plasticity, some researchers consider the prepubertal years a *sensitive*, rather than *critical*, period for learning language (Newport, Bavelier, & Neville, 2001; Schumann, 1997). But if either a critical or a sensitive period for language learning exists, what explains it? Do the brain's mechanisms for acquiring language decay as the brain matures? That would seem strange, since other cognitive abilities improve. An alternative hypothesis is that this very increase in cognitive sophistication interferes with an adolescent's or adult's ability to learn a language. Young children acquire language in small chunks that can be readily digested. Older learners, when they first begin learning a language, tend to absorb a great deal at once and then may have trouble analyzing and interpreting it (Newport, 1991).

#### What's your view?

Do you see any ethical problems in the studies of Genie and Victor? Is the knowledge gained from such studies worth any possible damage to the individuals involved? (Keep this question, and your answer, in mind when you read the section on ethics of research in Chapter 2.)

#### Check it out!

For more information on this topic, go to <http://www.mhhe.com/papaliacw9u>. There you will be directed to a website developed by Professor Robert Beard of the Linguistics Program at Bucknell University. The page at that URL gives a brief, accurate overview of the nature-nurture question as it concerns language acquisition. Links to other related sites of interest are also given.





## Around the World

### Box 8-2 Fatherhood in Three Cultures

Fatherhood has different meanings in different cultures. In some societies, fathers are more involved in their young children's lives—economically, emotionally, and in time spent—than in other cultures. In many parts of the world, what it means to be a father has changed—and is changing (Engle & Breaux, 1998.)

#### Urbanization in West Africa and Inner Mongolia

In Cameroon and other rural areas of West Africa (Nsamenang, 1987, 1992a, 1992b), men have more than one wife, and children grow up in large extended families linked to kinship-based clans. Although children guarantee the perpetuation of a man's family line, they belong to the kinship group, not just to the parents. After weaning, they may have multiple caregivers or may even be given to other members of the group to raise.

The father has the dominant position in the family and gives his children their connection with the clan. The mother is literally the breadwinner, responsible for providing her children's food, but the father controls his wives and their earnings; and wives compete for their husbands' favor. Fathers are primarily disciplinarians and advisers. They have little contact with infants but serve as guides, companions, and models for older children.

With the coming of urbanization and western values, these traditional patterns are breaking up. Many men are pursuing financial goals and are spending almost no time with their children. With the vanishing of traditional folkways, these men no longer know how to be fathers. They can no longer tell folktales to young children around the fire or teach their sons how to do a man's work.

Similarly, among the Huhot of Inner Mongolia, a province of China, fathers traditionally are responsible for discipline and mothers for nurturing; but fathers also provide economic support (Jankowiak, 1992). Children have strong bonds with mothers, who live in the homes of their mothers-in-law and have no economic power. Fathers are stern and aloof, and their children respect and fear them. Men almost never hold infants; they are believed to be incapable of it. Fathers interact more with toddlers but perform child care duties reluctantly, and only if the mother is absent.

Here, as in Cameroon, urbanization is changing these attitudes—but in the opposite direction. Families now live in

very small quarters, and women work outside the home. Fathers—especially college-educated ones—now seek more intimate relationships with children, especially sons. China's official one-child policy has accentuated this change, leading both parents to be more deeply involved with their only child (Engle & Breaux, 1998).

#### Aka Pygmies

The Aka are hunter-gatherers in the tropical forests of central Africa who move frequently from camp to camp in small, tightly knit groups and are highly protective of young children. In contrast with fathers in the other two cultures just described, Aka fathers are just as nurturant and emotionally supportive as Aka mothers. In fact, "Aka fathers provide more direct infant care than fathers in any other known society" (Hewlett, 1992, p. 169). They hold their babies frequently and hug, kiss, clean, and play gently with them (Hewlett, 1987).

This behavior is in line with *family systems theory*, which predicts that fathers will be more involved in the care of young children in cultures in which husbands and wives frequently cooperate in subsistence tasks and other activities (Hewlett, 1992). Among the Aka and other societies with high paternal involvement in infant care, the key is not just that both parents participate in such activities, but that they do it together. The father's role in child care is part and parcel of his role in the family.

#### What's your view?

How do you think your relationship with your father might have been different if you had grown up in Cameroon? Among the Huhot of Inner Mongolia? Among Aka Pygmies?

#### Check it out!

For more information on this topic, go to <http://www.mhhe.com/papaliacw9u> for a link to a discussion of the varieties of fatherhood and a review of research on the influence of fathers on their children's development.

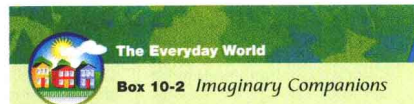
\*Unless otherwise referenced, this box is based on Engle & Breaux, 1998.

## "Around the World" Boxes

This boxed feature offers windows on child development in societies other than our own (in addition to the cultural coverage in the main body of text). A new topic under this heading is fatherhood in three cultures.

## "The Everyday World" Boxes

These boxes highlight practical applications of research findings. Among the new or greatly revised subjects are imaginary companions, the math wars, and whether parents should stay together for the sake of the children.



## The Everyday World

### Box 10-2 Imaginary Companions

At 3½, Anna had 23 "sisters" with such names as Och, Elmo, Zeni, Aggie, and Ankie. She often talked to them on the telephone, since they lived about 100 miles away, in the town where her family used to live. During the next year, most of the sisters disappeared, but Och continued to visit, especially for birthday parties. Och had a cat and a dog (which Anna had begged for in vain), and whenever Anna was denied something she saw advertised on television, she announced that she already had one at her sister's house. But when a live friend came over and Anna's mother happened to mention one of her imaginary companions, Anna quickly changed the subject.

All 23 sisters—and some "boys" and "girls" who have followed them—lived only in Anna's imagination, as she well knew. Like an estimated 25 to 65 percent of children between ages 3 and 10 (Woolley, 1997), she created imaginary companions, with whom she talked and played. This normal phenomenon of childhood is seen most often in firstborn and only children, who lack the close company of siblings. Like Anna, most children who create imaginary companions have many of them (Gleason, Sebanc, & Hartup, 2000). Girls are more likely than boys to have imaginary "friends" (or at least to acknowledge them). Girls' imaginary playmates are usually other children, whereas boys' are more often animals (D. G. Singer & Singer, 1990).

Children who have imaginary companions can distinguish fantasy from reality, but in free-play sessions they are more likely to engage in pretend play than are children without imaginary companions (M. Taylor, Cartwright, & Carlson, 1993). They play more happily and more imaginatively than other children and are more cooperative with other children and adults (D. G. Singer & Singer, 1990; J. L. Singer & Singer, 1981); and

they do not lack for friends at preschool (Gleason et al., 2000). They are more fluent with language, watch less television, and show more curiosity, excitement, and persistence during play. In one study, 4-year-olds—regardless of verbal intelligence—who reported having imaginary companions did better on theory-of-mind tasks (such as differentiating appearance and reality and recognizing false beliefs) than children who did not create such companions (M. Taylor & Carlson, 1997).

Children's relationships with imaginary companions are like peer relationships; they are usually sociable and friendly, in contrast with the nurturing way in which children treat personified objects, such as stuffed animals and dolls (Gleason et al., 2000). Imaginary playmates are good company for an only child like Anna. They provide wish-fulfillment mechanisms ("There was a monster in my room, but Elmo scared it off with magic dust"), scapegoats ("I didn't eat those cookies—Och must have done it!"), displacement agents for the child's own fears ("Aggie is afraid she's going to be washed down the drain"), and support in difficult situations. (One 6-year-old "took" her imaginary companion with her to see a scary movie.)

#### What's your view?

How should parents respond to children's talk about imaginary companions?

#### Check it out!

For more information on this topic, go to the World Wide Web: <http://www.mhhe.com/papaliacw9u>, which provides a link to a Web page about children's imaginary companions.



## “The Social World” Boxes

This box series includes new discussions or substantial updates or revisions of such topics as: Elder’s work on growing up in hard times; fetal welfare versus mothers’ rights; and “pubilect”: the dialect of adolescence.



The Social World

### Box 1-1 Studying the Life Course: Growing Up in Hard Times

Our awareness of the need to look at the life course in its social and historical context is indebted in part to Glen H. Elder, Jr. In 1962, Elder arrived on the campus of the University of California at Berkeley to work on the Oakland Growth Study, a longitudinal study of social and emotional development in 167 urban young people born around 1920, about half of them from middle-class homes. The study had begun at the outset of the Great Depression of the 1930s, when the youngsters, who had spent their childhoods in the boom years of the Roaring '20s, were entering adolescence. Elder observed how societal disruption can alter family processes, and through them, children's development (Elder, 1974).

As economic stress changed parents' lives, it changed children's lives, too. Fathers, preoccupied with job losses and irritable about their loss of status within the family, sometimes drank heavily. Mothers got outside jobs and took on more parental authority. Parents argued more. Adolescent children tended to show developmental difficulties.

Still, for boys, particularly, the long-term effects of the ordeal were not entirely negative. Boys who got jobs to help out became more independent and were better able to escape the stressful family atmosphere than girls, who helped at home. These boys grew up to be strongly work-oriented but also valued family activities and cultivated dependability in their children.

Elder noted that effects of a major economic crisis depend on a child's stage of development. The children in the Oakland sample were already teenagers during the 1930s. They could draw

on their own emotional, cognitive, and economic resources. A child born in 1929 would have been entirely dependent on the family. On the other hand, the parents of the Oakland children, being older, may have been less resilient in dealing with the loss of a job, and their emotional vulnerability may well have affected the tone of family life and their treatment of their children.

Fifty years after the Great Depression, in the early 1980s, a precipitous drop in the value of midwestern agricultural land pushed many farm families into debt or off the land. This Farm Crisis gave Elder the opportunity to replicate his earlier research, this time in a rural setting. In 1989, he and his colleagues (Conger & Elder, 1994; Conger et al., 1993) interviewed 451 Iowa farm and small-town families with children of various ages. The researchers also videotaped family interactions.

As in the depression-era study, many of these rural parents, under pressure of economic hardship, developed emotional problems. Depressed parents were more likely to fight with each other and to mistreat or withdraw from their children. The children, in turn, tended to lose self-confidence, to be unpopular, and to do poorly in school. In the 1980s this pattern of parental behavior fit both mothers and fathers, whereas in the 1930s it had been less true of mothers, whose economic role before the collapse was more marginal (Conger & Elder, 1994; Conger et al., 1993; Elder, 1998).

Elder's work, like other studies of the life course, gives researchers a window into processes of development and their links with socioeconomic change. The Farm Crisis study continues, with the families being reinterviewed yearly. Eventually it may enable us to see long-term effects of early hardship on the later lives of people who experienced it at different ages and in varying family situations.

Source: Unless otherwise referenced, this discussion is based on Elder, 1998.

#### What's your view?

Can you think of a major cultural event within your lifetime that shaped the lives of families and children? How would you go about studying such effects?

#### Check it out!

For more information on this topic, go to <http://www.mhhe.com/papaliacw9u>. There you will be directed to a website containing oral histories of the Great Depression (Reminiscences of the Great Depression, originally published in *Michigan History Magazine*, January–February, 1982 [Vol. 66, No. 1]). Read one of the oral histories and consider how the Great Depression seems to have affected the person whose story is told.



Glen Elder's studies of children growing up during the Great Depression showed how a major sociohistorical event can affect children's current and future development.