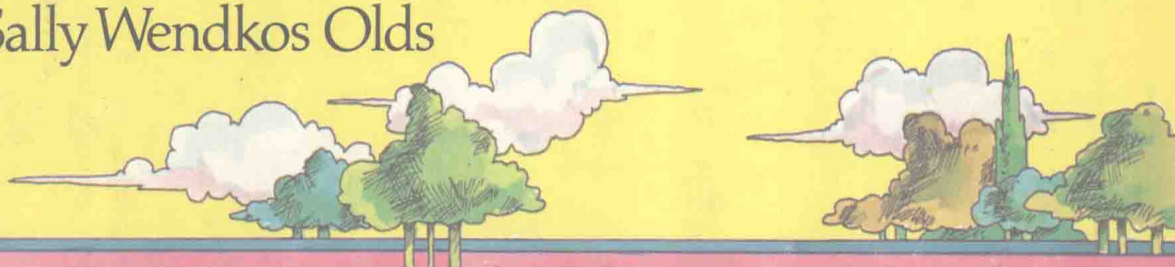


# A CHILD'S WORLD

INFANCY THROUGH ADOLESCENCE

Diane E. Papalia  
Sally Wendkos Olds



Second Edition



# A CHILD'S WORLD

INFANCY THROUGH ADOLESCENCE

SECOND EDITION

**Diane E. Papalia**

UNIVERSITY OF WISCONSIN

**Sally Wendkos Olds**

**McGraw-Hill Book Company**

New York St. Louis San Francisco Auckland Bogotá Düsseldorf  
Johannesburg London Madrid Mexico Montreal New Delhi  
Panama Paris São Paulo Singapore Sydney Tokyo Toronto

This book was set in Souvenir by Black Dot, Inc. (ECU).  
The editors were Richard R. Wright, Alison Meersschaert,  
and James R. Belser;  
the designer was Joan E. O'Connor;  
the production supervisor was Leroy A. Young.  
Von Hoffmann Press, Inc., was printer and binder.

See Acknowledgments on pages 615 and 616.  
Copyrights included on this page by  
reference.

## **A CHILD'S WORLD: INFANCY THROUGH ADOLESCENCE**

Copyright © 1979, 1975 by McGraw-Hill, Inc. All rights reserved.  
Printed in the United States of America. No part of this  
publication may be reproduced, stored in a retrieval system, or  
transmitted, in any form or by any means, electronic, mechanical,  
photocopying, recording, or otherwise, without the prior written  
permission of the publisher.

1 2 3 4 5 6 7 8 9 0 V H V H 7 8 3 2 1 0 9 8

Library of Congress Cataloging in Publication Data

Papalia, Diane E

A child's world.

Bibliography: p.

Includes index.

1. Child psychology. 2. Children—Management.

I. Olds, Sally Wendkos, joint author. II. Title.

HQ772.P23 1979 301.43'1 78-17198

ISBN 0-07-048458-9

*To our parents,  
Madeline and Edward Papalia  
and  
Leah and Samuel Wendkos,  
for their unfailing love,  
nurturance, and confidence in us,  
and  
for their abiding conviction  
that childhood is a wondrous time of life.*

# PREFACE

Just as children retain many basic temperamental, physical, and intellectual traits as they develop, while adapting some and acquiring new ones, so has this book developed since its first edition.

This second edition of *A Child's World* retains many of the characteristics of the first. Our ultimate goal is the same: to make the study of child development come alive for those of you who will be rearing children or working with them professionally, or who just want to understand the way people develop from conception through adolescence. We are still demonstrating the practical aspects of theories and research findings so that you can apply them in your teaching, counseling, or parenting. We are still keenly aware of the many differences among children, and so we talk about youngsters who grow up in many different worlds in many different kinds of families. We still include such topics of contemporary social significance as genetic counseling, childbirth without drugs, the father's role in child development, the effects of divorce and single parenthood, cross-cultural child rearing, and the ethics of research.

Yet the second edition shows changes, too. These changes reflect the comments of teachers and students who used the first edition, other reviewers who shared their opinions with us, and, finally, our own carefully considered judgment. What are some of these changes?

Vicky is still with us, that typical child whom so many students have enjoyed getting to know as she grows up in the pages of *A Child's World*, illustrating in a very personal way many of the issues we talk about. In this second edition, Vicky is joined by Jason, her male counterpart, who sometimes helps us clarify

discussions of sexual differences or similarities and who sometimes just plays his own part as a “typical kid.”

Our repertoire of student learning aids has grown. In addition to chapter summaries, part openings, and annotated reading lists, the material in the book is highlighted by interesting sidebar materials as well as values-oriented and personal history questions keyed to the issues in each chapter.

A prime reason for the early revision of *A Child's World* is the rapid pace of current research in child development. This new edition incorporates the results of many new studies. There are completely new sections on such important topics as Leboyer's “birth without violence,” infant language development, contemporary voices in parent education, models and theories of child development, adolescent moral development, and the college experience. We have also added a major section on emotional disturbances in childhood and their treatment.

While the basic organizational structure of the book remains the same, a few changes have been made here, too. The new overview of the major theories in child development now in Chapter 1 serves as a framework for the entire text.

With this new edition, then, we hope to help you understand children even better. By appreciating the significance of prenatal development and the sequence and timing of physical, intellectual, and personality development throughout the years of childhood, we hope you'll understand some of those factors that helped to make you the person you are. And we hope you'll be inspired to do what you can to better every child's world.

## ACKNOWLEDGMENTS

We would like to express our gratitude to the friends and colleagues whose help with both the first and second editions of this book was inestimable. To Mark A. Stewart, M.D., Ida P. Haller Professor of Child Psychiatry at the University of Iowa College of Medicine, and to Dr. Lynn Ourth, Ph.D., Professor of Psychology at the University of Tennessee at Chattanooga, both of whom read an early draft of the original manuscript and both of whom offered many valuable suggestions that helped us shape the basic form of the first edition. To Jonathan Finlay, M.B., Ch.B., formerly pediatric house physician at Birmingham Children's Hospital in Birmingham, England and now Postdoctoral Fellow in Pediatric Hematology and Oncology, University of Wisconsin-Madison, for his considerable help with the sections on heredity and prenatal development. To Gene Cranston Anderson, Shanklin Ph.D., Associate Professor of Nursing at the University of Florida, for her help with the section on infancy. To Emily Woodward, M.S. and Mary Dellmann, M.S. for their help in locating recent literature in child development. And to Jane Weier, who has typed her way through both editions, as well as aided us in organizing the bibliography.

We are grateful to the many students who used the first edition of *A Child's World* and whose generally positive reactions to it helped us accept whatever

suggestions they offered for improving upon it. And we owe a great debt to the following persons who reviewed portions of our manuscripts for either the first or second editions and gave us the benefits of their experience and well-thought-out opinions: Professor Alyce Blackmon, California State University, Northridge; Professor Ruth Bogdanoff, Purdue University; Professor Thomas Busse, Temple University; Professor Catherine L. Cowan, University of Maine at Orono; Professor Karen Dinsmore, University of Nebraska; Professor Claire Etaugh, Bradley University; Professor Beverly Gulley, Southern Illinois University at Carbondale; Professor Morton Keston, San Francisco State University; Professor Dene Klinzing, University of Delaware; Professor Henry L. Moreland, Florida Junior College at Jacksonville; Professor Robert Morgan, University of Southern Colorado; Professor Cosby Rogers, Virginia Polytechnic Institute; Professor Mary Knox Weir, Long Beach City College.

We know that this second edition of *A Child's World* is better for all the help offered by all these people, but, of course, we accept any shortcomings in it as ours alone.

Diane E. Papalia

Sally Wendkos Olds

# CONTENTS

PREFACE ix

Chapter 1 Introduction: Issues and Theories in Child Development 1

## **PRENATAL DEVELOPMENT, BIRTH, AND THE NEONATAL PERIOD**

Chapter 2 Prenatal Development 49

Chapter 3 Birth and the Neonate 91

## **DEVELOPMENT IN INFANCY**

Chapter 4 The Infant's Physical Development 119

Chapter 5 The Infant's Intellectual Development 143

Chapter 6 The Infant's Personality Development 181

## **DEVELOPMENT IN THE PRESCHOOL YEARS**

Chapter 7 Preschool Physical Development 215

Chapter 8 Preschool Intellectual Development 237

Chapter 9 Preschool Personality Development 287



## **DEVELOPMENT IN THE MIDDLE YEARS**

Chapter <b>10</b>	The Schoolchild's Physical Development	323
Chapter <b>11</b>	The Schoolchild's Intellectual Development	345
Chapter <b>12</b>	The Schoolchild's Personality Development	417

## **DEVELOPMENT IN ADOLESCENCE**

Chapter <b>13</b>	Adolescent Physical and Intellectual Development	477
Chapter <b>14</b>	Adolescent Personality Development	515

GLOSSARY	573
----------	-----

BIBLIOGRAPHY	580
--------------	-----

ACKNOWLEDGMENTS	615
-----------------	-----

INDEX	619
-------	-----

# 1 INTRODUCTION: ISSUES AND THEORIES IN CHILD DEVELOPMENT

*The task of education is to show the mysteries solved; but also to show where mystery has not been, and will not be, solved—and in the most familiar objects and events. There is mystery enough at noon; no need to multiply the midnight rites.*

*(John Fowles\*)*

As a college student, you are far enough from childhood to view it with perspective. And yet you are close enough to it—as we all are throughout our lives—so that certain incidents and emotions of those years remain as clear today as they were when you first experienced them. What made you the kind of child you were—and the kind of adult you are now? The answer to this question is what we hope to find through the study of child development.

By examining how children develop, from the moment of conception through the early adolescent years, we learn more about ourselves and about our fellow inhabitants on this planet. Only by knowing who we are and how we became this way can we hope to create a better world. Only by learning how children respond to influences around them can we offer them a better education, a better home environment, and a better start in life. They, then, will be better equipped to fulfill their individual potential, and to help society fulfill its potential.

## **WHAT IS DEVELOPMENT AND WHY SHOULD WE STUDY IT?**

The study of child development focuses on the *quantitative* and *qualitative* ways children change over time. *Quantitative* change is fairly straightforward and relatively easy to measure. A child's growth in height and weight is a quantitative

\* *The Aristos*. New York: New American Library, 1970, p. 101.

change. So are the expansion of vocabulary, the proliferation of physical skills, the number of relationships with other people, and so forth. The study of *qualitative* change is more complex, involving, as it does, “leaps” in functioning—those changes in kind that distinguish an infant from a toddler or a talking child from a nonverbal baby, that trace the growth of intelligence, creativity, sociability, morality. But even these leaps result from a series of small steps. No child wakes up on his sixth birthday suddenly thinking and acting vastly differently from the day before. Quantitatively and qualitatively, development is a continuous, irreversible, and complex process.

The modern science of development is concerned primarily with behavioral changes—things we can see. We emphasize aspects of change that are readily observable in an effort to apply rigorous scientific criteria to our study of the growing child. Thus we measure and chart physical growth. We follow the progress of emotional expression. We study the development of language from the infant’s artless babbling to more mature, grammatically correct speech. The field of child development has itself developed. Whereas its focus was once simply on recording observable behaviors and deriving age norms, developmentalists today try to explain *why* certain behaviors occur.

The study of child development has immediate and practical benefits, too. We learn how an average child behaves so that we can gauge how a particular child compares with the norm. Parents of a child who seems backward in development may be reassured that he falls within the limits of normality. Or they may be advised on how to help overcome any deficiencies. Parents of a perpetual truant may receive sound psychological advice that enables them to divert her from a path that leads to trouble. Educators can better plan classroom programs when they understand how children of any given age learn best. But aside from such practical applications of our knowledge of children, the study of childhood helps us understand all human beings.

## MEET VICKY AND JASON

This book is about all children, and it is also about each child. In our study of development, we are interested in patterns that govern the development of all individuals of the species *Homo sapiens*. But since each member of the species is unique, we want to know what factors make one person turn out differently from another.

To personalize some of the statements we will be making here, we have created *Vicky* and *Jason*. Each one is Everychild. And each is no child. Creatures drawn from a composite of information culled from research papers and from the skilled observation of professionals, neither Vicky nor Jason exists. On these pages, they are typical, or ideal, children at whatever stage of development we are discussing. But off these pages, there is no child exactly like them.

Although these two ideally represent all children—boys and girls, American and foreign, black and white, Jewish and gentile—in many cases they seem to



**Many factors influence human growth and development.**

represent the middle-class American child who has been raised in an intact home and been given good care, good nutrition, and a public education. By and large, these are the children who populate research studies. Yet even among this limited group of children, there is a wide range of differences.

No child grows up in a vacuum. When we talk about normal development for a child in favored circumstances, we cannot generalize our conclusions to a child who was born to a malnourished teenager, is raised in a rural shack, does not know his father, does not get enough to eat, fends for himself much of the time, is rarely spoken to at any length, and receives a deficient education. This child is growing up in a world light-years away from that of the “typical” child. What we say about one often does not apply to the other.

Many factors influence human growth and development. These elements are an integral part of the various subcultures all children belong to—their family’s socioeconomic status, their ethnic background, their race, their sex. Not to know these facts about a child leaves large gaps in our understanding of that child and limits our means to help him or her. Unfortunately, the data on which many developmentalists base conclusions cannot always be so complete as is wanted. As a result, our information is not so precise as it should be. And our conclusions are not always so valid.

### **The “Gestalt” of the Child**

Vicky, as she stands before us, eyes unblinking, thumb in mouth, is a whole child. We cannot dissect her into a physical creature, an intellectual person, and

an emotional self. Everything about her affects everything else about her, until it is virtually impossible to separate the various strands of the child Vicky.

Her physical self, for example, helps to determine both her personality and her intellect. If Vicky is in good health, of normal physical stature, and attractive in appearance (by the standards of her culture), her parents and other significant persons in her life will react to her in certain ways right from birth. The degree to which she is accepted, initially perhaps because of her physical characteristics, helps to determine the degree of her self-confidence and self-esteem. If her parents are disappointed in her looks or in the slowness of her physical development, their feelings may affect her personality adversely. As she grows taller and stronger, as she develops the skills that will enable her to master her environment, she will develop good feelings about herself, even though they may be tempered to some degree by the frustrations she experiences when on the threshold of some new ability. Thus the combination of her physical self and capabilities, plus the way others react to them, has strong effects on her personality. Abnormal physical development has many emotional ramifications.

Vicky the physical person also affects Vicky the intellectual person, since good physical health is often important for normal intellectual development. Malnutrition can impede brain development, and certain physical disabilities, like phenylketonuria (PKU) and Down's syndrome (mongolism), impede mental processes as much or more than they affect physical functioning.

Vicky's intellectual capabilities are closely related to both the motor and the emotional aspects of her being. In infancy, in fact, virtually the only way to measure an individual's intelligence is through motor development. If Vicky holds her head up, reaches for a toy, and pulls herself to a sitting position at certain ages, we can be assured that she is probably normal mentally as well as physically. Slowness in these activities is often the first sign of mental retardation.

And the social and emotional aspects of Vicky's personality affect both the physical and the intellectual aspects of her functioning. Emotional deprivation in infancy, for example, can have devastating effects on mental and motor development, as well as on personality.

Throughout our discussion of the ways children develop, we will be separately considering their physical, intellectual, and personality development. In our discussion of personality, we will actually be grouping together a variety of aspects involving *interpersonal interaction*. Our emotions affect our personalities, which in turn affect the way we act socially. Thus these interpersonal aspects of development tell us a great deal about how and why a certain child reacts a certain way in certain situations involving other people.

But while we carve Vicky into three beings for convenience and ease of discussion, we always have to bear in mind that these aspects of her life are inextricably intertwined. We do not know any child until we know her or him in all spheres of functioning.

## Age Stages

We have made another arbitrary division of the child. Jason's development, from birth till adulthood, is a gradual, continuous process. No sharp demarcations set his infancy off from his early childhood, or his childhood from adolescence. Very often he is in one stage in one part of his development and in another stage in another part. For example, Jason may be shaving every day without having outgrown many of his childish feelings and thoughts.

The individual differences among children are so great that they enter and leave these age stages at different times of life. Annie, at 2, may have already achieved physical developmental milestones that Brian will not reach for another year. Yet Brian may be more advanced socially or intellectually. For example, a child who spends most of his days with loving, nurturant, stimulating parents and little time with children his own age is likely to have a fluent command of language, but little idea of how to approach, play with, and not be overwhelmed by another child. Vicky and Jason do not show these contradictory, individual tendencies. They are, by and large, reflections of the average child as revealed by the scientific literature.

Jason and Vicky are abstractions. But real children are not abstract. They are living, laughing, crawling, crying, shouting, shrieking, jumping, whining, skipping, reaching, thumb-sucking, nose-picking, diaper-wetting, tantrum-throwing, question-asking human beings. We have tried to help you see children more as they really are by relating the concepts we discuss to Vicky and Jason.

You can personalize these findings much more meaningfully if you look with new eyes at the children in your own life. Observe your little brothers and sisters, your cousins, your neighbors, even the youngster who sits across from you on the bus one afternoon. Talk to them. And really listen to what they have to say. Try to relate your firsthand observations to the more general points we make here, and you will know more about children than you could possibly absorb from reading alone.

## DEVELOPMENTAL PRINCIPLES AND ISSUES

Certain principles apply to the totality of developmental change and thus serve as useful guidelines for interpreting the raw information about development.

### Individual Differences in Development

Although all children go through developmental stages in the same sequence and according to the same general chronology, wide ranges in normal development allow for a great deal of individual difference. Throughout this book, we talk about *average* ages for the occurrence of certain behaviors; the first smile, the first word, the first step. In all cases, these ages are *only* averages. As we have



**The normal range of behavior includes a wide spectrum of individual differences.**

said, Vicky and Jason as average children are in reality *no* child, because no child hews to the average rate of development in every aspect of growth. The normal range of behavior includes a wide spectrum of individual differences—with respect to measures of height and weight, walking or talking, understanding various ideas, and so forth. Therefore, *all* the average ages we give should be regarded as flexible. Only when a child's deviation from these norms is extreme is there cause for considering her or him exceptionally advanced or retarded. The important point to remember is that all children go through the same general sequence of events, even though the timing varies greatly among them.

### **Critical Periods in Development**

If a woman undergoes irradiation, ingests certain drugs, or contracts certain diseases at specific times during the first three months of pregnancy, her unborn baby will show specific effects. The amount and kind of damage to the fetus will vary according to the particular insult and to its timing. Experiments have shown that pregnant mice that have received x-rays 7 or 8 days after conception are likely to have pups with brain hernia, whereas those that are irradiated 9<sup>1</sup>/<sub>2</sub> days after conception are more likely to bear pups with spina bifida, a disease of the nervous system (Russell & Russell, 1952). Similar mechanisms operate in humans.

*A critical period* in development is a period of time when an event will have its



greatest impact. The same event—such as radiation—would not have as much of an influence if it took place at a different time in development.

This theory of critical periods has been incorporated into a number of theories regarding various aspects of human behavior, including intelligence and emotional attachment between babies and their mothers.

Psychoanalysts, especially, have embraced the concept of critical periods. As we shall see, Freud maintained that certain experiences undergone by the baby or young child in the *oral*, *anal*, and *phallic* periods could set an individual's personality for life. And Erikson proposed eight ages in life, each of which constitutes a critical period for social and emotional development: infancy for trust, toddlerhood for autonomy, the preschool years for industry, adolescence for identity, and so forth.

Although some of the evidence for critical periods of development is incontrovertible (such as that involving the physical development of the fetus), some of the other theories, while persuasive, still need to be followed further, to be backed up by more research.

## **Development Is Orderly, not Random**

There is nothing haphazard about development; it follows a well-defined path.

*It always proceeds from the simple to the complex.* In the development of language, for example, babies go from crying to babbling, then to words, and finally to more and more complicated sentences.

*It proceeds from the general to the specific.* Emotions begin as a global state of excitement in the newborn babe and gradually differentiate into a wide repertoire of feelings that include love, hate, fear, anger, jealousy, and so forth.

*Physical development follows* two principles of progression, both in physical growth and in motor development. The *cephalocaudal* principle (from the Latin “head-to-tail”) dictates that development shall proceed from the head to the lower part of the body. Thus, an embryo's head, brain, and eyes develop before its trunk and legs, continue after birth to develop ahead of the lower parts, and are disproportionately large until the other parts catch up. The head of the 2-month-old embryo is half the length of the entire body, and the head of the newborn infant is one-fourth the total body length and weight, while the head of the adult is only one-seventh the size of the rest of the body. The brain of a 1-year-old baby weighs 70 percent of its full adult weight, while the rest of the body still has far to go. Furthermore, infants learn to use the upper parts of their bodies before their lower parts. Vicky sees objects before she can reach them with her hands; she can control her head before she can control her trunk; and she learns to do many things with her hands long before her legs are very useful.

According to the *proximodistal* law (Latin, “near-to-far”), development proceeds from the central part of the body to the peripheral parts. Thus, the embryonic head and trunk develop before the limbs, and the arms and legs before the fingers and toes. Jason first develops the ability to use his upper arm and upper leg (which are closest to the central axis), then his forearm and foreleg, then his hands and feet, and finally his fingers and toes.



(Erika Stone/Peter Arnold.)



**The infant learns to do many things with his hands long before his legs are very useful.**

*Cognitive development also proceeds along orderly lines.* Piaget describes the stages of sensorimotor, preoperational, concrete operational, and formal levels of thought.

Although the precise timing of all these facets of development varies for each child, their sequence is invariant in conformity with the overall principles involved.

### **Different Types of Development Are Important at Different Times in Life**

Motor and physical development is most rapid in infancy; language develops most quickly during the preschool years; the development of logical thinking and of sociability are most rapid during the elementary school years; and the reproductive system develops dramatically in adolescence. Children seem to concentrate intensely at any stage on those facets of development that are currently emerging. They may even seem to regress in earlier abilities.

## **MODELS AND THEORIES OF DEVELOPMENT**

What is the basic nature of human beings? Are we active or passive as we live out our time upon this earth? Do we control our own destiny—or are we simply