

THE PSYCHOLOGY OF ADOLESCENCE

BY

FOWLER D. BROOKS

ASSOCIATE PROFESSOR OF EDUCATION,
JOHNS HOPKINS UNIVERSITY

HOUGHTON MIFFLIN COMPANY

BOSTON · NEW YORK · CHICAGO · DALLAS

ATLANTA · SAN FRANCISCO

The Riverside Press Cambridge

COPYRIGHT, 1929

BY FOWLER D. BROOKS

**ALL RIGHTS RESERVED, INCLUDING THE RIGHT TO REPRODUCE
THIS BOOK OR PARTS THEREOF IN ANY FORM**

The Riverside Press

CAMBRIDGE · MASSACHUSETTS

PRINTED IN THE U.S.A.

**TO THE MEMORY
OF
MY FATHER
LEONIDAS CULVER BROOKS**

EDITOR'S INTRODUCTION

THAT period of physical maturation known as adolescence has been regarded commonly as a time when youth breaks with his past and develops into a new person — when a “new self” is born. This belief has existed from the time of primitive peoples down to the present, and still finds expression in the more popular literature of the time. Those who believe that the birth of a new self is one of the chief characteristics of adolescence face the difficult task, however, of harmonizing such a popular conception with the facts brought forth within recent years as the result of careful scientific observation and measurement. These facts do not support such a theory.

Instead, we now know that the adolescent period, while marked by certain distinct and pronounced physical changes, from the mental and personal points of view is very largely only a maturing of individual traits and habits of thinking and acting that have been developing since childhood. Even in the matter of the emotional and volitional changes and the development of personality traits which take place with adolescence, there now seems to be little reason for believing that what a youth becomes is to any great degree independent of his own past environment and training. While these changes are marked and important, they are in the nature of a continuous development of what has gone before rather than an abrupt transition to some new and different type of living. While the self that emerges at the close of the adolescent period is vastly different from that which entered it, that self is still very similar in its fundamental traits and habits to the self that existed when the maturation

tion period began. In other words, any correct account of adolescent development must consider the physical, mental, moral, social, and religious development of the boy or girl from early childhood to manhood or womanhood as a continuous process. What takes place at adolescence is largely determined by what has taken place in the training of the youth before that period. The educational significance of this more scientific conception of the developmental process, for both parents and teachers, is most important.

The author of the present volume in this series has rendered an important service to teachers and parents, as well as to the student of the problems of adolescence, in assembling and organizing into usable form the results of the many hundreds of individual investigations which have been made as to different aspects of the problems of physical growth and the mental, moral, social, and religious development of young people during the adolescent and preadolescent years. In a series of chapters of much interest he has shown how careful observation, accurate measurement, and a critical interpretation of data replace superficial observations, inadequate measurements, and inferences based on recollections of individual cases, and from the assembled results he has drawn conclusions of importance as to the physical, mental, moral, social, and religious regimen to which youth must be subjected and which they must follow if the best results in the development of human personality are to be attained. The volume represents an important organization of objective evidence on a subject on which there has been much loose thinking, and is a useful contribution to our rapidly growing educational literature.

ELLWOOD P. CUBBERLEY

PREFACE

AN important problem of psychology is that accurate description of human behavior which makes possible both its prediction with reasonable accuracy and its effective direction and control in the service of society and the individual. Accordingly, *The Psychology of Adolescence* has the task of describing adolescent nature, growth, and development so as to facilitate both reliable prediction and suitable guidance and control of behavior during the teens.

This book has developed in connection with courses offered by the author on the Psychology of Adolescence. Hundreds of college students, high-school teachers, and high-school principals in the author's classes at Johns Hopkins University and at the University of Wisconsin summer session have influenced it through discussion and conference and the approximately three thousand written questions which they have asked on problems of interest and practical value to them. The materials have been chosen to cover the topics which thus seem to be of greatest importance.

In the very nature of the case, we have drawn heavily upon general and educational psychology, thus indicating that many features of adolescence are not unique.

The general point of view, which we are forced by the facts to accept, is that development is a continuous function throughout childhood and into and through adolescence; that the youth normally does not break with his past; that, in fact, the roots of his present nature lie deeply imbedded in his past.

Many of the problems have been or are controversial. Accordingly, we have endeavored to present the evidence

on them impartially and at some length so that the reader may have a sound basis for his conclusions. Although the material is that which has proved most serviceable in the author's classes, and although an independent, critical evaluation of data bearing on the problems of adolescence necessitates some command of certain statistical and other technical procedures, yet the reader or instructor may, if he wishes, omit portions of chapters containing much statistical or technical detail. A glossary of technical terms and abbreviations is appended at the end of the volume immediately before the index.

The references at the end of the chapters have been selected to give an introduction to the extensive growing literature on the subject. A few for each chapter, marked by an asterisk (*), may be used as a first reading list to supplement the material of the chapters.

Many of the problems for discussion are those raised by students in the author's classes and by parents and teachers. Information on some of them is very meager or is lacking almost entirely, but we have included them anyhow in the hope that discussion by revealing this fact may lead to the further investigation necessary to solve them.

The author is under obligation to the many investigators upon whose researches he has so freely drawn. He also desires to express his thanks to the authors and publishers who have granted permission to use copyrighted materials. Specific acknowledgments are made in each case.

FOWLER D. BROOKS

ACKNOWLEDGMENTS

THE author wishes to make specific acknowledgment and to express his obligation for the use of copyrighted material from the books and journals listed below. In each case permission for their use has been granted by either the author or the publisher.

- Atkinson, R. K.: *American Physical Education Review*. American Physical Education Association.
- Baldwin, B. T., and Wood, T. D.: *Baldwin-Wood Weight-Height-Age Table*. American Child Health Association.
- Bassett, S. J.: *Retention of History in the Sixth, Seventh, and Eighth Grades*. The Johns Hopkins Press.
- Bigelow, M. A.: *Adolescence*. Funk and Wagnalls Company.
- Brooks, F. D.: *Journal of Applied Psychology*.
- Brooks, F. D.: *Journal of Educational Research*. Public School Publishing Company.
- Cabot, R. C.: *What Men Live By*. Houghton Mifflin Company.
- Campbell, C. M.: *Journal of Abnormal and Social Psychology*. Boyd Printing Company.
- Campbell, C. M.: *A Present-Day Conception of Mental Disorders*. Harvard University Press.
- Clark, T. A.: *The High School Boy and His Problems*. The Macmillan Company.
- Clemens, S. L.: *The Adventures of Tom Sawyer*. Harper and Brothers.
- Coe, G. A.: *Education in Religion and Morals*. Fleming H. Revell.
- Counts, G. S.: *The Selective Character of American Secondary Education*. The University of Chicago Press.
- Dunlap, K.: *Mysticism, Freudianism, and Scientific Psychology*. C. V. Mosby Company.
- Franklin, E. E.: *The Permanence of Vocational Interests of Junior High School Pupils*. The Johns Hopkins Press.
- Gates, A. I.: *Teachers College Record*. Teachers College, Columbia University.
- Gesell, A.: *Twenty-Seventh Yearbook*, National Society for the Study of Education. (A reprint from an issue in the series of Genetic Psychology Monographs.)

- Hall, G. S.: *Adolescence*. D. Appleton and Company, New York.
- Jordan, A. M.: *Children's Reading Interests*. University of North Carolina Press.
- Keith, A.: *Human Embryology and Morphology*. Edward Arnold and Company.
- Koffka, K.: *Growth of the Mind*. Harcourt, Brace and Company.
- Latimer, C. W.: *Girl and Woman*. D. Appleton and Company, New York.
- Lehman, H. C.: *Pedagogical Seminary*. Clark University Press.
- Lewis, W. H.: *Contributions to Embryology*. Carnegie Institution of Washington.
- May, J. V.: *Mental Diseases, A Public Health Problem*. Richard G. Badger.
- McDougall, W.: *Outline of Abnormal Psychology*. Charles Scribner's Sons.
- Miner, L. B.: *Journal of Educational Research*. Public School Publishing Company.
- Robinson, J. H.: *The Mind in the Making*. Harper and Brothers.
- Rugg, H. O.: *Journal of Educational Psychology*. Warwick and York, Inc.
- Statistical Manual for the Use of Hospitals for Mental Diseases*. The National Committee for Mental Hygiene, and the American Psychiatric Association.
- Taft, J.: *Proceedings, American Sociological Society*. University of Chicago Press.
- Terman, L. M.: *The Intelligence of School Children*. Houghton Mifflin Company.
- Terman, L. M.: *The Measurement of Intelligence*. Houghton Mifflin Company.
- Thorndike, E. L.: *Educational Psychology*. Teachers College, Columbia University.
- Thorndike, E. L.: *The Measurement of Intelligence*. Teachers College, Columbia University.
- Thurstone, L. L., and others: *Psychological Review*. Psychological Review Company.
- VanDenberg, J. K.: *Causes of Elimination of Students in Public Secondary Schools of New York City*. Teachers College, Columbia University.
- Westermarck, E. A.: *Origin and Development of the Moral Ideas*. The Macmillan Company.

CONTENTS

CHAPTER I. INTRODUCTION: THE MEANING AND SIGNIFICANCE OF ADOLESCENCE	1
1. The Meaning of Adolescence. — 2. The Importance Attached to Adolescence. — 3. Adaptation, Development, and Integration. — 4. Where are the Adolescents? — Problems for Discussion. — Selected References.	
CHAPTER II. GROWTH IN BODILY SIZE	18
1. Sources of Data on Bodily Growth. — 2. Height. — 3. Weight. — 4. The Head, Trunk, Chest, and Extremities. — 5. Growth of the Skeletal System. — 6. The Muscular System. — 7. The Circulatory System. — 8. The Reproductive System. — 9. The Digestive System. — 10. The Respiratory System. — 11. The Nervous System. — Problems for Discussion. — Selected References.	
CHAPTER III. THE DEVELOPMENT OF PHYSICAL AND MOTOR CAPACITIES	41
1. Maturing of the Sex Functions. — 2. The Development of Breathing Capacity. — 3. The Development of Muscular Strength. — 4. Motor Capacities. — Problems for Discussion. — Selected References.	
CHAPTER IV. MENTAL DEVELOPMENT DURING ADOLESCENCE	59
1. Conflicting Opinions on Adolescent Mental Growth. — 2. Sensory and Perceptual Capacities. — 3. Attention. — 4. Theoretical Curves of Growth, and of Rate of Growth. — 5. Memory. — 6. Judgment and Reason. — 7. The Development of Reading Abilities. — 8. Other Mental Functions. — 9. Conclusions. — Problems for Discussion. — Selected References.	
CHAPTER V. THE GROWTH OF INTELLIGENCE	89
1. The Meaning of Intelligence. — 2. Kinds of Intelligence. — 3. Growth Curves of Intellect. — 4. The Rate of Mental Growth. — 5. The Variability of Individual Performance on Mental Tests: The Constancy of the Intelligence Quotient. — 6. The Age of Cessation of Mental Growth. — 7. The Mental Age of Adults. — 8. The Effect of Adolescent Growth upon the Range of Individual Differences in Mental Traits. — Problems for Discussion. — Selected References.	

CHAPTER VI. PHYSICAL AND MENTAL GROWTH DURING ADOLESCENCE: THEIR CORRELATION AND SIGNIFICANCE	134
1. Current Views of the Relation between Mental and Physical Growth. — 2. Kinds of Maturities or "Ages." — 3. Evidence on the Relation between Mental and Physical Development. — 4. Significance of the Relation between Physical and Mental Traits. — 5. Physiological Age; Early or Late Pubescence. — 6. Physical Maturity or "Maturities." — 7. The Significance of Physical Development during Adolescence. — 8. Implications of Adolescent Mental Growth. — Problems for Discussion. — Selected References.	
CHAPTER VII. INSTINCTS AND IMPULSES: INDIVIDUAL AND SOCIAL TENDENCIES OF ADOLESCENTS	177
1. The Meaning of Instinct and Impulse. — 2. Classification of Instincts. — 3. Instinctive Tendencies during Adolescence. — 4. The Utility of Instinctive Tendencies. — 5. Modification and Control of Instinctive Tendencies. — Problems for Discussion. — Selected References.	
CHAPTER VIII. THE EMOTIONAL LIFE OF THE ADOLESCENT	206
1. Nature of the Emotions. — 2. Measurement of the Emotions. — 3. Classification of the Emotions. — 4. Individual and Social Significance of the Emotions during Adolescence. — 5. Control of the Emotions. — 6. Emotional Development during Adolescence. — 7. Causes of Emotional Disturbances at Adolescence. — Problems for Discussion. — Selected References.	
CHAPTER IX. LEARNING AND FORGETTING	243
1. Functions of the Nervous System. — 2. Laws and Other Conditions of Learning. — 3. The Course of Improvement in Learning. — 4. Principles of Economy in Learning. — 5. General Facts and Principles of Forgetting. — 6. Permanence of High-School Learning. — Problems for Discussion. — Selected References.	
CHAPTER X. ADOLESCENT INTERESTS	275
1. Nature, Origin, and Development of Interests. — 2. The Measurement of Interests. — 3. The Relation of Interest to Aptitude and Maturity. — 4. Recreational and Social Interests. — 5. Intellectual and Æsthetic Interests. — 6. Vocational Interests. — 7. The Role of Interests in Adolescent Development. — 8. Means of Developing Interests among Adolescents. — Problems for Discussion. — Selected References.	

CONTENTS

xv

CHAPTER XI. MORAL AND RELIGIOUS DEVELOPMENT . . . 313

1. The Meaning of Morality. — 2. Psychological Characteristics of Moral Character. — 3. Constituent Elements of Moral Character. — 4. Stages in Moral Development. — 5. Factors in the Moral Development of Adolescents. — 6. Origin and Development of the Individual's Religious Beliefs. — 7. The Place of Religion in the Life of the Adolescent. — Problems for Discussion. — Selected References.

CHAPTER XII. PERSONALITY: ITS MEANING, GENESIS, AND APPRAISAL 348

1. The Meaning of Personality. — 2. Genesis and Development of Personality. — 3. Methods of Appraising Personality. — 4. Types of Personality. — 5. Summary and Conclusions. — Problems for Discussion. — Selected References.

CHAPTER XIII. ADOLESCENT PERSONALITY AND ITS PROBLEMS 378

1. Qualities and Traits of Adolescent Personality. — 2. Personality Traits of Intellectually Gifted Adolescents. — 3. Personality Traits of Adolescents of Normal Intelligence. — 4. Personality Traits of Adolescents of Subnormal Intelligence. — 5. Personality Traits of Delinquent Adolescents. — Problems for Discussion. — Selected References.

CHAPTER XIV. ADOLESCENT PERSONALITY AND ITS PROBLEMS (*continued*) 416

1. The Organization of Traits at Adolescence. — 2. The New Self. — 3. Factors in the Development of Personality during Adolescence. — 4. Theories of Development. — Problems for Discussion. — Selected References.

CHAPTER XV. DISTURBANCES OF ADOLESCENT PERSONALITY 455

1. Meaning of Disturbances of Personality. — 2. Social Waste from Personality Disturbances. — 3. Incidence of Disturbances of Personality and Its Significance. — 4. Thwarting. — 5. Introversion and Extroversion. — 6. Rationalization. — 7. Conflict of Desires as a Cause of Personality Disturbances. — 8. Classes of Mental Disorders. — 9. The Psychogenic Disorders. — The Marked Mental Disorders. — The Neuroses or Psychoneuroses of Apparently Well People. — 10. Why Adolescents Are Disposed to Mental Disorders. — Problems for Discussion. — Selected References.

CHAPTER XVI. THE HYGIENE OF ADOLESCENCE	497
1. The Physical Welfare of Adolescents. — Puberty not necessarily a critical period. — Factors in promoting physical welfare of adolescents. — Provisions for physical health by home, school, vocation, and other agencies. — 2. Social Hygiene. — Meaning and importance of social hygiene. — Sex hygiene for adolescent boys. — Sex hygiene for adolescent girls. — 3. The Mental Hygiene of Adolescence. — Meaning and importance of mental health. — Adolescence marked by faulty adjustments. — Essentials of a mental hygiene program for adolescents. — Provisions for mental hygiene by the agencies dealing with adolescents. — Problems for Discussion. — Selected References.	
CHAPTER XVII. THE PREDICTION OF ADOLESCENT BEHAVIOR	544
1. Methods of Determining the Predictive Value of Knowledge. — 2. Predicting Physical and Motor Development. — 3. Predicting Intellectual Development. — 4. Predicting Moral and Religious Development. — 5. Predicting Success in High School. — 6. Predicting Success in College. — 7. Predicting Vocational Success. — Problems for Discussion. — Selected References.	
CHAPTER XVIII. THE GUIDANCE AND CONTROL OF ADOLESCENT BEHAVIOR	595
1. The Nature of the Problem. — 2. Parental Control of Adolescents. — 3. Guidance and Control of the Adolescent in School. — 4. Guidance and Control of the Adolescent Gainfully Employed. — 5. Guidance and Control of Social Relations. — 6. Prevention or Cure of Delinquency. — 7. Guidance and Control of Other Groups. — Problems for Discussion. — Selected References.	
GLOSSARY	625
INDEX	631

THE PSYCHOLOGY OF ADOLESCENCE



CHAPTER I

INTRODUCTION: THE MEANING AND SIGNIFICANCE OF ADOLESCENCE

1. *The meaning of adolescence*

ADOLESCENCE (from the Latin verb, *adolescere*, meaning to grow, to grow to maturity) refers to the period of growth extending approximately from ages twelve or thirteen to twenty. The period really closes with manhood and womanhood. During this time the reproductive functions mature, but it must not be supposed that adolescence is characterized by this fact alone. Various physical, mental, and moral changes are taking place at the same time, and their interrelations and coördinations are important for an adequate understanding of these years.

By puberty is meant the initial stage of adolescence, the earliest age at which the individual is capable of begetting or bearing offspring. Puberty among girls begins, on the average, about the thirteenth year, and, among boys, about the fourteenth year; but the time varies, as we shall see in Chapter III.

2. *The importance attached to adolescence*

People have always had some understanding of the importance of adolescence, and some appreciation of its significance. Among primitive and savage peoples puberty

rites were almost universal. The males of a tribe really consisted of four groups — the boys who had not arrived at puberty, and lived with the women and girls; the unmarried youths; the mature men on whom rested the duties and responsibilities of tribesmen; and the old men — the wise men — who directed the affairs of the tribe.

Puberty rites. Among some primitive peoples the boy, upon reaching puberty, was initiated into the tribal secrets, laws, customs, and rites, and at once or at a later time married and became a full tribesman. When the oldest son attained manhood, the father became one of the elders or "wise men," and retired from active service.

The initiatory rites usually were very impressive, and often lasted several months. A strong bond of brotherhood was formed and tribal unity furthered. Initiation frequently involved difficult ordeals or painful mutilations. Thus among certain Australians the novice lost one or more teeth, even though many blows were required to dislodge them. Severe beatings, confinement for weeks with little food and that the filthiest obtainable, marked initiatory rites among certain tribes of North American Indians,¹ among whom pubic rites for girls also were quite common and often severe and trying. The girl might be segregated in a small house for a month, six months, or longer, not being allowed to leave it except after dark and then with her mother. Among certain tribes of Brazil the girl at puberty was secluded indoors one month and fed bread and water; then she was brought forth and beaten by relations and friends until she fell senseless. Sometimes death resulted.

The method, however, was not always harsh. The moral training of the young adolescent in one tribe of New South Wales is described as follows:² "Each lad is attended by one

¹ See Lawson, *History of Carolina*, pp. 380-82.

² Palmer, *Journal of Anthropological Institute*, vol. 13, p. 296.

of the elders, who instructs him every evening in his duties, and gives him advice to regulate his conduct through life — advice given in so kindly, fatherly, and impressive a manner as often to soften the heart and draw tears from the youth.”

Among the Romans the boy at fourteen put on the *toga virilis*. In the days of knighthood the boy was a page until the age of fourteen and associated with women, but at fourteen he became a squire and was in the company of men.

The initiatory rites constituted a large part of formal, primitive, adolescent education. By this means were taught such social virtues as (1) obedience to the tribal chiefs, (2) independence of maternal control, (3) bravery in battle, (4) observance of the customs and moral code of the tribe, and (5) liberality toward the community.

The adolescent in literature: the new self. Literature in all ages reflects the consciousness of adolescence as a distinct period of development. Thus it appears that the onset of adolescence has been regarded widely and from antiquity as a new stage in development.

Primitive peoples in the puberty rites emphasized the break between childhood and youth. After the rites the boy was a new person. This view has had wide acceptance. Many persons among civilized peoples to-day think adolescence marks a distinct break with the youth's past; that it means the birth of a new self. Many writers on adolescence stress this view. Close observation of children, however, gives little ground for the belief; careful, unbiased observation and investigation tend to clear it away entirely.

Two reasons account for the belief in abrupt changes at adolescence.

First: Uncritical observation. The changes preceding and accompanying adolescence are not observed carefully. Consequently, the differences between children and adults are not clearly perceived or appraised. The child of eleven

is little understood; he is thought of as a child; his true mental powers are underestimated in comparison with those of older children, so that the difference between eleven and fourteen really seems greater than it is.

Second: Some of the emotional disturbances at adolescence accentuate the new elements in the total physical-mental life of the teen-age period. As we see later, the youth's mental development and physical growth during adolescence are not the bizarre, saltatory affairs of popular psychology and the fiction writers. Changes do take place and they are of great importance, but life is a continuous function; the youth does not break with his past. Even in cases of great emotional upheaval, such as religious conversion, the individual's future is conditioned largely by the past. Of course, there is some truth in the lines,

Every day is a fresh beginning,
Every morn is the world made new,

but this is true of the individual as infant, child, adolescent, and adult; it is not a unique characteristic of this period.

3. *Adaptation, development, and integration*

Adaptation to environment a function of living organisms. A basic function of living organisms, possessed in varying degrees by both plants and animals, is adaptation to environment. Preparing individuals to meet adequately the circumstances of life has long been regarded as the important aim of education. We educate and train pupils so that they may adapt themselves more adequately to their surroundings, modifying conditions whenever it seems best to do so for individual and group welfare. This is the end. What about the means?

Adaptation through development and integration. Adaptation implies the suitable development and effective in-