

PSYCHOLOGY OF
SECONDARY
EDUCATION

JUDD

PSYCHOLOGY OF SECONDARY EDUCATION

BY

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PREFACE

In 1915 the writer of this book published a volume entitled, "Psychology of High-School Subjects." It was prepared as a companion of the book entitled, "Methods of Teaching in High Schools," which was published in the same year by the late Samuel Chester Parker. At the time of the appearance of these two books, the literature on methods of teaching in the high school consisted of various volumes discussing the problems and available methods in particular subjects, such as English, Latin, and mathematics. The books on general methods which had appeared up to that date were for the most part concerned only with elementary-school problems. Such books as had been written in educational psychology gave little or no special attention to high-school subjects. They were either general, like Hall's monumental work on adolescence and Thorndike's texts, or specifically devoted to elementary subjects.

Professor Parker and the writer deliberately chose the high-school field for the very practical reason that there was an immediate institutional demand, and there appeared to be a growing general demand, for materials of instruction in courses organized to give professional training to prospective high-school teachers.

During the eleven years that have elapsed since 1915 the writer has used his book with twenty-four classes of advanced students. He has had an opportunity to accumulate new material from the reports which these students prepared and from the scientific work which has been done in the institution which he serves and elsewhere. He has had an opportunity to organize the material in various

ways, and he believes that the time is ripe for a substitution of a new book for the "Psychology of High-School Subjects." Accordingly, that book will go out of print with the appearance of this volume. The author takes this opportunity to express his appreciation of the generous support given by his publishers to his plans for a new book. They have been willing to publish this volume in spite of the fact that it involves the complete abandonment of the plates of the earlier book.

The title of the present book is intended to indicate that the scope of the treatment undertaken is broader than is the scope of the earlier book. The heart of this book is an analysis of the mental processes which pupils exhibit in studying particular high-school subjects, but new general material has been incorporated which aims to extend the discussion to all phases of secondary education.

The book is new with the exception of some forty pages, which have been reproduced with minor revisions. Much new experimental material has been incorporated, especially with reference to reading. Emphasis has also been laid on the importance of social psychology as a basis for educational psychology. It has become increasingly clear in recent years that any productive theory of education as well as any satisfactory science of human nature will have to be based on a recognition of the fact that social institutions, such as language, number, science, customs, and laws, are far more significant than are individual modes of thought and behavior. The author has attempted to defend this thesis in a separate volume entitled, "Psychology of Social Institutions," which may be of service to any reader who is concerned with scientific method and with the background for the conclusions set forth in the present volume.

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PSYCHOLOGY OF SECONDARY EDUCATION

CHAPTER I

PROGRESS TOWARD MATURITY

THE HIGH-SCHOOL STAGE OF MATURITY

The pupil who is ready to enter high school has physical and mental characteristics which are very different from those which he exhibited when he entered the first grade. In bodily stature he has attained height and weight; in movements he exhibits certain skills and a relatively high degree of general control; in experience and knowledge he has advanced far enough to be in possession of many facts about geography, number, and other matters of which he was ignorant at the beginning of his school career. He can read more or less fluently. He has habits of courtesy or discourtesy which were cultivated during his life in the grades. In short, he has developed to a measurable extent qualities which contribute to that which is called "maturity." The high school will guide him in acquiring new types of thought and new habits of action; it will furnish him with an opportunity to develop a higher type of maturity.

The high-school period is characteristically a period of transition from the partial and slowly acquired maturity of childhood to the type of maturity which belongs to the

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adult. The high-school period cannot be fully understood without referring backward to what the child was and forward to what he is to become. The transitional character of the high-school age can perhaps be shown more clearly by a study of the physical traits of the pupil than by reference to any other series of facts. In keeping with the suggestion that a study be made of that which precedes the high-school age, our discussion of physical maturity may begin by reviewing the facts of human infancy.

HELPLESSNESS AND PLASTICITY IN INFANCY

John Fiske, the historian and writer on evolution, has pointed out that the human infant is more helpless and dependent at birth and for a long period thereafter than is the offspring of any of the animals.¹ The human infant is helpless because he is not fully provided through inheritance with the completely developed organs and forms of behavior which he will exhibit as a mature individual. His digestive system is immature, his muscles are weak and incapable of coördinated action, his nervous system is not mapped out at the beginning of life, and his habits are not yet formed. He has potentialities, but he lacks mature ways of adjusting himself to his environment. His immaturity, coupled with his power to learn through experience, makes it possible for him to develop personal characteristics more fully than can any other animal. His plasticity is his chief characteristic.

IMMATURITY OF DIGESTIVE PROCESSES

Even in so fundamental a physiological trait as the ability to assimilate food, the human being must pass through a series of stages of development before the helplessness of infancy is overcome. The infant is very limited

¹ John Fiske, *The Meaning of Infancy*. Houghton Mifflin Company, 1909.