A BROADER ELEMENTARY

EDUCATION

BY

J. P. GORDY, PH.D., LL.D.

PROFESSOR OF THE HISTORY OF EDUCATION IN THE SCHOOL OF PEDAGOGY, NEW YORK UNIVERSITY. AUTHOR OF GORDY'S NEW PSYCHOLOGY, AND POLITICAL HISTORY OF THE UNITED STATES

HINDS, NOBLE & ELDREDGE

PUBLISHERS

31–33–35 WEST 15TH STREET, NEW YORK CITY

COPYRIGHT, 1903, BY HINDS & NOBLE.

Entered at Stationers Hall.

ALL RIGHTS RESERVED.

370.1
G65

PREFACE.

THIS book is written primarily for two classes of readers: (1) those who, having enjoyed the advantages of college or normal-school training, occupy positions which make it their duty to shape the educational policy of their community; (2) those who, as students, are preparing for such positions. With the needs of these classes in mind, it has seemed to the author desirable to set forth as explicitly as might be that in the very conception of education certain presuppositions are involved, and all the more desirable since opinions at variance with these presuppositions are widely prevalent.

In the conviction, also, that there can be no fundamental study of education that does not seek to ascertain the end education should strive to reach, and the impulses and capacities it must appeal to, and that there can be no rational teaching that is not based on definite notions as to these matters, he has endeavored to present those notions as clearly as may be; and he has sought to base all his recommendations as to practice upon his conclusions. A prominent feature of the book is the emphasis laid upon the doctrine that there is a place for the will in education. The current theory inherited from Herbart, and by him from Rousseau, that everything should be made to depend upon interest, that there should be no *must* in education,

427

seems to the author thoroughly pernicious — a theory that is prevented from resulting in deplorable consequences only by the fact that most of those who profess it do not take it seriously.

While these difficult questions have been discussed primarily with a view to the needs of the two classes above mentioned, the author has had constantly in mind a third class — the earnest, enthusiastic, and capable teachers who, in characteristic American fashion, are trying to remedy the defects of their early education by present arduous preparation for their chosen work. To such readers he would fain be of service, and to this end has prepared a list of questions for each chapter, with the object of helping concentrate the attention on the important points.

The author wishes to make special acknowledgment of his indebtedness to Doctors Dewey and Baldwin, and all the more because his discussions have emphasized points of difference rather than of agreement; also to his former assistant, Dr. Clarke Wissler, for a detailed statement of the opinions of those who advocate the postponing of the teaching of reading, writing, and drawing until the child is ten years of age; but most of all to Mr. Theodore F. Neu, who has revised the manuscript and read the proof, and to whose keen intelligence are due many improvements in the manner of presentation.

J. P. GORDY.

NEW YORK UNIVERSITY,
March 31, 1903.

TABLE OF CONTENTS.

CHAPTER I.

PAGE

A PRESUPPOSITION OF EDUCATION: PERSON OR PHYSIOLOGICAL MACHINE 17

1. Theory of automatism stated. 2. Nothing is due to purpose, if automatism be true. 3. From the standpoint of this theory education has to do with the brain only, not with the mind. 4. Ordinary facts incapable of clear statement from the standpoint of automatism. 5. According to automatism, physical causes alone account for all we do. 6. Automatism leaves no place for logical thinking. 7. Automatism makes distinctions between truth and falsehood impossible. 8. Theory of parallelism stated. 9. Superiority of parallelism over automatism. 10. This superiority has no significance from the standpoint of education. 11. According to parallelism the relation between matter and consciousness is like that between substance and shadow. 12. Attempts to do away with the distinction between laws of matter and laws of mind.

CHAPTER II.

A PRESUPPOSITION OF EDUCATION: PERSON OR PSYCHOLOGICAL MACHINE 31

1. Herbart's theory of the will. 2. Metaphysical difficulties of the theory. 3. Educational implications of the theory. 4. It does not make a philosophy of education impossible. 5. Consequences of the theory. 6. Coleridge. 7. Dr. Dewey's theory of interest. 8. Self-expression as understood by Dr. Dewey. 9. Dr. Dewey's confused account of interest. 10. Dr. Dewey's attempt to show that interest in an end guarantees an abiding interest in the means.

CHAPTER III.

PAGE

DEMOCRACY AND EDUCATION 45

1. The connection between education and the form of government. 2. The German school system. 3. Professor Peck on universal education. 4. Who shall receive a thorough education according to Professor Peck? 5. The relation of education to political philosophy. 6. The philosophy of education should assume the truth of the republican theory. 7. The effect of education on the masses. 8. The dilemma of rulers. 9. Three causes that work towards democracy. 10. Progress of the world towards democracy.

CHAPTER IV.

THE END OF EDUCATION AS CONCEIVED BY THE REPORT OF THE COMMITTEE OF FIFTEEN 58

1. The end of education and civilization. 2. Must education conform to the principles of a given civilization? 3. The educational statesman.

CHAPTER V.

THE END OF EDUCATION AS CONCEIVED BY MR. HERBERT SPENCER AND DR. DEWEY 65

1. Education preparation for rational living. 2. Mr. Spencer's description of complete living. 3. Conflict of duties. 4. The development of character as the end of education.

CHAPTER VI.

THE TRUE END OF EDUCATION 72

1. The unclearness of the fundamental conceptions of science. 2. Conclusions as to the end of education not susceptible of proof. 3. Things known through lower mediacy. 4. Things known through mediacy. 5. Things known through higher immediacy. 6. Intellectual activity an ultimate good. 7. The appreciation of beauty another ultimate good. 8. Moral character another ultimate good. 9. Friendship and domestic affection ultimate goods. 10. Sympathy, also, an absolute good. 11. Loyalty an ultimate good. 12. Comparative value of the various ultimate goods of life. 13. A standard for judging institutions.

CHAPTER VII.

PAGE

EDUCATION AS PREPARATION FOR RATIONAL LIVING 91

1. Education and public opinion. 2. Blunder of the old Greeks. 3. Mr. Spencer's Theory. 4. The constituents of rational living: Knowledge. 5. Intellectual Power. 6. A cultivated emotional nature. 7. An effective will.

CHAPTER VIII.

THE END OF ELEMENTARY EDUCATION 98

1. Material and intellectual needs. 2. Moral causes of poverty. 3. Intellectual and moral training compatible. 4. No conflict between the needs of the citizen and of the man. 5. A liberal education and the elementary school.

CHAPTER IX.

THE CHILD'S CAPITAL: GENERAL 105

1. Begin with the child. 2. The young child and the educated man. 3. The child guided by interest. 4. Habits of rational conduct. 5. The educational centre of gravity. 6. Curiosity. 7. The constructive impulse. 8. The art impulse. 9. The social impulse. 10. Imitation. 11. Invention. 12. Emulation. 13. The ethical impulse.

CHAPTER X.

THE CHILD'S CAPITAL: IMITATION 118

1. Professor Baldwin on imitation. 2. Imitation defined. 3. Biological imitation. 4. Psychological imitation. 5. Plastic imitation. 6. Imitation of thoughts and feelings. 7. Is education imitation? 8. Education due to all our impulses. 9. Imitation and the constructive impulse. 10. Interaction of impulses. 11. Another interpretation of Professor Baldwin. 12. Imitation and intelligence.

CHAPTER XI.

THE FUNCTION OF IMITATION 131

1. When the child begins to imitate. 2. When imitation exerts the most powerful influence. 3. Influence of heredity on imitation. 4. Plastic imitation. 5. Plastic imitation and higher immediacy. 6. Signe Rink's childhood. 7. Imitation and character. 8. Imitation and reason.

CHAPTER XII.

PAGE

How the Child's Capital is to be Invested: Imitation . . 141

1. President Eliot on the public school. 2. Imitation the chief source of ideals. 3. Cardinal Newman on imitation. 4. Imitation and character-building. 5. Imitation during the kindergarten period. 6. Imitation in dress, etc. 7. Influence of the child's associates.

CHAPTER XIII.

How the Child's Capital Is to Be Invested: Manual Training 150

1. Curiosity. 2. The constructive impulse. 3. Manual training and respect for work. 4. Manual training adapts the school to the many.

CHAPTER XIV.

How the Child's Capital Is to Be Invested: His Art, Social, Ethical, and Emulative Impulses 158

1. The art impulse. 2. The social impulse and language training. 3. The social impulse and the moral nature. 4. Rousseau and Pestalozzi on moral training. 5. The social impulse and the study of history. 6. Intellectual, constructive, art, and social impulses contrasted with imitation and emulation. 7. The place of emulation in the school.

CHAPTER XV.

The Course of Study in the Primary Grades 167

1. The foundation on which the school must build. 2. Reading and story-telling. 3. Language Lessons. 4. Nature study. 5. Drawing. 6. Music, physical culture, and manual training. 7. Number lessons. 8. Distribution of time. 9. Young children's need of supervision. 10. The economic difficulty. 11. Second-year work.

CHAPTER XVI.

Should Reading and Writing be Taught Before the Age of Ten? 177

1. It is argued that reading should not be taught before ten, because (1) the function of books is supplementary. 2. (2) Be-

PAGE

cause the child has no "natural desire to learn to read." 3. (3) Because reading is a recent accomplishment of the race. 4. (4) Because of the development of the nervous system. 5. (5) Because the fundamental muscles develop before the accessory. 6. Objections summarized. 7. Practical argument in favor of current practice. 8. Relation between the real and the ideal.

CHAPTER XVII.

CONCENTRATION AND CORRELATION 186

1. The law of interest. 2. Concentration defined. 3. The principle upon which specialization depends. 4. Interest in the individual and scientific interest. 5. Interest not a criterion of educational method. 6. Cultivation of intellect: Its place in education. 7. Training to think. 8. Correlation.

CHAPTER XVIII.

THE FETICH OF GENERAL METHOD 196

1. General method explained. 2. What determines the validity of method. 3. Action of the mind (1) in connection with grammar. 4. (2) In connection with history. 5. (3) In connection with arithmetic. 6. (4) In connection with literature. 7. Summing up conclusions relating to the action of the mind in connection with grammar, history, arithmetic, and literature. 8. Possible defence of the Herbartian theory. 9. Three processes not usually required. 10. How psychology may help the teacher.

CHAPTER XIX.

THE GRAMMAR SCHOOL CURRICULUM 212

1. Difficulty of mapping out the work through the grades. 2. Kind of work to be done. 3. History and literature. 4. Boston and French and old Athenian schools compared. 5. The amount of reading required by Massachusetts schools. 6. Arithmetic. 7. Political geography. 8. Nature study. 9. Electives. 10. Language and grammar. 11. Elements of a liberal education from the start.

CHAPTER XX.

PAGE

THE MOST IMPORTANT PROBLEM OF PUBLIC SCHOOL ADMINISTRATION 224

1. Man and nature the central subjects. 2. Need of adapting work to individual students. 3. Why the integrity of the college is threatened. 4. Responsibilities of the learned professions. 5. Do existing conditions discriminate against the poor? 6. Injury to all grades of schools through disregard of the unequal capacity of pupils.

CHAPTER XXI.

DEPARTMENTAL INSTRUCTION IN THE GRAMMAR SCHOOL . . . 232

1. Proposed transformation objected to as impracticable. 2. Is the existing system sacred? 3. The grammar and high school compared. 4. Why specialists are not needed through all the grades. 5. When the study of facts in their logical relation should begin. 6. Advantages of specialization in teaching. 7. Objections to the existing system. 8. Existing system requires teachers to teach subjects in which they are not interested.

CHAPTER XXII.

THE EDUCATIONAL VALUE OF HISTORY 241

1. Educational values and method. 2. History (1) increases one's knowledge of himself and his fellows. 3. (2) Develops sympathy and charity. 4. (3) Makes us realize that nations, like individuals, must act in accordance with moral law. 5. (4) Prepares for citizenship. 6. (a) By the knowledge it imparts. 7. (b) By developing a certain kind of reasoning power. 8. (c) By fostering a high civic ideal. 9. The Theory of the Sophists. 10. Its American counterpart. 11. Children may study history with profit.

CHAPTER XXIII.

THE EDUCATIONAL VALUE OF SPELLING, LANGUAGE LESSONS, AND GRAMMAR 252

1. Spelling has little educational value. 2. The uses of forgotten knowledge. 3. Conventional value of spelling. 4. What words children should be taught to spell. 5. Conventional and

PAGE

real value of the ability to use good English. 6. Language lessons should deepen a child's interest in his work. 7. Grammar (1) cultivates the capacity of discrimination. 8. (2) Promotes the study of the mind. 9. (3) Should illustrate the difference between knowledge and opinion. 10. At what age should grammar be studied.

CHAPTER XXIV.

THE EDUCATIONAL VALUE OF READING 261

1. Reading and education. 2. Dr. Harris on "The educational value of reading." 3. The educational value of reading and observation lessons. 4. Mistakes in the teaching of reading. 5. Value of the knowledge of real men. 6. How to become acquainted with a man of thought. 7. Literature in the elementary school: Homer and Shakspere. 8. Burns, Lowell, and Holmes. 9. What literature is available for school purposes. 10. Pleasure to be derived from literature.

CHAPTER XXV.

THE EDUCATIONAL VALUE OF ARITHMETIC 274

1. Arithmetic as a science and as an art. 2. Educational value of arithmetic as an art. 3. Arithmetic as an art should give definiteness to all our concepts. 4. Two methods of teaching arithmetic as an art. 5. (1) How arithmetic may give definiteness to the concepts of elementary science. 6. (2) To the concepts of geography. 7. (3) Ideas acquired out of school. 8. Incidental and accidental teaching of form subjects. 9. Arithmetic as a science (1) makes clear the difference between first and second-hand knowledge. 10. (2) Different kinds of first-hand knowledge. 11. Arithmetic as a science the product of deductive reasoning. 12. Too much time given to arithmetic. 13. The grammar school the university of the masses.

CHAPTER XXVI.

THE EDUCATIONAL VALUE OF NATURE STUDY 285

1. Nature study (1) increases our interest in nature. 2. (2) Develops a realization of law and cultivates openmindness. 3. (3) Incites to specialization along the lines of natural bent.

CHAPTER XXVII.

PAGE

SCHOOL MANAGEMENT 290

1. The object of discipline. 2. The function of education. 3. The principle of anarchy. 4. The problem of the school. 5. The child may learn to love a rational life (1) because he wishes to be like his teacher. 6. (2) Because his teacher loves a rational life. 7. The influence of imitation on Roman education. 8. The teacher and the source of the ideals of the pupil.

CHAPTER XXVIII.

THE SMALL HIGH SCHOOL. 297

1. The general principle upon which the proper work of the small high school depends. 2. The large high school not a model for the small high school. 3. The report of the Committee of Ten on the identity of the needs of those who are and those who are not going to college. 4. The small high school should teach (1) political economy. 5. (2) American history. 6. But (3) not a foreign language. 7. The course of study of the small high school to be determined in part by the capacity of the teachers and by its equipment. 8. English and American history should be substituted for general history. 9. Summary of the course of study.

INTRODUCTION.

EDUCATION, from the standpoint of the mind which is being educated, consists of a vast series of changes; from the standpoint of the teacher, of the influences brought to bear upon the mind to bring those changes about. But the intelligent use of means to this end presupposes not only an idea of the type of character for the sake of which the changes are desired, but also of the mind in which it is to be developed. For our opinion as to what the mind may become depends upon our opinion of its essential nature. If we believe that the thoughts, feelings, and volitions of a human being are the mechanical and inevitable results of the influences brought to bear upon him, we are bound to think of him as one of the links in the vast enginery of nature, and education cannot consider him as having anything to do with his own development. If, on the other hand, we believe that the mind is essentially active, then education has an entirely different problem to solve, the problem of supplying the mind with occasions of its own activity.

The lines of our subject are, therefore, marked out for us by its character. We must first seek to determine the essential nature of the mind, whether it is active or passive, and then endeavor to ascertain the end of education. This accomplished, we must investigate the means by which the ideal of education may be approximately realized.

But it is already evident that the question of means must be considered from two points of view. For the

changes that take place in the mind at any moment are due not only to the particular influences brought to bear upon it, but to the nature of the mind, and that not simply as active or passive, but as endowed with certain impulses and native tendencies. In order to furnish an adequate explanation of a given state of anger, for example, we have to determine both what it was that occasioned the anger and what it is in human beings that makes such a state possible. In considering the means of education, therefore, we are obliged to study the impulses of human nature which make education possible, as well as the material which must be presented to the mind in order to occasion the changes that lead towards the desired end.

But the question of means must be further subdivided. For the effect of the material presented to the mind depends very much on the way in which it is presented, or, rather, the mode of the presentation forms an important part of the material. Compare George Eliot's sentence, "It seems to me there must always be pale sad faces among the flowers, and eyes that look in vain," with a prosaic expression of the same idea: It seems to me I shall never be able to see anything beautiful again without thinking of something sad, — and the effect of the form in which an idea is expressed becomes very evident. A rational theory of education, therefore, requires us not only to know what our pupils should study, but the manner in which the subjects should be taught: and this necessitates a discussion of method.

A yet further subdivision is necessary. The changes in the mind in which education consists are exceedingly complex and numerous, the matter to be presented to it indefinitely extensive and various. The rational practice of

education, therefore, requires us not only to know in a general way the changes which we wish to bring about in the minds of our pupils, and the subjects which they must study, but the method according to which they must be taught. Or, rather, in order to have a thorough grasp of method, we need to know the precise effect which a given phase of a subject ought to produce. The teacher's subjects are his tools; in order to use them effectively, he needs to know the sort of influence which each of them ought to have in the shaping of the mind — he ought to know their educational values.

When we have considered the influences exerted upon the pupil by the subjects which he studies, and the teacher's presentation of them, there remains for examination an important part of the business of the school. Those influences to which the pupil is subjected which are designated by the term *discipline* have a direct bearing not only on the immediate work of the pupil, but upon those habits of conduct which a wise theory of education seeks to form. The subject of school management will, accordingly, form still another subdivision of the question of the means to be employed in the education of the pupil.

We may, then, roughly indicate the subdivisions of our subject as follows:

I. The nature of the mind — active or passive, person or thing.
II. The end of education.
III. The means to be employed in reaching it.
    1. Subjective: the impulses and native tendencies which make education possible — the "child's capital."
    2. Objective.
        a. The course of study.
        b. The method of teaching.
        c. Educational values.
        d. School management.

The first two general subdivisions grow out of the very nature of the subject. No matter what phase of education is considered, whether Kindergarten, elementary, secondary, or advanced, a rational treatment of it must be based on a conception of the nature of the individual whom we wish to educate, and of the ideal towards which we wish to develop him. But the means which education should employ depend largely upon the stage which the mind has reached in its development. A course of study proper in a high school would not be proper in the primary grades; a successful method of governing college students would not be recommended to a grammar-school teacher. It must be borne in mind, then, that in this book we are concerned only with elementary education.

A BROADER ELEMENTARY EDUCATION.

CHAPTER I.

A PRESUPPOSITION OF EDUCATION: PERSON OR PHYSIOLOGICAL MACHINE.

THERE is a preliminary question which must be answered before there can be any intelligent discussion of the purpose or methods of education: What is the nature of the mind? Is consciousness an active process determined by the mind's own laws, or is it only a mechanical reflection of objects?

Theory of Automatism Stated. — Automatism gives a precise answer to this question. It says that the mind is a mere thing among the other things of the world. It holds that at a certain stage in the evolution of the cosmos organic life began to appear; that later a nervous system began to exist; that at some point in the development of the nervous system a rudimentary form of consciousness began to evolve; and that from this simple beginning up to and including man there has been no essential change in the nature of mental life. Throughout the entire series, from the lowest and most incoherent form of organic matter to the most highly developed human

being, you find, according to automatism, one kind of cause and one only — matter. The matter that functions in the inorganic world does indeed differ from that of which a highly developed nervous system is composed. But it differs only in the degree of its complexity. And as the motions that take place in the simplest forms of matter are due to material causes only, so are those that take place in the human body — what we call consciousness, having no more to do with them than the whiz of a wheel with its revolution.

Nothing is Due to Purpose, if Automatism be True. — If this theory be true, we must change our attitude towards human beings. It can no longer be said that men buy, sell, steal, kill for gold or for anything; purpose has no existence among the realities of the world. Its place is taken by the brain, blindly and mechanically obeying the laws of matter. Man indeed has no independent existence, unless we give that name to the purely material aggregate known as the human body. The body, constituting the innermost nature of man and forming a part of the material universe, is strictly and absolutely governed by material laws. We get up in the morning, dress, eat our breakfast, go to our place of business, write letters, engage in conversation, not because we are intelligent beings, but because our brains are what they are — every movement of every part of our bodies being the purely passive product of mechanical forces.

From the Standpoint of this Theory Education has to do with the Brain Only, not with the Mind. — From the standpoint of this theory education begins and ends with

modifications of the brain. If we are automatists, we may — if our brains permit us — continue to talk about arousing the aspirations of our pupils, stimulating their interests, making appeals to their wills, to their sense of duty or of honor. But if we are bold enough to accept the logical consequences of our theory, we shall be sure that such appeals either accomplish nothing or that they do not operate as they seem to do. We shall be sure that they derive their entire significance from the fact that in some inscrutable way they produce a peculiar effect upon the body — not through the agency of the mind. The sentinel on guard, fighting against the drowsiness that threatens to overcome him, utters the word "duty" and straightway every sense becomes alert, every muscle tense, through attention. If automatism be true, how are we to explain this fact? Are we to say that it was the desire of the sentinel not to betray his trust that enabled him to overcome his drowsiness? That would impute efficiency to consciousness, that a state of his mind caused something, while the theory maintains that what he does is due to his brain alone.

Ordinary Facts Incapable of Clear Statement from the Standpoint of Automatism. — From the point of view of automatism the fact is not only inexplicable, but the very attempt to state it involves one in a labyrinth of obscurities. "The sentinel on guard" is a phrase which embodies contradictory ideas. "The sentinel" is nothing but a group of atoms every change in which takes place according to material laws. But "on guard" expresses purpose, and matter has no purposes to serve. Blind matter obeying mechanical laws is the only causal agency in the

universe. "The sentinel on guard," then, means for automatism nothing more than that the aggregate of material atoms which constitute the sentinel has, in obedience to certain mechanical laws, undergone such changes as to result in the body's taking a position in a certain place and in an erect form. That the body holds a gun in its hands, that the gun will be used against all enemies, are inexplicable facts, according to automatism. To say that they are due to purpose would be to ignore all the achievements of science from Empedocles to Herbert Spencer, and naïvely to suppose with the old Greek philosopher that the reason why a leaf falls to the ground is because of its desire to rest on the bosom of the earth.

The phrase "fighting the drowsiness" is just as contradictory from the standpoint of automatism. To the sentinel who foolishly supposes that he is something more than a group of material atoms the phrase has a meaning. To him it signifies a struggle between himself and purely material conditions. "Drowsiness" he regards as the effect of his bodily state, and "fighting" as the effort which he, the conscious being, makes to overcome it. But, according to automatism, "fighting" and "drowsiness" represent nothing but material changes taking place in material things. We are again confronted with the same dilemma: the necessity of imputing purpose to that which, according to the theory, cannot entertain it, or of admitting that the facts, or what seem to be the facts, of ordinary life are incapable of being stated in terms of the theory.

Obviously every statement in the sentence is condemned to the same fate. "Every muscle becomes tense through attention" has a meaning only on the supposition that the mind has an influence on the body. Accepting automa-

tism, we must describe the fact set forth in the sentence as follows: In the functioning of that purely physical machine which constitutes the sentinel an exceedingly complex group of changes in that part of the machine called the brain has led to equally complex changes in the nerves controlling the action of the muscles of the various parts of the machine, with the result that it takes an erect position in a certain place. This machine is subject to two highly complex groups of internal influences: a part of the atoms of its brain is undergoing changes which tend to produce such an effect on certain nerves and, through them, on certain muscles as will make an erect position of the machine impossible; another part of the atoms of the brain is undergoing such changes as tend to counteract the changes of the first. The two sets of forces are almost perfectly balanced until somehow those brain changes stimulate the nerves controlling the tongue in such a way as to cause it to utter the word "duty," and straightway the nerve changes which stimulate the muscles that keep the body in an erect position become intensified and those having an opposing tendency become weakened. But this "description," it is evident, takes no account of the only characteristic features of the fact. That which sets it off from a mere happening in the external world, like the fall of a leaf from a tree, is the purpose which stupid common sense imputes to the sentinel; but automatism leaves no place for purpose.

We say the soldier did his duty; we might with equal reason give the same praise to a tree which falls to the ground just in time to crush the skull of a notorious criminal. As the tree falls because it has to, so the tongue of the soldier wagged because it had to: each obeyed purely

physical laws and produced in turn a purely physical result.

According to Automatism, Physical Causes Alone Account for All We Do. — Of course, if automatism be true, teacher as well as pupil, writer as well as reader, are hopelessly entangled in purely physical causation. My pen writes these lines because my hand is compelled by the changes that take place in my brain to trace them, and every word that the teacher utters is due to the same cause. If the physical laws that govern my brain changes will permit me to think logically, I shall be sure, if I am an automatist, that this book, for example, will produce an effect upon its readers, not through their intelligence, but through their nervous systems. And the teachers who are automatists will be equally sure that the feelings which their words bring to the minds of their pupils are significant only in so far as they indicate changes that are taking place in their brains.

Automatism Leaves No Place for Logical Thinking. — But, upon second thought, both these statements are without warrant. "Logical" itself is a term without significance from the point of view of automatism. There are states of mind called belief, and these, like all other states, are the necessary and passive accompaniments of brain changes. To attempt to draw distinctions between them, to say that some are logical, would be to forget that the various states of mind have only one quality in common —that of being the inevitable result of brain changes. No state of mind as such signifies anything. The wakefulness of the sentinel as a state of mind counts for nothing; it is

the physical condition of which this mental state is the sign that counts. And if the laws which control the changes in our brains will permit us to think of things as they are, always provided automatism be accepted as true, we shall continue to endeavor to arouse the ambitions of our pupils, to excite their interests, to make appeals to their sense of honor, only because the same laws have in some inscrutable way brought about brain changes which compel us to have a profound confidence in the physical effect of illusions; or, rather, we shall continue to do it because the influences which act upon the physical machine which we ourselves are, make that and nothing else possible. If the only things in the world are physical, if all causation is physical, our faith in the efficiency of any appeal, if it has any foundation, must be grounded on our confidence in the purely material effect of such appeals.

Indeed according to the theory all teaching, all writing, all conversation, all so-called science is absurd. All intercourse of mind with mind presupposes that the mind is susceptible of being influenced by intelligent considerations, whereas it is influenced by nothing but matter. A man who expostulates with a cyclone, entreating it either to suppress itself or, if it will not do that, to select a field of operations where it will do less damage, is quite as logical as a teacher who, believing that actions are not influenced by intelligence, expostulates with an unruly boy, urging him to change his course because of the influence he is exerting upon the school. Cyclone and boy alike are inevitably bound to obey the mechanical laws of matter. That the two differ in an important particular, that the boy can be made aware of the tendencies of his conduct, in no way establishes an essential difference between

them, since, according to automatism, his consciousness has nothing to do with his actions.

Automatism Makes Distinctions Between Truth and Falsehood Impossible. — It follows, of course, from what has been said, that this statement is, from the standpoint of the theory, absurd. This statement, like every other, assumes that there is such a thing as truth, assumes, in other words, that in an act of real knowledge the act of cognition is something radically different from a mere passive effect; that the mind, in knowing, stands in a unique relation with its object, a relation that has no counterpart in the material world. Whoever says, "I see it," "I believe it," "It is true," makes assertions into which no meaning can be put by automatism. All the language of ordinary life, to say nothing of the carefully guarded statements of science, presupposes that acts of the mind may come into a peculiar relation with objects — a relation which is through and through mental, a relation which, however hard it may be to define it, we all have in mind — when we assert that a thing is true. Automatism, on the other hand, maintains that the one thing which can be asserted of states of consciousness is that they are the passive results of brain changes; and this is equivalent to saying that the cause-and-effect relation is the only one into which they can enter.

Theory of Parallelism Stated. — There is another theory of the relation between the mind and the body which makes equally impossible the presuppositions which must be made by any consistent educational doctrine. This theory, known as parallelism, maintains that matter and mind never

exist apart; that not only in the human brain, but everywhere, from an atom to the largest star, matter and mind go together. Instead of supposing with automatism that at a certain point in the development of the nervous system a rudimentary form of consciousness began to exist, parallelism maintains that a germ, so to speak, of consciousness exists not only in connection with the most elementary nervous systems, not only in connection with every form of organic life, not only in connection with every complex form of inorganic matter, but in connection with the simple elements out of which those complex forms are built up.

Superiority of Parallelism over Automatism. — The advantage of parallelism over automatism as a metaphysical theory is manifest. Automatism offers no explanation for the appearance of an entirely new phenomenon, consciousness, at a certain point in the history of the evolving world. Parallelism avoids this difficulty by postulating a universal and necessary connection between matter and consciousness — by postulating that wherever matter is, and in whatever form, there consciousness is.

This Superiority has no Significance from the Standpoint of Education. — But this superiority has no significance from the point of view of education. Granted that mind and matter are inseparable, and that for that reason a human being has a mental and a material side; granted that those sides are so related that the question as to which of them is the cause of the other in a given case becomes absurd, since it is the nature of each to be the opposite of the other. The question of fundamental importance for educa-

tion is, which of these two sides has priority? Does the mental side obey laws of its own, the material accompaniment passively following where consciousness leads? Or does the physical side take the lead, the mental accompaniment mechanically following? Parallelism does not, cannot hesitate between these alternatives. The logic of the situation compels it to say that matter and mind are like substance and shadow, the former containing all the causal energy of the universe, the latter being only its inert accompaniment.

According to Parallelism the Relation Between Matter and Consciousness is like that Between Substance and Shadow.—What is the object of both automatism and parallelism? To introduce simplicity into our conceptions of the universe, to close every breach in the continuity of cosmic processes. Parallelism differs from automatism in that while the latter accomplishes this purpose from one point of view, it fails to do it from another. Automatism does indeed present to our conception a universe whose every element is under the absolute control of physical laws. But facts which compel recognition force it to admit that in connection with the developing nervous system a new phenomenon appears, a phenomenon which plays no part, serves no function, has no purpose, and, what is worse, has no assignable origin. For the distance from matter to mind is just as great as that from mind to matter. And he who has difficulty in conceiving how mind can influence matter ought to have equal difficulty in seeing how matter can give birth to mind. Now parallelism avoids both difficulties. It postulates a connection between matter and mind as a part of the nature of things, thus avoiding the

necessity of accounting for consciousness as a new fact in connection with animal life, and at the same time solves the problem of the origin of consciousness by assuming that there is no problem to solve.

It is evident, therefore, that both parallelism and automatism must take the same attitude towards the laws of nature. The laws of gravitation, cohesion, chemical affinity, and the like, are purely mechanical laws. To permit mind or consciousness anywhere to take the initiative, to compel matter to be passive and wait upon mind, would be to make precisely the break in the continuity of cosmic processes which both theories aim to avoid. It would be to assert that under certain circumstances all the changes in matter are due to mechanical laws, and that, under certain other conditions, those laws cease to be the only laws in operation, and that matter comes, to some extent at least, under the control of the laws of logic and of mind.

Nor is this difficulty avoided by Professor Baldwin, who says that it is not the brain as mere matter, but the brain plus the consciousness that forms its inseparable accompaniment, and without which "the brain would not be a brain," which causes voluntary movement. For he admits that the principle of parallelism would be violated if consciousness had any efficiency whatever in producing physical effects.

Evidently, therefore, from the standpoint of a consistent theory of education automatism and parallelism are on a level. Arguments, discussions, conversation, have the same absurdity from the point of view of one theory as from that of the other. Both assume that consciousness is the internal passive accompaniment of physical

changes, whereas all argument presupposes that it can be brought under influences of a purely intelligent character.

Attempts to Do Away with the Distinction Between Laws of Matter and Laws of Mind. — Nor is the case made better for education by the attempt through a supposedly deeper metaphysic to annihilate the distinction between the laws of matter and the laws of mind. By maintaining that the laws of matter are themselves simply the expression of the will of an infinite consciousness, that they are in the last analysis laws of mind, some thinkers seem to imagine that the difficulties upon which we have been insisting are obviated. But it is surely unnecessary to insist that, no matter what the metaphysical character of the laws of nature may be, they wear, to the look of our apprehension, the same mechanical character which they have when we regard them as laws of matter. Whether the law of gravitation is a law of matter or of mind, a tree that falls to the ground in obedience to it will make no discrimination between a good man and a bad man who happen to stand in its path. If the universe and its laws are but the embodiment and externalization of the nature of an infinite consciousness, educational doctrine has no foundation if it is maintained that, since the human mind is a part of this externalization, it has no autonomy, obeys no laws of its own. Education as consisting of influences exerted by one intelligence upon another cannot be conceived if the educating intelligence is powerless and if the intelligence to be educated cannot be got at. Make what supposition you please about the entity with which our minds are associated — call it Matter, with plain people; or the Unknowable, with Herbert Spencer; or the Merely

Possible, with the Positivists; or Absolute Consciousness, with some metaphysicians — and you have done nothing to make educational theory possible so long as you contend that consciousness, to be educated, must obey laws imposed upon it by an outside power. If mind cannot come into contact with mind; if it has no ear for logic, no eye for intelligence; if it is but the tail of a metaphysical kite with no agency or volition of its own, then education, and for that matter science, is impossible.

QUESTIONS ON THE TEXT.

1. What is the theory of automatism?
2. Show that if this theory is true, nothing which we do can be due to purpose.
3. Why, if it is true, has education to do with the body only?
4. Why does automatism render it impossible to make a clear statement of ordinary facts?
5. Why, according to automatism, must physical causes account for all we do?
6. Why does it leave no place for logical thinking?
7. Why does it make distinctions between truth and falsehood impossible?
8. What is the difference between automatism and parallelism?
9. Show that, according to parallelism, the relation between matter and mind is like that between a thing and its shadow.
10. Why must any attempt to identify the laws of matter and of mind have the same consequences for education as automatism or parallelism?

SUGGESTIVE QUESTIONS.

1. Can you think of any reasons which might incline men to believe that automatism is true?
2. Can you cite any cases in which men act precisely as they would if they were mere automata?
3. What makes you believe that you have a mind?
4. Why do you believe that other people have minds?

5. Would your reasons be valid if automatism were true?

6. What is the relation between automatism and materialism?

7. Can you think of any reasons which might incline men to believe that every kind of matter has a bit of mind stuff connected with it?

8. What is the difference between mechanical and intelligent action?

9. What is the difference between the law of gravitation and the force of gravity?

10. Do you know what the force of gravity is?

CHAPTER II.

A PRESUPPOSITION OF EDUCATION: PERSON OR PSYCHOLOGICAL MACHINE.

Herbart's Theory of the Will. — There is another class of theories, of which Herbart's is a type, which equally eliminate the will from the causes that determine the actions of a human being. As automatism makes the actions of men depend upon a purely physical mechanism, so Herbartianism makes them depend upon a purely psychical mechanism. According to Herbart, the soul is merely one among the other monads of the world. The only thing which the soul monad can do is to resist the efforts of the other monads to destroy it — which resistance expresses itself in the form of consciousness. Feelings are the result of the relations between states of consciousness, and will is only the name which we give to a peculiar feeling when it passes into action. We have, according to Herbart, two classes of desires, one accompanied, and the other not, by a belief in the expediency of a certain action. The former passes into action, the latter does not; and the so-called consciousness of a volition is nothing but the consciousness of the passing of a desire into action.

Metaphysical Difficulties of the Theory. — If we were discussing the theory from the side of metaphysics, it would be insisted on that this theory is inconsistent with itself. Starting with the postulate that the soul can only

do one thing — resist the attacks of other monads upon it — the theory really postulates two kinds of soul activity. For Herbart concedes that feeling as well as knowing is a genuine form of mental activity. And the Herbartians cannot deny that feeling as well as knowing is a product of the soul without denying that it is the soul that feels.

We should also point out that the theory is untrue to the facts of consciousness. According to the theory, the mind is purely passive in its so-called acts of volition; according to consciousness, volition is the active product of an active mind. The mind seems to itself in its acts of volition to be exercising a power of its own, sometimes in strenuous and painful opposition to desires that threaten to break it down.

Educational Implications of the Theory. — But our concern is with the educational implications of the theory, and our contention is that there must be a radical difference between a philosophy of education which bows the will out of the universe whether in the interest of a physiological or a psychological mechanism, and one which is based upon the belief that the deepest things in the life of a human being rest upon his will.

The theory that a human being is a psychological or metaphysical machine is not indeed exposed to the same difficulties as those that automatism and parallelism have to contend with. As has been shown, they make a philosophy of education impossible, because they leave no place for the effectiveness of appeals to intelligence. If all causation is blindly mechanical, then education, since its object is to increase the effectiveness of intelligence, is pure illusion. As well appeal to the shadows that dance on a wall

as to an intelligence that is a passive, nerveless, forceless spectator of the world.

It Does not Make a Philosophy of Education Impossible. — But if the soul is a metaphysical machine, there is no *a priori* reason why it may not obey laws of its own. As matter must obey mechanical laws, so, it may be held, the mind is obliged by its nature to obey mental laws. Now such a theory does not make a philosophy of education impossible. If mind, like matter, acts as it does because it must, and, at the same time, obeys laws of its own, education may be conceived as the process of surrounding the mind with influences, subjecting its actions to conditions which will occasion its actions more and more to conform to a preconceived end.

Nevertheless such a theory must profoundly affect one's philosophy of education. Is there in the minds of your pupils a will upon whose coöperation or opposition you have to reckon? Are you to conceive of them as beings whose every action is inevitably determined by some form of interest? Or may you regard them as possessed of an innate power of resistance to the powerful currents that would sweep them from their moorings? Plainly one's philosophy of education must depend upon his answer to these questions. For if with Herbart we hold that the actions of men are determined entirely by their interests, then with him we must hold that the most important thing in education is the development of interest. But if we assent to the reality of the will, of a power that can throw its weight in the scale of the weaker interest and habitually does so in the life of a well-regulated human being, we shall realize that the development of interest, important

as it is from any point of view, must give precedence to the training of the will. Without a well-trained will at the helm, the life of every human being must drift aimlessly and helplessly, the sport of the capricious winds of impulse and passion that beat upon it. Surely, as Hinsdale said, if there is a will, a power of active volitional attention, its cultivation is the "educational problem." As Dr. Carpenter puts it,[1] "it is in virtue of the will that we are not mere thinking automata, mere puppets to be pulled by suggesting strings capable of being played upon by every one who shall have made himself master of our springs of action." Naturally, in the opinion of the same author, the acquirement of the "volitional direction of attention . . . should be the primary object of all mental discipline." As the Herbartians, who do not believe in the existence of the will, contend that the primary object of education is the cultivation of interest, since it is the sole spring of action, so those who agree with Dr. Carpenter must believe in the preëminent importance of that power which alone distinguishes a man from an automaton.

Consequences of the Theory. — The difference between the mind as the writer conceives it and the mind as the Herbartians conceive it, is fundamental. To say, as the latter do, that there is no such thing as will, that volition is merely the passing of a desire into action, that the mind is controlled by its interests, is to say that the mind at each moment is controlled by the feelings then present to consciousness. Yesterday I had certain feelings and under their influence formed certain resolutions; what significance can they have for me to-day when the feelings are

[1] Hinsdale's Art of Study, p. 141.

gone? Absolutely none. Yesterday the wind blew from the west and my rudderless vessel went due east; to-day it comes fresh and driving from the north and my course must be toward the south. There is nothing in me to enable me either to make headway against it or to offer any obstacle to it. I am the helpless victim of the wind and waves. If there were within me a principle of action not dependent for its exercise on feelings present to consciousness, this principle might by its control over the attention arouse some feeble interest of an antagonistic sort. And if the same principle of action were of such a sort as to make it possible for it to choose between interests present to it, then I might decide to act on the weaker and pursue my course steadily in spite of the tornadoes of passion that would turn me aside from it. But if there is in me no such principle, no such rudder of the mind, so to speak, it would seem that a steady, persistent adherence to a course in the face of all obstacles, not only from moment to moment, but from hour to hour and day to day and year to year, would be impossible.

Coleridge.—The difference between the mind as we conceive it and the mind as the Herbartians conceive it may perhaps be more clearly brought out by a study of Coleridge. All who knew him well agree that the great defect of his mind was his weakness of will—weakness of the power whose function it is to make an effective stand against the unimportant interests of the moment which would turn the mind away from the course it has marked out for itself. "At the very outset of his career," says Dr. Carpenter, "when he had found a bookseller generous enough to promise him thirty guineas for poems which

he recited to him, and might have received the whole sum immediately upon delivery of the manuscript, he went on week after week begging and borrowing for his daily needs in the most humiliating manner, until he had drawn from his patron the whole of the promised purchase-money, without supplying him with a line of that poetry which he had only to write down to free himself from obligation. . . . All accounts of Coleridge's habits of thought as manifested in his conversation agree in showing that his train of mental operations once started went on of itself, sometimes for a long distance in the original direction with a divergence into some other track, according to the consecutive suggestions of his own mind, or to new suggestions introduced into it from without." How did it happen that the train of thought going on of itself sometimes travelled for a long distance in the same direction? It was because of the continuance of the interests that dominated it at the start, not because he had marked out for himself a goal toward which he pressed forward in spite of interests that tended to draw him away from it.

This explanation is irresistibly suggested by another incident which Dr. Carpenter mentions. A lady narrated to him the experience which she and her schoolgirl friends at Highgate used to have at the time of Coleridge's residence there. When the latter succeeded in getting one of the children to talk with him, the conversation would soon "pass into the accustomed monologue, altogether beyond the comprehension of the poor child," who vainly endeavored to free herself that she might resume her sport. Manifestly the cause of the conversation was not determined by some preconceived end, but by the predominance of metaphysical interests with which his mind

was full and on account of which the child was entirely forgotten.

Coleridge's conversation, as Carlyle describes it, admits of no other explanation. "He began anywhere; you put some question to him, made some suggestive observation; instead of answering this, or decidedly setting out towards answer of it, he would accumulate formidable apparatus, logical swim-bladders, transcendental life-preservers and other precautionary and vehiculatory gear for setting out; perhaps did at last get under way, but was swiftly solicited, turned aside by the glance of some radiant new game on this hand or that, into new courses. . . . His talk, alas! was distinguished, like himself, by irresolution; it disliked to be troubled with conditions, abstinences, definite fulfilments; loved to wander at its own sweet will. It was talk not flowing anywhither like a river, but abounding everywhere in inextricable currents and regurgitations like a sea or lake; terribly deficient in definite goal or aim, nay, often in logical intelligibility; what you were to believe or do on any earthly or heavenly thing obstinately refusing to appear from it."

His notorious lack of punctuality may be ascribed to the same cause. Says De Quincey: "Nobody who knew him ever thought of depending upon any appointment he might make; spite of his uniformly honorable intentions, nobody attached any weight to his assurance *in futuro;* those who asked him to dinner or any other party, as a matter of course sent a carriage for him, and went personally or by proxy to fetch him."

The accounts given of Coleridge's lectures are just what we would expect upon the supposition that one of his most notable traits of mind was lack of will. Says Henry

Crabb Robinson: "Accompanied Mrs. Ruth to Coleridge's lecture. In this he surpassed himself in the art of talking in a very interesting way, without speaking at all on the subject announced. According to advertisement, he was to lecture on 'Romeo and Juliet' and Shakespeare's female characters. Instead of this he began with schoolflogging, in preference at least to Lancaster's mode of punishing, without pretending to find the least connection between that topic and poetry. Afterwards he remarked on the character of the age of Elizabeth and James I. as compared with that of Charles; distinguished, not very clearly, between wit and fancy; referred to the different languages of Europe; attacked the fashionable notion concerning poetic diction; ridiculed the tautology of Johnson's line, 'If observation with extended view,' etc.; and warmly defended Shakespeare against the charge of impurity." Lamb's comment was certainly to the point: "He promised a lecture on the Muse in 'Romeo and Juliet,' and in its place he has given us one in the manner of the Muse." In the next lecture Coleridge managed to stick to his subject, but, as we learn from the same authority, he failed completely the third time. "Tuesday we were to hear a continuation of the theme. Alas! Coleridge began with a parallel between religion and love, which, though one of his favorite themes, he did not manage successfully. Romeo and Juliet were forgotten. And in the next lecture we are really to hear something of these lovers. . . . Instead of a lecture on a definite subject, we have an unmethodical rhapsody, very delightful to you and me and only offensive from the certainty that it may and ought to offend those who came with other expectations." It would be hard to find a more vivid illus-

tration of the truth of Dr. Hinsdale's emphatic statement: "A man who can only do what interests him is not half a man."

The importance of this question would seem to justify a somewhat detailed examination of Dr. Dewey's elaborate presentation of a philosophy of education which makes the development of interest the supreme object of all training.

Dr. Dewey's Theory of Interest. — Let it first be remarked that Dr. Dewey's statement of the case in the "educational lawsuit of interest *versus* effort cannot be accepted."[1] If we can secure interest in a given set of facts or ideas, we may be perfectly sure that the pupil will direct his energies towards mastering them." That is not true, for two reasons: when we have developed interest in a given subject, we have no guarantee that it will be permanent. Interest is a state of mind; when the state of mind passes away interest ceases to be. And because we felt it to-day we are not able to say that we shall experience it to-morrow. Moreover, we have no sort of reason for declaring that it will not come into competition with a stronger interest. If there is no such thing as a power of will, it is a question of the relative strength of interests: the stronger interest must drive the weaker to the wall.

Nor does "the theory of effort say that voluntary attention should take precedence over spontaneous attention" in any other sense than this: the pupil must have some interest in every subject to which it is his duty to attend, and the theory of effort maintains that he should be required to attend to that whether his interest in it is his strongest interest or not. Nor does the "theory of

[1] The quotations are from Dr. Dewey's pamphlet on Interest.

effort" say that "demands are constantly made," that "situations have to be dealt with which present no features of interest." It only says that demands are continually being made which present features of less interest than are offered by other lines of possible activity.

Self-Expression as Understood by Dr. Dewey. — Dr. Dewey finds a common false assumption in the theory of effort and the theory of interest as ordinarily conceived: the assumption of "the externality of the object or idea to be mastered, the end to be reached, the act to be performed, to the self." "The genuine principle of interest," he maintains, "is the principle of recognized identity of the fact or proposed line of action with the self; that it lies in the direction of the agent's own self-expression, and is therefore imperatively demanded if the agent is to be himself."

Unless Dr. Dewey means by his "genuine principle of interest" to draw a distinction between interests which from the point of view of psychology stand on a level, his principle is not only true but tautological. A boy likes to fight because he is combative; he does what he sees another boy do because he is imitative; he is never still a moment because he is active; he likes to talk because he is social. So conceived, it is self-evident that whatever a boy wishes to do lies in the direction of his self-expression; he likes to do what he does because his nature is what it is. But, so conceived, it is equally evident that the self which he wishes to express may be precisely the one which we who are interested in his development do not want him to express. Professor James says that he would if he could be both "handsome and fat and well-dressed and

a great athlete. So the seeker of his truest, strongest, deepest self must review the list completely and find out the one on which to stake his salvation." We are not assisted, therefore, by being told what our pupils wish to do in the line of their self-expression; what we need to know is what self is being expressed, and what means are to be employed to prevail upon them to express the self which we regard as their true self.

This evident distinction Dr. Dewey has taken no account of. "Genuine interest in education," he says, "is the accompaniment of the identification through action of the self with some object or idea for the maintenance of self-expression." But, as has just been seen, this interest may accompany the identification of the pupil through action with widely different selves.

Dr. Dewey's Confused Account of Interest. — The same confusion reappears in his definitions of interest. "The root idea of the term seems to be that of being engaged, engrossed, or entirely taken up with some activity because *of its recognized worth*." If the italicized phrase merely means that the individual is engrossed with a thing because it appeals to him, if every idea of moral, æsthetic, or intellectual worth is rigidly excluded from it, no exception can be taken to it. The gambler is intensely interested in his game, and never more so than when he is trying to cheat his victim out of all he is worth. But the context makes it impossible to put this interpretation on Dr. Dewey's definition. In the very next paragraph he says that "much of the controversy regarding the use of interest arises because one party is using the term in the larger objective sense of recognized

value in engrossing activity, while the other is using it as equivalent to selfish motives." But those who use the term to denote the emotional accompaniment of engrossing activity include both selfish motives and recognized value. Devil and saint are equally interested in their respective activities. The burglar planning to rob a bank, the mother pondering the education of her child, are equally engrossed with the subject of their thoughts. That you disapprove the one and approve the other does not prevent both from being states of interest. To call a mode of being engrossed interest when you approve of it, and to refuse to give it that name when you disapprove of it, is to forsake the point of view of psychology for that of ethics. But there can be no valid description of interest except as a state of mind.

Having confused self in general with the self which education seeks to develop, and interest in general with interests that have an educational value, Dr. Dewey has but one more step to take in order to reach his goal. If he can show that interest in an end necessitates an abiding and equal interest in the means, he has simplified the educational problem. Education has only to develop an interest in the proper end and its most important task is done.

Dr. Dewey's Attempt to Show that Interest in an End Guarantees an Abiding Interest in the Means. — Dr. Dewey proves the point by begging the question. "If," he says, "the means are recognized truly as means, . . . then the full interest in the end is at once transferred to the so-called means." Again, "the only sure evidence of desire as against mere vague wishing is effort, and desire is aroused

only when the exercise of effort is required." Evidence of desire to whom? To me who experience it or to an outsider? Certainly, I who experience it require no evidence beyond the consciousness of the desire, and if the report of my consciousness is to be accepted, it is one thing to be interested in an end and quite another to have an abiding and equal interest in the means that lead to it. To say that whenever the ideal is really a projection or translation of the self it must strive to assert itself, that it must persist through obstacles, is to contradict the plainest and commonest facts of experience. Three fourths of the tragedy of life arises from the fact that men fail ignominiously to live up to their ideals, and one reason why they fail is because of the uninteresting, unattractive character of the means they must employ to reach them.

That a thinker of Dr. Dewey's ability should be reduced to such straits in order to use interest as the foundation of his philosophy of education, that he should confuse self in general with one's best self, and interest in general with interests that have an educational value, that he should misstate facts of universal experience by contending that whoever is interested in a given end is equally interested in the necessary means, is surely a cogent argument against his position. We submit, then, that the ideal which education should put before itself is that of a human being not controlled by, but controlling, his interests — a human being choosing, under the guidance of an intelligent will, what interests shall determine his activity.

QUESTIONS ON THE TEXT.

1. What is Herbart's theory of the will?
2. What are the metaphysical difficulties of the theory?

3. What is its bearing on education?
4. What is the study of Coleridge intended to show?
5. State Dr. Dewey's theory of interest.
6. What does he mean by "self-expression"?
7. State clearly the three fallacies of which he is the sponsor and show clearly that they are fallacies.

SUGGESTIVE QUESTIONS.

1. Do you think there is any difference between will and desire, and, if so, why?
2. What is the difference between a physiological and a psychological machine?
3. What sort of laws would govern the movements of the former, and what the movements of the latter?
4. The Herbartians maintain that it makes no difference whether we believe that our pupils have wills or not: do you agree with them, and, if not, why not?
5. Show that a boy may develop into any one of an indefinite number of selves.
6. Show that all of the impulses of a human being are equally a part of his actual self.
7. Show that some of these impulses are antagonistic to education.
8. Show by illustrations drawn from your own experience that it is possible to have interests which possess no educational value.
9. Would you say that burglars, thieves, pickpockets, murderers, have no interests?
10. Illustrate from your own experience the fact that you may really care for an end, and yet find the means which are necessary to attain it so uninteresting that you cannot bring yourself to employ them.

CHAPTER III.

DEMOCRACY AND EDUCATION.

The Connection Between Education and the Form of Government. — Education deals with members of society, not with isolated human beings. And the duties of men manifestly differ with the forms of the society to which they belong. The duties of American citizens, for example, differ in important particulars from those of the citizens of Germany. It would, of course, be absurd to say that the society of any highly civilized country under a monarchical form of government has anything in common with the caste system. But the society of Germany, or even of England, has far less of mobility than is characteristic of the society of this country. The theory that underlies the governments of England and Germany is that birth, as such, is entitled to special powers and privileges. The theory that underlies our own government is that every man has the right to make the most of himself and his life, without being hampered by artificial distinctions. Now, a government based on the aristocratic theory is logically bound to make different provisions for the education of different classes, provided it makes any provision whatever for the education of the masses. If certain classes have an inherent right to certain special privileges, it is the duty of the society of which they are members to see to it that they have the education that prepares them to make a right use of them. If it is the duty of another

class to be hewers of wood and drawers of water, and to permit their so-called superiors to think for them on important questions of government, then the education which would inflate them with the notion that they can think for themselves is an absurdity.

The German School System. — It is indeed true that Germany not only offers education to all classes of German citizens, but makes a certain amount of it compulsory. But this policy of educating the masses was entered upon because German statesmen and the members of the class entitled to special privileges by virtue of their birth realized that this was the only means through which the governing powers could regain the prestige of which they had been deprived by Napoleon, and the privileged class its position of importance in the State. But the same clearness of perception required them to recognize the fact that this education must be limited both in quantity and quality. For if the aristocracy of birth did not entitle its possessors to special educational advantages, how could it entitle them to special privileges? While, therefore, the German government does not erect barriers that make university education impossible to the lower classes, it does interpose obstacles which it is exceedingly difficult to surmount. The government says in substance to its citizens: "You are entitled to the completest possible development of your powers if you are members of a certain class; otherwise, to that amount of education, and no more, which will make you useful to the government." Says Professor James E. Russell: "The greatest defect in the German school system is the organization which fosters distinctions of class and sex. The common schools are for the common people,

the real-schools are for the middle classes, the classical schools are for the aristocracy. . . . If class prejudice did not exist, one high school could easily perform all the functions of secondary education by the simple arrangement of elective subjects. No such axiom as that the school exists for the pupil is recognized in German educational philosophy. The German school exists primarily for the state. The pupil is a citizen in training. That he should be an obedient, legal, submissive subject is a self-evident truth. Respect for authority is the one essential prerequisite to German citizenship. In the selection of a school and the course of study, in seeking admission to the university and the vocations of civil life, the individual has little freedom of choice. The rigorous discipline of the schools, which brooks no opposition and tolerates no parental interference; the methods of instruction, which leave nothing to chance and individual initiative; the system of privileges, which dominates teachers and pupils alike — all tend to the development of character which feels no restriction of personal liberty in the constant surveillance of the police and the rule of a military despotism. . . . German society is founded on the principle that the greatest good of each is included in the greatest good of all, rather than on the principle that the greatest good of all is subserved by the highest individual development of each." [1]

Professor Peck on Universal Education. — This is not said in criticism of the methods of education of aristocratic societies. As Plato held that the interests of the masses would be best promoted by absolute submission to a few thoroughly trained philosophers, so a man to-day may

[1] Russell's German Higher Schools, pp. 420, 421.

hold that the interests of all classes will be best subserved by putting special privileges in the hands of an aristocracy. Nor is this view without representatives in the United States. Says Professor Harry Thurston Peck : " Linked closely with many other very serious educational mistakes, and from many points of view by far the most profoundly serious of them all, is that curious fancy that education in itself and for all human beings is a good and thoroughly desirable possession. So axiomatic is this held to be that its principle has been incorporated into the constitutions of many of our States, and not only is education made free to all, but in most States is made compulsory upon all. There is probably in our whole system to-day no principle so fundamentally untrue as this, and there is certainly none that is fraught with so much social and political peril for the future. For education means ambition, and ambition means discontent."

Nor are we left in doubt as to the political philosophy which underlies these views of education. " It [the university] should produce for the service of the State men such as those who in the past made empires and created commonwealths — a small and highly trained patriciate, a caste, an aristocracy, if you will. For every really great thing that has been accomplished in the history of man has been accomplished by an aristocracy. It may have called itself a sacerdotal or a military aristocracy, or an aristocracy based on birth and blood, yet these distinctions were but superficial; for in reality it always meant one thing alone — the community of interest and effort in those whose intellectual force and innate gift of government enabled them to dominate and control the destinies of States, driving in harness the hewers of wood and

drawers of water, who constitute the vast majority of the human race, and whose happiness is greater and whose welfare is more thoroughly conserved when governed than when governing." [1]

Who Shall Receive a Thorough Education According to Professor Peck? — But how are we to determine who shall be members of this aristocracy? Shall we assume that the "children of the hewers of wood and the drawers of water" are fit for nothing but to follow in the footsteps of their parents, and that their welfare will therefore be most thoroughly conserved by blindly submitting to the guardianship of their betters? Plato saw that to select the class who were to rule, and therefore to receive a thorough education, simply on the basis of birth would be a manifest injury to society. Believing that heredity would generally insure to the children of his philosophers the possession of powers that entitled them to rule, he admitted that this would not always be so. He accordingly made it the duty of his philosophers, whom he endowed with infallible insight and absolute freedom from class spirit, to raise to the ruling class any children of the lower orders that possessed exceptional abilities, and to give them the education of the aristocracy.

But the defenders of aristocracy in our time, while admitting the injury done to society in particular cases by giving special privileges to birth, may contend that there is no way of avoiding it without inflicting greater injury in other directions. There can be, they may insist, no ideal system either of government or of education. If we could find in any society philosophers such as Plato dreamed of — men

[1] Cosmopolitan, 1897, pp. 269–271.

endowed with infallible insight and entirely free from class spirit — and if the other members of society had the power of infallibly determining who the philosophers were and the wisdom to trust themselves to their guidance, then indeed we might have a Utopia in which each man should receive the education best adapted to prepare him for his proper work and do it. But none of these conditions has ever existed anywhere save in Plato's imagination. And in their absence no safer method, none that inflicts less injury on society, it may be argued, can be found than the one employed by an aristocracy. That method assumes that the descendants of able men will have the special abilities which entitled their ancestors to special privileges, and that they, therefore, should receive the education befitting the members of the ruling class.

The Relation of Education to Political Philosophy. — Let it be repeated that the contrasting postulates that underlie aristocratic and republican forms of government respectively have not been presented for the purpose of discussing them. That would be a work of supererogation in this country, at least at this time. For though a considerable number of Americans doubtless hold the views of Professor Peck, at present we are safe in regarding them as constituting too small a minority to be likely to influence action. But the object has been to show that there can be no intelligent discussion of education, especially in its elementary forms, unless it is based on a certain political philosophy. If the German political philosophy is true, then the German educational practice which discourages spontaneity in its elementary schools is wise. But if our American political philosophy is true, if that form of society is best in

which there is no discrimination between man and man, if men as such have an inherent right, if not to equality of opportunity, at least to freedom from artificial inequalities, then the thing to do is to work out an American theory of education based on the assumption that every member of society, without regard to birth, race, or sex, should receive that development of his or her powers which makes life most worth the living.

The Philosophy of Education Should Assume the Truth of the Republican Theory. — But without attempting to discuss the abstract principles underlying the political philosophies of republican and aristocratic forms of government, it may not be amiss to point out that there are considerations of the most cogent character which justify us in assuming, at least from the standpoint of education, the truth of the republican theory. Let us grant, for the sake of argument, that the cultured and intelligent few alone have the "right" to rule, that the interests of all parties would be best subserved by restricting all power to them. There is no way of preventing the real or supposed interests of one group of rulers from clashing with those of another. It is this conflict of interests between the dominant elements of one "nation" — which always practically means the rulers of a country — that has given rise to nine tenths of the wars of history. Now in war the immediate object — not ulterior and remote consequences — is bound to monopolize attention, and the immediate object is always victory. But the achievement of this object depends not merely on the quantity but on the quality of the force that is hurled against the adversary; not merely on the number of soldiers but on their character, training, and intelligence.

In this way the elevation of the intelligence of the governed may become a matter of importance to rulers. Regarding the masses as mere means to the attainment of their own ends, looking upon themselves as the only creatures having an intrinsic right to consideration in the world, the few are likely, in the course of time, to be confronted with conditions which make it essential in the furtherance of their objects to improve the quality of their tools.

The Effect of Education on the Masses. — But the human tool protests against being treated as a tool as soon as you begin to educate him. Perhaps he ought not to protest; perhaps the well-being of society requires that he should look upon himself as having but one purpose in creation, the hewing of wood and the drawing of water for his masters. Perhaps the widening of his own horizon, the illumination of his own mind, the enlargement of his own sympathies, the purifying of his own affections, the deepening and quickening of his own sense of duty and of beauty, the improvement of the conditions of his own life, are really matters of no consequence in the scheme of life. Be it so; the significant thing is, the moment you begin to educate him, the moment you begin to increase his value for your purposes, *that* moment you implant in his mind the germ of the belief that from his point of view they are supremely important matters, and the more you educate him the more quickly you will cause that germ to develop.

The Dilemma of Rulers. — This, then, is the dilemma of rulers: they must choose between the poor service of con-

tented but brutish workers and the far more effective but discontented service of intelligent men. The nearer the masses approach to the level of brutes, the more their aspirations are stifled, the more destitute they are of ambition, the more contented and at the same time the less useful they are. Professor Peck is right: universal education means universal discontent. But he did not add that universal ignorance means universal incapacity. Contented ineffectiveness, discontented effectiveness — between these rulers must choose.

For reasons already mentioned, the choice is likely in the course of time to be discontented efficiency. Disregarding remote consequences, rulers are likely, sooner or later, to be confronted with conditions which make the accomplishment of their own purposes dependent on the elevation and education of their subjects. And this is one of the causes that tends to bring about democracy. (By this term I mean a society founded on the principle that "the greatest good of all is subserved by the highest individual development of each.") For when the discontent that education engenders takes possession of the masses, they begin to employ their own energies for a new purpose — the promotion of their own welfare. The tradition of uncounted centuries, that they are mere cogs in the social machine whose one function it is to grind out the interests of the nobility, no longer binds, and they begin to wonder whether the sun does not shine and the flowers bloom and the brooks murmur for them. The history of every progressive people in the world is an illustration of this; and the stationary peoples, whatever else they may be, are those whose rulers have not yet found it to their interest to educate the masses.

Three Causes That Work Towards Democracy. — We find, then, in the selfishness of the ruling classes, and in the discontent of the subject classes, two causes that work in the direction of democracy. But there is in the unselfishness of the ruling class a cause that works in the same direction. Unselfishness is as fundamental, if not as powerful, a characteristic of human nature as is its opposite. That it does not manifest itself more effectively, that it does not exert a more powerful influence in bringing on democracy, is due to the greater influence exerted by selfishness upon men's beliefs. We always incline to believe what we wish to believe, and our selfishness makes us wish to believe that the sufferings and deprivations and contracted lives of the poor are part of the inevitable order of things, not the result of man's own work; and we wish to believe this because, if the sufferings of the poor are inevitable, we can indulge in the luxury of pity as we contemplate them, without feeling under obligation to do anything about it. This explains why it happened that the unselfishness of the North had more to do with effecting the overthrow of slavery than had the unselfishness of the South. Not that the unselfishness of the North was the only, perhaps not even the chief, factor in bringing about the result. One need not read far in the history of the antislavery struggle to become aware of the fact that opposition to slavery was due to both the selfishness and the unselfishness of its opponents. The desire of the North for political power combined with its pity for the slave to free him. That the unselfishness of the South[1] in reference

The existence of a strong antislavery sentiment in the South is proved by the fact that in 1827 one hundred and six of the one hundred and thirty antislavery societies in the United States outside of Illinois were

to slavery had so few visible results was by no means due to its absence, but to the fact that it had no support from the selfishness of Southern men.

Now this philanthropic sentiment is another of the forces tending towards democracy that must be reckoned with. By itself so weak that history might safely neglect it, in conjunction with the forces already mentioned it may turn the scale in favor of results of world-wide importance. With one group of the ruling class seeking to improve the condition of the masses for its own selfish purposes, with the masses bent on having their own welfare treated as an end in itself, it ought not to be a matter of wonder if the members of the ruling class, whose humanitarianism is so intense as to cause them to forsake the standpoint of their class, should make an effective alliance with the masses in bringing about progress towards democracy.

Progress of the World Towards Democracy. — This rough sketch may perhaps throw some light on the fact which De Tocqueville so long ago noted: the steady march of the world towards democracy. The peoples of the world may be divided into two classes — those that are stationary and those that are moving towards democracy. Whether that ought to be the trend of progress, let it be repeated, is not the question. Perhaps there is but one stable condition of society — the stability of fossilization, such as China has shown to the world since the dawn of history. But if there are two, the other is democracy. If a living, growing, progressive society has any stable form, it is that which treats every man as an end in himself, as

in slaveholding States. For a fuller discussion of this subject see the author's "Political History of the United States," Vol. II. pp. 406, 407.

having an inalienable right to develop himself and pursue happiness without being hampered by artificial encumbrances. Whether such a form can be stable depends on the natural capacity of the average man and on his education. What his natural capacity is time alone can tell.

The philosophy of education is bound, therefore, to say to such bodies politic as that of Germany: "You have no foundation in the nature of things. You are neither frankly feudal nor frankly democratic. You do not, like China, seek to suppress three fourths of the man; nor do you, like the United States, seek to develop the whole man — unless he belongs to certain classes. But between these types you must choose, since, from the nature of the case, no other can be permanent."

QUESTIONS ON THE TEXT.

1. Illustrate by means of the German school system the connection between education and the form of government.
2. Why is Professor Peck opposed to universal education?
3. Who, in his opinion, should receive an education?
4. What is the inevitable effect of education on the masses?
5. What does the text mean by the dilemma of rulers?
6. What are the three causes that work towards democracy?
7. What are the two main conclusions of this chapter and on what arguments do they depend?

SUGGESTIVE QUESTIONS.

1. Which do you consider the more desirable state for a human being, content or discontent?
2. Show that opponents of universal education ought logically to oppose republican government.
3. What is the difference between regarding man as a tool and thinking of him as an end in himself?
4. Can you cite any examples from history that illustrate what the text calls the "dilemma of rulers"?

5. State the history of popular suffrage in this country, and point out its bearing on the argument.

6. What is the Fifteenth Amendment, and why was it passed?

7. The text says that the philosophy of education must choose between the fossilization of China, and the progressiveness of the United States; do you clearly see why?

CHAPTER IV.

THE END OF EDUCATION AS CONCEIVED BY THE REPORT OF THE COMMITTEE OF FIFTEEN.

ALL intelligent action presupposes a conception of the end to be attained. What end does education seek to realize?

The End of Education and Civilization. — A high authority intimates that the question is sufficiently answered by the demands of civilization. "The chief consideration," says the Report of the Committee of Fifteen, "to which all others are to be subordinated is this requirement of the civilization into which the child is born, as determining not only what he shall study in school, but what habits and customs he shall be taught in the family before the school age arrives; as well as that he shall acquire a skilled acquaintance with some one of a definite series of trades, professions, or vocations in the years that follow school; and furthermore, that this question of the relation of the pupil to his civilization determines what political duties he shall assume and what religious faith or spiritual aspirations shall be adopted for the conduct of his life.[1]

If this reasoning is good from the point of view of an American, it is equally good from that of a Chinaman. The education required by the civilization of the United States lays emphasis on reflection, on emancipation from tradition; the education required by the civilization of

[1] L. c., p. 41.

China emphasizes the supreme importance of adherence to ancient beliefs and customs. Ought education in the one country differ as widely from that in the other as do their respective civilizations? Should education take no account of the fundamental truths upon which each bases its civilization?

The civilization of Greece had as its root the inequality of man, the fundamental difference between Greek and barbarian. Our civilization is based upon the principle of the equality of man before the law. Ought the ancient Greeks to have been taught that it was right to make slaves of the barbarians? Ought they to have neglected the education of their women?

The civilization of the South before the Civil War was based on the assumption that the nature of the negro was such that his own interest, as well as that of society in general, required that he should be held as a slave; must the philosophy of education hold that it was wise for Southern parents to teach this doctrine to their children?

There is, indeed, another construction which may be given to the paragraph quoted from the Report of the Committee of Fifteen. It may mean to say that a man must accept the fundamental ideas of the civilization in which he is born, however widely they may depart from the truth, as the condition of helpful co-operation with his fellows. And since education means to prepare him for such co-operation, it must inculcate in him the beliefs without which helpful work is impossible. But this putting of the case begs the question. What is helpful co-operation? Is it to conform in all important particulars to the beliefs and practices insisted upon by public opinion? So thought the ancient Athenians, who put

Socrates to death because he did not co-operate with them in what they regarded as a helpful way. In common with every other man who has dared to lay a sacrilegious hand on the customs and traditions of his community he met with violent opposition. But was it Aristophanes, the conformist, or Socrates, the nonconformist, who was most helpful to his fellows? What is it China needs to-day so much as thinkers who can arouse the Chinese from the sleep of tradition and open their minds to truth? Surely it must be granted that that man confers the greatest benefits on his fellows who does most to influence them to live a rational life.

Must Education Conform to the Principles of a Given Civilization? — It may indeed be said that a system of education which is fundamentally at variance with the principles of a given civilization would not be tolerated within the sphere of that civilization. We know what would happen to an American who should teach his pupils that the only way in which they could make the most of life was by following the teaching of Confucius.

If it were entirely true that an education at variance with the principles of a given civilization must be futile, it is surely one thing for the philosophy of education to recognize that its protest against irrational methods and practices which are sanctioned by tradition and in harmony with civilization must be futile, and quite another for it to become the mere mouthpiece of civilization and of the traditions that underlie it.

But it is not wholly true. Reason is the only weapon with which the mind can combat error. If it is true that society will not permit to be taught in its schools ideas

entirely out of harmony with its civilization, it is equally true that it is possible to modify the school by modifying the character of the civilization upon which it is based. "A minority of one with truth on its side is an eventual majority." If truth is on one side and civilization on the other, he who sees what he believes to be the truth should teach it in the sure faith that the world will come his way in the course of time.

But, on second thought, it is evident that this may be conceived too abstractly. It is indeed true that the progress of society is conditioned upon the fact that there are individuals in it who rise above their environment. It is thus that the development, step by step, of the human race from its primitive state in prehistoric time to civilization has been brought about. The various arts and inventions which, on the material side, serve to register this progress are illustrations of this truth. Every one of them is the development of an idea first existent in the mind of an individual.

But to say that the progress of society depends upon individuals is to state only half the truth. Unless the community which constitutes the social environment of the individual approves of his new ideas, unless it adopts them, so to speak, they are without significance for it.

As Professor Baldwin says,[1] "The problem of the invention itself, considered as a factor in human progress, is quite different from the problem of the inventor, considered as a man. The invention cannot be an element in human progress unless it enter into the network of social relationships in some way. If it do not, it may be a thing

[1] Baldwin's Mental Development: Ethical and Social Interpretations, p. 172.

of great ingenuity and originality, but that only makes it a part of the problem of the origin of the man. It then loses its interest as a thing of social value."

The Educational Statesman. — This is only saying that the position of the educational statesman differs widely from that of the educational philosopher. While the latter endeavors to ascertain the end which under ideal circumstances education should seek to realize, and the methods which should be employed under ideal conditions in attaining it, the former tries to make the best possible compromise between truth and the assumptions underlying the civilization with which he is dealing. It is his duty to incorporate into the school as much of truth as society will tolerate. To act the part of a mere doctrinaire, to disregard public opinion and flout prevalent prejudices, would be to forget that social progress depends not merely on the propagation of new and fruitful ideas, but upon their entertainment and endorsement by society. The blunder of the doctrinaire is indeed much more serious than this. The man who seeks to force on society ideas for which it is not ready, which do such violence to its conservative instincts as to make acceptance of those ideas impossible — even if they are true — succeeds only in earning for himself the reputation of a "crank."

And this is the point of view from which the Report of the Committee of Fifteen should be judged. It discussed the question of educational values and courses of study for American schools. From such a standpoint, the character of American civilization, American government, American religious opinions must not be lost sight of. But if the educational statesman is to make the best terms he can for

educational philosophy, if he is to get all the truth in relation to education which society will tolerate into the school, he must know what the truth is. If, in a word, while so far adapting his courses of study and methods of instruction to the civilization of his country as to keep them in a general way in harmony with it, he is nevertheless not to lose sight of the ideals which he should seek to realize and of the methods which he should employ were society to give him a free hand, he must know what these ideals and methods are, he must know the ideals which the school should seek to realize if it had regard only to the interests of the growing human mind, and he must know what methods should be employed in attaining them. We are bound, then, to try to determine the end which education under ideal circumstances should seek to realize.

QUESTIONS ON THE TEXT.

1. State and criticise the end of education as conceived by the Committee of Fifteen.

2. What is the comparison between Socrates and Aristophanes intended to show?

3. Why will a minority of one with truth on his side be an eventual majority?

4. Illustrate at length the difference between the educational statesman and the educational philosopher.

5. What does Professor Baldwin mean by the difference between the problem of the invention and that of the inventor?

6. From what standpoint may the Report be defended?

7. Why cannot a man be an educational statesman without being an educational philosopher?

SUGGESTIVE QUESTIONS.

1. Why is it desirable to consider the end of education at all?

2. Do you think that most teachers have clear ideas on this subject?

3. What would happen if a man should seek to build a house without deciding what sort of a house he would build?

4. Do you think that results of the same sort are the consequence of attempting to teach without having clear ideas of what we wish to accomplish?

5. Who wrote the Report of the Committee of Fifteen?

6. Give examples from your own observation to show the necessity of educational statesmanship.

7. How did the superintendent of schools in the neighboring town decide upon a course of study?

8. Can there be any intelligent consideration of such a question that is not based on a clear perception of the end of education?

9. What is meant by educational values?

10. Can you determine the educational value of a subject if you have not determined the end of education?

11. What is a good school?

12. Can you answer that question if you do not know what the end of education is?

CHAPTER V.

THE END OF EDUCATION AS CONCEIVED BY MR. HERBERT SPENCER AND DR. DEWEY.

Education Preparation for Rational Living. — The end of education may be provisionally stated as preparation for rational living. This statement ought to be acceptable to all parties. For whatever the ends you have in view, you cannot reach them without the employment of reason. If you say with Plato that the nature of the vast majority of men makes it their duty to submit absolutely to the guidance and direction of a few highly trained minds, then such submission is rational, and the education that determines who the highly gifted few are and that disposes the many to submit to the few is preparation for rational living. If with Aristotle you hold that the incapacity of the majority makes it their duty either to be slaves of individuals or the servants of a community, then submission to such service is the rational thing for those who ought to submit to it. If with the same philosopher you maintain that contemplation, thought, reflection, is the highest thing in life, then you will hold that the training for this activity of those who are qualified for it is training which prepares for rational living. If with the Stoics you believe that the wise man is he who concentrates his attention upon himself, on his own moral development, then you will believe that a life in harmony with this conception is a rational life. If with Epicurus you contend that individual

happiness is the true end of life, then you will contend that rational living is living intelligently devoted to its realization.

If, with what seems to be the public opinion of our time, you hold that he succeeds best who accumulates most wealth, then you will hold that the education that best prepares men to make money is preparation for rational living. If with some society people you believe that "cutting a dash" — giving the finest dinners and the smartest receptions, wearing the costliest diamonds and the handsomest gowns — is the most desirable thing in the world, then you will believe that the education that makes this possible is preparation for rational living.

But if people of the most widely divergent ideas of education can agree in regarding it as preparation for rational living, it is evident that such a description has no value for science. Granting that the thing to do is to live a rational life, and the proper education that which prepares us for it, the question at once arises: What ends shall rational living seek to realize, and what is the education that will enable us to do it?

Mr. Spencer's Description of Complete Living. — Herbert Spencer has attempted to answer these questions in language which seems at first sight transparently clear. Education, he says, is preparation for complete living, and complete living consists in dealing wisely with one's mind and body, in training one's children and earning a livelihood intelligently, in performing one's duty to his family and society, and in making a wise use of one's leisure time. Now, satisfactory as this may seem to the casual reader, it really hides a host of difficulties. In the first place, a

number of the constituents of complete living, to use Mr. Spencer's phrase, mean absolutely nothing until we know the very thing which they profess to tell us. The end of education is complete living, we are told, and one of the things we must do in order to live completely is to train our children wisely. But how can you train your children wisely unless you have a true ideal of life, a true conception of that which really makes it worth the living? Do you think that intelligent selfishness is the only wise thing in life? Then you will train your children wisely, from your point of view, when you have done all you can to discourage any altruistic "nonsense." If you think that the making of money is the fundamental matter, then you will regard the training which disposes them to make everything subordinate to it and employ successful means in acquiring it as the wisest possible training. In order to live completely, also, we must earn a livelihood. But by what principles are we to be guided in doing it? Shall we adopt the code of many business men and say that any method is good which accomplishes its purpose and enables us to avoid the clutches of the law? Shall we in earning a livelihood seek to concentrate our attention on the service we are trying to render to society, or shall we regard our business as a sort of economic prize-fight in which our duty to ourselves obliges us to knock out our competitors without regard to the consequences to themselves and their families?

I must also perform my duty as a citizen in order to live completely. But that, again, is a phrase that does not mean very much until one knows what his duty to his country requires. Shall I say, "My country right or wrong"? And if you tell me that I am only to uphold my country when it is right, that an important part of my duty as a

citizen consists in the supervision of my country's conduct so that I may by my vote call to account those who are responsible when it goes astray, I need to know the standard which you would have me apply when I am dealing with my country. Is the golden rule for individuals, not for nations? Is it right to bully a weak nation like Mexico, and goad it to war, if the weaker nation has a lower civilization than the stronger, and if the result of the war will enable the powerful nation to enforce its civilization on a part of the territory of the weak one? Is it the duty of civilized nations to extend their civilization over less civilized countries, even at the cost of war, as Aristotle contended that it might be their duty to go to war in order to compel the citizens of less civilized countries to occupy their proper positions as slaves? Is it the first duty of a man in office to promote the interests of himself, then of his personal friends, then of his party, then of his State, then of his section, and last of all, if he has any energy left over, of his country as a whole?

Conflict of Duties. — Let us waive these difficulties, let us suppose that we know what principles should guide us in training our children and earning a livelihood, and in our work as citizens; there yet remain other questions which must be answered before one is in a position to live his life according to knowledge. I am not earning a livelihood when I am training my children, nor am I, except in an indirect way, performing my duty as a citizen. When these duties conflict, by what principle am I guided? Manifestly this question cannot be answered precisely. We feel that the street-car conductor who was obliged to work such long hours that his children scarcely knew him

acted wisely if that was the only occupation in which he could earn a livelihood. But a lawyer who neglects his family in order to employ all his waking hours in swelling an already sufficient income deserves our censure. The mother who should neglect the training of her children in order to devote herself to missionary work would blunder seriously if not criminally. But it is equally certain that the emergencies can rarely arise which would justify us in the complete neglect of all civic and social obligations.

Nevertheless, however sure we may be in extreme cases, there are numerous instances on the border line when the most thoughtful person must be in doubt. A pronounced blue and a pronounced green are very easily distinguished, but who shall say at what point in the spectrum blue becomes green, or green blue? In like manner, it is clear that a father should devote a certain amount of attention to the training of his children, and some time to his duties as a citizen; but who can say how much time he shall give to each, or when the one duty becomes so urgent that the other must give way to it? Perhaps Socrates was right in neglecting his family for the sake of his fellow citizens, but we feel that nothing short of the genius of Socrates would justify such a course.

The Development of Character as the End of Education. — Dr. Dewey says that the end of education is the development of character, and by character he means a perception of the interests of society, and the power and disposition to promote them. Whoever sees the true interests of society and has the power and disposition to promote them, he and he alone, says Dr. Dewey, deserves to be called educated.

Now in criticising this definition I do not wish to be understood as disagreeing with it. On the contrary, I wish at the outset to say that I regard it as asserting by implication a very important truth: that the true interest of the individual and that of society are identical. My criticism of the definition is that it does not tell us in what the interests either of the individual or of society are to be found. To be told that the interests of the individual are the same as those of society tells me nothing unless I know what the interests of society are. To be told that the interests of society are the same as those of the individual leaves me entirely in the dark unless I know what the interests of the individual are. The teacher has to deal with a lot of psychological raw material, and he wishes to know what he shall try to make of it, toward what ideal he shall seek to have it shape itself. Is it not evident that the one thing that he needs to know is in what the true interests of the individual lie? And is it not equally clear that you are giving him no positive conception when you tell him that the interests of the individual consist in such a development of his powers as will enable him to see and respond to the interests of society? I say, no positive conception; there is a negative idea of very great value in Dr. Dewey's definition. He says that the material, selfish view of education is not the true one: so far it is good. But when we ask for a positive statement of the end of education, his definition gives us nothing but words. It tells us that it consists in such a training of the individual as will promote the interests of society. But it does not tell us in what the interests either of the individual or of society consist.

QUESTIONS ON THE TEXT.

1. Show the indefiniteness of the statement that education is preparation for complete living.

2. In what does the vagueness of Spencer's statement consist?

3. What does a father need to know in order to train his children wisely?

4. Show that Mr. Spencer's formula does not impart that knowledge.

5. What is meant by conflict of duties?

6. What does Dr. Dewey mean by character?

7. Why is his conception of the end of education unsatisfactory?

8. What valuable negative idea is contained in it?

SUGGESTIVE QUESTIONS.

1. Would it help a teacher to tell him that he ought to seek to train perfect men and women, and, if not, why not?

2. Would it help him to tell him that a perfect man takes proper care of his body and mind, trains his children, and performs his duty as a citizen intelligently, and uses his leisure time wisely?

3. Does a man know what he ought to try to make of himself when he knows that he cannot be what he ought without having the interests of society at heart?

4. Is it possible for you to have a clear opinion as to the interests of society until you have reached a clear opinion as to your own interests?

5. What *are* your interests?

6. Show that Mr. Spencer and Dr. Dewey have made the same mistake.

CHAPTER VI.

THE TRUE END OF EDUCATION.

In view of the conclusions reached in the preceding chapter, it would seem that an attempt to give some sort of scientific basis to the work of education must of necessity end in failure. If a work is to rest on a scientific foundation, it is apparent that its object must be determined with absolute definiteness; but the precise determination of the end of education seems to be involved in almost hopeless difficulties.

The Unclearness of the Fundamental Conceptions of Science.— But there are few more remarkable things in the world than the fact that great results are constantly being achieved with very poor tools. While it would seem to be self-evident that there can be no such thing as science unless the ideas that lie at its foundation are definite, it has been shown again and again that these ideas are woefully lacking in definiteness. We seem to know what we mean when we use the terms space, time, matter, motion, substance, cause, until we begin to reflect upon them. But the more we consider them, the more we are convinced that ultimate scientific ideas cannot be precisely determined. Nevertheless, while the metaphysician and the logician are contending about the nature of the tools which science is obliged to use, the latter slowly piles discovery on discovery, thus giving a practical demonstration

of the fact that it is able to use the tools at hand in an effective way.

In like manner, although the teacher may not have an accurate notion of the purpose of education, it will be admitted that a discussion which diminishes by ever so little the indefiniteness of his ideas will decrease his inefficiency. Admitting, then, our inability to reach preciseness, let us see what can be done in the way of making our conception of the end of education more definite.

Conclusions as to the End of Education not Susceptible of Proof. — First of all, it behooves us to inquire whether there are any things in the world that are absolutely good — good, that is to say, not as means to ends, but in and of themselves. In considering this question, it must be borne in mind that, in the nature of the case, it is not susceptible of proof. The very fact that a thing is assumed to be good in and of itself involves the necessity of assuming it without proof, either on the testimony of one's individual consciousness or on that of the world in general. For a thing which could be proved to be good would follow as a logical consequence from some higher good — would be good, not as an end, but as a means to an absolute good. If, for example, pleasure is assumed to be an absolute good, then anything which ministers to pleasure will be a good because of its relation to pleasure — will be a mediate, a relative, not an absolute good. Evidently, then, in endeavoring to ascertain what the absolute good or goods are, our method is determined for us by the very nature of the inquiry. We must investigate the consciousness of the world, and then submit the answers we receive to the scrutiny of our individual consciousness.

It may not be out of place here to point out that the method of investigation which the nature of the subject prescribes is by no means singular. Professor Ormond has shown that all the things we seem to ourselves to know may be put in one or the other of three classes: things known through lower immediacy, things known through mediacy, and things known through higher immediacy.

Things Known Through Lower Mediacy. — As examples of the first class we may cite our knowledge of divers states of consciousness, of the external world, and of the axioms of mathematics. All men know intuitively the various pleasures and pains they experience, the existence of some sort of external reality, and the truth of a proposition, such as, A straight line is the shortest distance between two points. Since they are known immediately, not as the result of processes of reasoning, they are examples of things known through immediacy. And since in order to be known they do not require any special development on the part of the individual or of the society which constitutes his social environment, they are illustrations of things known through lower immediacy.

Things Known Through Mediacy. — What we know through mediacy includes everything that we have learned through processes of reasoning, whether inductive or deductive. Not merely the conclusions of science, but those which we reach from day to day in the performance of our ordinary pursuits, and in our observations of men and things, are examples of this class.

Things Known Through Higher Immediacy. — If we make a survey of the beliefs by which our lives are guided, we shall find that some of the most fundamental and far-reaching of them cannot be twisted so as to fit into either of these classes. Every normal American, for example, believes in the practical universality of law, and in the reality of distinctions of right and wrong, which should govern man as man in all his dealings with his fellows. But these beliefs are, so to speak, late achievements of the human race. They are a part of the social inheritance of civilized man, a part of the system of beliefs which the growing mind absorbs from society and which it finds constantly confirmed by its experience. But they differ from the first class above mentioned in that they are entirely unnecessary to the mature mind as such. It is inconceivable that a human being could ever have been in doubt as to the reality of his pleasures and pains, and as to the existence of some sort of external reality. And that only amounts to saying that the very nature of the mind is such that it must accept these things as realities. But this is far from being the case with the class of beliefs we are considering. For not only is it possible to suppose a mature and powerful mind not believing in the universality of law and in the reality of ethical distinctions which should govern man as man in his dealings with his fellows; we are taught by anthropology that, as a matter of fact, these beliefs come late in the scale of human development. We know that even now they are held only by the most highly civilized peoples, and that within the historic period they were not entertained by the most advanced peoples. Even Plato, the man who makes such "havoc of our originalities," believed that right and wrong were one thing

between Greek and Greek, and another between Greek and barbarian.

Having admitted that the reality of duty and the universality of law which I have cited as examples of higher immediacy are believed by civilized men, not by thinking them out, but because those things have become established conventions, it may be urged that, in the last analysis, there is no difference between those beliefs and beliefs of the second class; that, as we accept them on the authority of society, precisely as we do the Copernican theory, society, or some member of it, really originated them in the same way that Copernicus evolved his theory.

An adequate reply to this objection would involve an excursion into the domain of metaphysics which cannot here be undertaken. I must content myself with pointing out that while it is easily conceivable that a normal mind may not entertain those beliefs which we have been considering as examples of higher immediacy, it is impossible to imagine a man, in howsoever low a stage of development, as not having conceptions which, when logically developed and freed from all inner contradictions, would lead to those beliefs. A man without any belief in law would be unable to profit by experience. That fire once burnt him, that water once quenched his thirst, that food once nourished him, would constitute to his mind no reason for believing that these causes could be depended on to produce the same effects. Such a being could not live in the world. Nature would crush him utterly and remorselessly.

In like manner, it is impossible for man to live alone, and he cannot live with his fellows without some sort of ethical creed. We sometimes say that the hand of this or

that man is raised against all his fellows. Such a statement is wide of the truth. There is always some one, generally some group of men, with whom the most hardened man considers himself under obligations to keep faith. We all know the meaning of the proverb, "There is honor even among thieves." What we need to note here is that the proverb not only states a fact, but illustrates a profound sociological truth. Man can exist, as Plato long ago taught, only provided in his dealings with some of his fellows, at least, he assumes that there is such a thing as right. The bad man of whatever type — criminal, corrupt politician, dishonest business man — will be found, as a rule, to derive all his power from the fact that he is not wholly bad, from the fact that there is always a larger or smaller group to whom he feels himself "in honor bound." An utterly bad man is a man with a minimum of power for evil, a man whom society is sure to hound to destruction sooner or later.

We see, then, that the difference between the attitude of what we may call prehistoric man and that of the highest product of civilization towards the beliefs which we have been considering is this: the former believed in law as governing some of the events which came under his observation — fire always burns, food always nourishes; the latter believes in law as coextensive with the universe. The former believed in ethical distinctions as holding, first, between the members of his family, later as applied to his tribe or clan, and later still as applied to his city or state. The latter believes in those distinctions as holding between man and man. In other words, the slow evolution and growth of society have enabled it to make explicit and universal some of the beliefs which were held in an

implicit, particular form by primitive man; and these beliefs, become explicit and general, are examples of higher immediacy.

All this may seem an unnecessary digression. It has been entered upon because the opinion is prevalent among educated men that all of their beliefs are the results of processes of reasoning. To say to such men that they are expected to believe certain things without proof seems an insult to their intelligence. As to a business man it would seem inconceivably absurd to be asked to give something for nothing, not as a matter of charity but as a matter of business, so to these men it seems "unscientific" to believe what they cannot prove: and to be unscientific is to be an intellectual barbarian. This digression will have accomplished its purpose if it succeeds in suggesting that after all there was a profound truth expressed by St. Anselm when he said, "I believe that I may know" — if it succeeds in making clear the fact that though what may be proposed as the ends of education and of life are not matters that are susceptible of proof, we may nevertheless be bound as rational beings to accept them as true.

One of these ends may be illustrated by the following passage from the Greek poet Euripides:

"Happy is he who has learned
To search out the secret of things,
Not to the townsmen's bane,
Neither for aught that brings
An unrighteous gain.
But the ageless order he sees
Of nature that cannot die,
And the cause whence it springs,
And the how and the why.
Never have thoughts like these
To a deed of dishonor been turned."

Intellectual Activity an Ultimate Good. — The meaning of this is unmistakable: there is one thing, at any rate, which is good in and of itself — intellectual activity, searching out the secret of things, contemplation of the ageless order of nature and the causes that originated it. The philosopher Anaxagoras, who, when asked what made life worth living, answered, "The contemplation of the heavens and of the universal cosmic order," bore testimony to the same fact.

The Platonic Socrates expressed the same conviction when he told his fellow citizens upon his trial that he preferred death rather than life without inquiry and speculation; that if they would let him go free if he would discontinue it, he would reply: "Men of Athens, I honor and love you; . . . but while I have life and strength I shall never cease from the practice and teaching of philosophy, exhorting any one whom I must after my manner, and convincing him, saying, 'O my friend, why do you, who are a citizen of the great and mighty and wise city of Athens, care so much about laying up the greatest amount of money and honor and reputation, and so little about wisdom and truth and the greatest improvement of the soul?'"

Plato, in making the supreme good of life to consist in wisdom, and this in the contemplation of those eternal essences which make the existence of all particular things possible, gave utterance to the same truth.

So also Aristotle: "Of all activities," he says, "theorizing is the most delightful and the best; so that if God always has such happiness as we have in our highest moments, it is wonderful, and still more wonderful if he has more. Of all virtues, this is the most self-sufficing;

for while, in common with every other virtue, it presupposes the indispensable conditions of life, wisdom does not, like justice and temperance and courage, need human objects for its exercise: theorizing may go on in perfect solitude. . . . All other pursuits are exercised for some end lying outside themselves — war entirely for the sake of peace, and statesmanship in great part for the sake of honor and power; but theorizing yields no extraneous profit great or small, and is loved for itself alone."

Likewise Wordsworth when he said: "To me the meanest flower that blows can give thoughts that do often lie too deep for tears." Thus, too, George Eliot when, in her first story, she makes one of her characters say: "Depend upon it, my dear lady, you would gain unspeakably if you would learn with me to see some of the poetry and the pathos, the tragedy and the comedy, lying in the experience of the human soul, that looks out through dull gray eyes, and that speaks in a voice of quite ordinary tones."

Witness, finally, the modern scientific specialist who is indifferent to money, and sometimes neglectful of his family, in order that he may devote himself the more to his researches. Like Lavoisier, who asked for a postponement of his execution that he might perform certain experiments, he is inclined to value life itself only as it gives him an opportunity for investigation.

Evidence of the conviction that what Aristotle calls the theorizing activity is at least one of the absolute goods is found in quarters where we would least expect it. Few things are more pathetic than the struggle between the piety of the early Christian and his love of knowledge. Excusing himself to himself for his devotion to the scraps of knowledge that circulated under the name of the seven

liberal arts, on the ground that they were essential to the ends of piety — arithmetic, in calculating Easter, and so on — he yet shows in unmistakable ways the ineradicable love of knowledge in and for itself. Even the modern business man, consumed, as he often is, with his passion for wealth, shows, by the attention which he bestows upon his morning paper, that there is something in his experience which would enable him in a quiet hour to understand and appreciate the scholar's thirst for knowledge. And the consciousness of every man bears testimony to the truth affirmed by all of these witnesses. Every one of us knows, and knows with a certainty that needs no aid of logic, that thought, the play of the mind about the facts of the world and of life, is at least one of the things that make life worth living.

This, then, is one of the ends which education shall set before itself: the development of the power to think — not simply as a means to other ends, but because the exercise of thought is intrinsically good, a thing to be desired for itself alone.

The Appreciation of Beauty Another Ultimate Good. — Is there anything else which we have a right to pronounce good in and of itself? Surely. Recall the day when, late in August, you took a drive through the country along the shore of a river sleepily winding its way towards the sea, its banks guarded by tall old sycamores whose leaves here and there gave a hint that autumn was coming, and as your eye took in the panorama that spread itself out before you — grazing sheep, fields of yellow corn, brooks hurrying to the river through groves of green trees, — and as your ear drank in the melodies of the country sounds — tinkling

cow-bells, humming insects, songs of birds, voices of children at play, — perhaps those beautiful lines of George Eliot passed through your mind:

> "It seemed the light was never loved before.
> Now each one says, 'Twill go and come no more;
> No budding branch, no pebble from the brook,
> No form, no shadow, but new dearness took
> From the one thought that life must have an end."

Recall all this and, say, did you not find that it was good? Surely the beauty of nature, the beauty of art — whether in painting, sculpture, architecture, music, or literature, — beauty of any kind, gives life intrinsic value. For him who has the eye to see it, beauty, like thought, has an intrinsic right to a place among the realities of the world. He who demands to know why our children should be trained to an appreciation of the beautiful only proves by his question that he does not know what beauty is, that it is to him a mere name.

Moral Character Another Ultimate Good. — Is there any other absolute good discernible? In the passage already quoted Aristotle says that theorizing activity does not require the co-operation of others, and the same may be said of the appreciation of the beautiful. But there is a third absolute good that education should seek to realize. We may call it the moral good — which depends chiefly, if not entirely, on our relations with other men. It consists in the practical recognition of the fact that the rights of others have the same validity as ours, and that we cannot trespass upon them without losing the best things of life. The man who questions this only proves that he has had no experience of this good. To him who yields himself to it

it speaks in terms of such persuasiveness, and at the same time of such authority, as to leave no doubt of its right to the homage which it receives.

Friendship and Domestic Affection Ultimate Goods. — Is there a fourth absolute good at which education should aim? Students of Aristotle have noted his fine distinction of true and false self-love, the latter consisting in the attempt to secure for one's self the greatest share of money, honor, and bodily pleasure; the former, in the attempt to secure for one's self the absolute goods of life. They have also observed that in the opinion of the Stagyrite true self-love will lead a man to treat a friend as another self. The good man, the true lover of himself, may even give up wealth, position, life itself for the sake of his friend, in order that he may realize thereby the greatest good of life. From this description it is evident that friendship, that "partnership of speech and thought in which the distinctive life of man consists,"[1] was regarded by Aristotle as one of the things that have absolute worth, one of the things that make life worth living. Was Aristotle right? No one will doubt it who knows the meaning of friendship.

Can we find any other absolute good? Thousands of admirers of Socrates have asked themselves in perplexity and pain whether even for the sake of the great service which he rendered to humanity he had a right to neglect his family. And few readers of *Phædo* have doubted that the classic beauty of the Platonic Socrates as he is presented in that immortal dialogue is marred by his lack of regard for his family. Throughout the universe these feel-

[1] Educational Review, 1901, p. 249.

ings are only the expression of the universal feeling of humanity — that domestic affection fills a place in human character and human life that nothing else can take.

Sympathy, also, an Absolute Good. — Sympathy, also, is one of the things that give absolute value to life. It is indeed true, as Wordsworth said, that

> "Men live by admiration, hope, love;
> And even as these are well and wisely fixed,
> In dignity of being we ascend."

But the human brute that sympathizes with his fellow brutes is less of a brute than one who does not. What he needs for his transformation and uplifting is, not less sympathy, but a change in its direction. And we feel that the value of sympathy is not exhausted by the fact that it has a close relation to action. It is indeed a notorious fact that sympathy often leads to unwise action. The existence of the tramp profession, if the expression may be pardoned, would be impossible, if it were not for misdirected sympathy. But all know that if the mischief is to be remedied without inflicting any injury on society, it must be, not by decreasing sympathy, but by increasing intelligence. The man who is conscious of a strong impulse to help the undeserving, but who refrains from doing it because he knows he is thereby putting a premium on shiftlessness and degradation, is surely a better type of man than he who has no impulse to help them.

Loyalty an Ultimate Good. — We cannot undertake to enumerate all the things of the mind that give value to life, but one more may be mentioned — loyalty. Froude tells us that "between the lords [of the Middle Ages] and

their feudatories there were links of genuine loyalty which drew high and low together as they have not been drawn since the so-called chains have been broken. . . . No fact of history is more certain than that the peasants born on the great baronies looked up to these lords of theirs with real and reverent affection. . . . Custom dies hard, and this feeling of feudal loyalty has lingered into our own times with very little to support it. Carlyle once told me of a lawsuit pending in Scotland affecting the succession of a great estate of which he had known something. The case depended on a family secret known only to one old servant, who refused to reveal it. A Kirk minister was sent to tell her that she must speak on peril of her soul. 'Peril of my soul!' she said. 'And would ye put the honor of an auld Scottish family in competition with the soul of a poor creature like me?'" I think the thrill of admiration that we experience when we hear such a story is the mind's spontaneous recognition of the fact that loyalty, however misguided, is one of the things that enrich life.

It is, then, things of the mind alone that have absolute worth, that make life worth living. And these things of the mind are (1) what Aristotle calls the theorizing activity, the apprehension of an isolated fact in wider and wider circles of relations, until to the poetic temperament the "meanest flower that blows suggests thoughts too deep for tears," and eyes and tones that would otherwise be dull and commonplace become weighted with the tragedy and comedy of life; (2) the appreciation of the beautiful; (3) devotion to duty; (4) friendship; (5) domestic affection; (6) sympathy and loyalty. And it is the realization of these things which education should set before itself as the ultimate aim.

Comparative Value of the Various Ultimate Goods of Life. — To attempt to ascertain the comparative value of these various elements would be for the most part an idle and profitless discussion. The truth, even if it were attainable, and it probably is not, would be of questionable value for education. But there are two questions in this connection upon which the philosophy of education must decide: Is the development of the intellect, of the power to apprehend the relations between things, of more importance than the development of character? Is the dogma of art for art's sake true — may true art prosecute its aim without regard to ethical considerations? Manifestly, if these two questions are answered in the affirmative the primary aim of the teacher must be the intellectual and æsthetic development of the pupil, making the formation of character a matter of secondary importance.

It is more than doubtful whether arguments can exert any influence on the decision which any individual may make as to which of these — intellectual, æsthetic, or moral development — shall be the primary aim of his own life. A man who through education or heredity is willing to do violence to his sense of duty for the sake of intellectual or æsthetic culture is joined to his idols; there is nothing to be done but to let him alone. But if he admits that all these things have an intrinsic value, if he only differs with you as to which should have the preference in case of a conflict, then he can be forced to admit that all the rest of the world should be regulated by principles the value of which, in his own case, he refuses to acknowledge. For if intellectual and æsthetic culture, loyalty to duty, sympathy, friendship, and domestic affection are good things, then the more of them the better: every addition

to them is an increase of the spiritual wealth of the world. But the only one of these principles whose one aim is the increase of spiritual wealth is loyalty to duty. Make intellectual culture, or æsthetic culture, or friendship, or sympathy, or domestic affection the element of surpassing worth, and the enlargement of the goods of life, increasing the number of people who possess them, becomes a matter of secondary and incidental importance. You want your friends and the members of your family to have the things which seem good to you because of their personal relation to you; for the cultivation of your own intellectual and æsthetic nature requires the contact of your mind with other cultivated minds. But loyalty to duty makes you regard the goods of other people as of equal importance with your own, or, rather, modifying the fine saying of Aristotle, makes you see that the attainment of your own highest good depends upon your doing what you can to help others to attain theirs. Evidently, then, the man who refuses to admit that he is bound to sacrifice an iota of his intellectual or æsthetic life for the sake of other men is logically bound to concede that every one else should. He refuses to admit it in his own case because the realization of the goods of life by other men is as nothing to his consciousness when it comes into competition with the things which seem to him to be of supreme worth; he is bound to concede it in the case of the rest of the world because, when his own personality is not in question, the good of one abstract man, so to speak, must appear equal to that of another, and the greater the number of men who realize the condition that gives life intrinsic value the greater the wealth of the world.

The ultimate aim of education, then, should be to

promote the intellectual and æsthetic culture, enlarge the sympathies, strengthen and purify the friendships and domestic affections of those who are being educated, and to make devotion to duty the governing principle of their lives.

A Standard for Judging Institutions. — This gives us a standard by which not merely schools but all institutions whatsoever may be judged. The one question the answer to which determines the right of an institution to be is: Does it help men think more clearly, feel more deeply, act more wisely? This is our only criterion for determining the value of civilization. If civilization is better than barbarism, the primary reason is not that it increases the amount of wealth per capita. It is that civilization has a greater tendency to make men clear-headed, appreciative of beauty, responsive to the calls of duty and affection.

The world has always been prone to forget the end in the means. It has no difficulty in realizing that in any kind of manufacture it is the product which is the essential thing. We would not permit an architect to distract our attention from an ill-planned house by insisting that his drawings were beautiful. But in the midst of the wonderful increase in the tools of civilization, we find it hard to bear in mind that the important thing is the product to which all these things must minister if they are to have any value, and that product is man. We are certainly making marvellous improvements in various arts; are we making corresponding improvements in the art of living?

Common opinion to the contrary notwithstanding, it is precisely this that the school must undertake to do if it is to discharge its obligations to society. Its task is to

make its pupils masters of the art of living. In order to perform it, the school must rid its pupils of what Plato called the lie in the soul, self-deception, as to the ultimate goods of life. It must make them realize that not in their wealth, not in their social position, not in their reputation, but in themselves is to be found that which makes life a success or a failure.

It is not of course intended that these things are to be taught to little children, or to students of any age as matter to be memorized. They are to be taught, not as concepts, but as ideals; to be taught in such a way that they may become the underlying forces of life.

QUESTIONS ON THE TEXT.

1. What are some of the fundamental conceptions of science?
2. What do you understand by proof?
3. Why cannot conclusions as to the end of education be proved?
4. State and illustrate what Professor Ormond means by "lower immediacy," "mediacy," and "higher immediacy."
5. What did Aristotle mean by theorizing activity?
6. Mention the other ultimate goods which education should seek to realize.
7. Which of the ultimate goods of life must take precedence of the rest, and why?
8. Show that our conclusions furnish a standard by which institutions may be judged.

SUGGESTIVE QUESTIONS.

1. Show that in the very nature of the case proof presupposes something which is known without proof.
2. What do you understand by the phrase, "end of education"?
3. Show that the end of education must be incapable of proof.
4. Can you mention any changes that would have taken place in the schools of the Middle Ages if the end of education had been clearly understood?

5. Do you think that American public opinion correctly apprehends the true object of education?

6. If the people of your town should come to believe what the text teaches as to the purpose of education what changes would they require in your school?

7. Do the conclusions of the text enable you to determine in what national greatness consists?

CHAPTER VII.

EDUCATION AS PREPARATION FOR RATIONAL LIVING.

Education and Public Opinion. — At this point the educational statesman takes up the argument. All this, he says, would be very well in the garden of Eden, in a world where men were like the lilies of the field. But in our workaday world men have to earn their living by the sweat of their brows, and the public insists that their education shall prepare them for it. And though people in general may be mistaken as to what genuine advancement in life means, we must take their opinions into account, else we shall find that the schools we would establish will lack money for their support, and those we open will be without pupils.

Blunder of the Old Greeks. — The educational philosopher finds no difficulty here. Insisting so strenuously on the ultimate end of education, he must not lose sight of the mysterious union of mind and body, and the consequent necessity of training with that in view. The fundamental blunder of the old Greek thinkers was their tendency to treat education as though we had no bodily necessities to provide for. As the modern business man inclines to regard education as purely a means of making better provision for the body — clothing it with finer garments, feeding it with richer food, sheltering it with more beautiful houses — so the old Greek was wont to

look upon education as though it had to deal with detached souls. And while the former's opinion is the more fundamentally false, a real philosophy of education must admit that both views are one-sided.

This statement would be true if, in providing for one's needs, one had to consider himself alone. But it is in earning one's living that one finds his best opportunity to render effective service to society.

A constantly increasing number of men consider the earning a living as incidental to the service they are rendering society. Their bodies must be provided for, of course, but so must their souls. The higher, intellectual life, however, attains its supreme worth only as it is employed in rendering useful service to society. The ultimate reason, then, for work is that by means of it we find our best opportunity to give expression to our noblest impulses. The education, therefore, that prepares us to do it in this spirit, and to do it well, ministers to our best self.

We are bound all the more rigorously to take this view since from another standpoint it is evident that these bodies of ours are not such mistakes after all, and the necessity of making provision for them not the curse that it seemed. To Greeks like Plato and Aristotle they seemed a sort of blunder, and the work of providing for them so essentially degrading as of necessity to cut off those engaged in it from participating in the duties and privileges of citizenship. But we have learned that doing whatever we have to do honestly and well brings peace, "as much as seems possible to the nature of man; that, ascending from lowest to highest, industry wisely followed brings happiness. Ask the laborer in the field, at the forge, or in the mine; ask the patient delicate-fingered artisan, or the strong-armed fiery-hearted

worker in bronze and in marble, and with the colors of light; and none of these who are true workmen will ever tell you that they have found the law of life an unkind one — that in the sweat of their face they should eat bread till they return to the ground." [1]

Respect, then, for any kind of useful work, preparation to do it well, is a part of the equipment of life even from the standpoint of the philosopher. In the solution of the problems connected with our work our theorizing activity finds large scope for exercise, and in the conscientious performance of it our loyalty to duty finds its most beneficent expression, and our lives the highest attainable peace.

Mr. Spencer's Theory. — All the other elements of Mr. Spencer's conception of complete living become clear and definite in the light of the ultimate aim of education. To live completely, he says, we must know how to treat the body. Why? Because health is an end in itself? No, but because we are hampered in our efforts to attain the great ends of life without it. Without health we can neither think, nor appreciate beauty, nor feel affection for our friends and family, nor work beneficently for our fellows as we otherwise might.

From this point of view, also, we are able to see the true meaning of the phrase, "in what way to treat the mind." We treat the mind most wisely when we help it most effectively to ascend in "dignity of being." Now we know to what end we should train our children: to the end that they shall so realize that the best thing in life is mental wealth as to strive supremely to attain it.

[1] Ruskin's Sesame and Lilies, p. 155.

Dr. Dewey's Theory.—Now also we are able to see the truth and limitations of Dr. Dewey's theory. We know now that the true interests of society consist in the increase of precisely this "spiritual wealth,"[1] and we understand that we must learn how to contribute to it, and do our utmost to promote it, because in this way only can we attain to a realization of our best self. Aristotle was wiser than Dr. Dewey. The Greek philosopher saw that no deeper reason for any course of activity could possibly be assigned than that through it only could one's true self find expression. Dr. Dewey writes as though the promotion of the interests of society were an end in itself; as though the interests of society could be made intelligible until one understands the interests of individuals, as though the interests of society could be of ultimate significance until one has found the ultimate value in the life of the individual.

From this standpoint, also, we are able to see the truth and error in the contention of the educational Philistine. "Give us the three R's," he says; "they are the essential things." They certainly are essential. The first error of the Philistine consists in supposing that nothing else counts; the second, in the assumption that the life to which they minister is the life of the body. We want the three R's for the sake of the mind, and we want everything else that can contribute to its well-being. The pagan Plato saw that religion, art, science, literature, government, life itself may be utilized in the development of the growing mind.

The Constituents of Rational Living: Knowledge.—It will, perhaps, serve to give greater definiteness to our con-

[1] The phrase is George Eliot's.

ception if we note the constituents of the complete or rational life for which education is to prepare us. The first one, manifestly, is knowledge. All the goods of the world, whether ultimate or subordinate, are attainable only by mediate processes. Health, for example, is a good; but in order to regain it, if we have lost it, we must do and leave undone a great many things. What shall we do? what shall we avoid? Evidently without some knowledge of the laws of health we are absolutely in the dark. And so it is with everything else that we would accomplish. Whether we would teach school, or build a house, or manage a farm, or conduct a bank, or carry on a government, without knowledge we can do nothing.

Intellectual Power.—But if we have knowledge and knowledge only, we are almost helpless. We can acquire a knowledge of the laws of health from books and lectures. But how much and what to eat, how much exercise and how much sleep we require, no one can tell us. We learn those things through reflection upon the laws of health and through our own experience. We can learn from teachers and books the laws of the mind. But laws of the mind will not apply themselves. No amount of knowledge of them will tell us what we shall teach this particular child at this particular time, or how we shall discipline him when he goes astray. We can learn, also, from books and lectures the facts of history and some of the facts that underlie them. But this knowledge alone will not enable any one to say with certainty whether it was wise for the United States to acquire the Philippine Islands. One's opinion on that subject must be the result of reflection. In a word, intelligent, rational living requires not only

knowledge, but reflection, and that of a kind which is only possible to a well-trained mind.

A Cultivated Emotional Nature. — Once more: it is not enough to have the knowledge bearing upon any department of activity, and to be able to apply the laws that underlie it to particular cases. As the late Thomas Davidson put it: "It is perfectly obvious as soon as it is pointed out, that all criminal life is due to a false distribution of affection, which again is often, though by no means always, due to a want of intellectual cultivation. He that attributes to anything a value greater or less than it really possesses in the order of things has already placed himself in a false relation to it, and will certainly, when he comes to act with reference to it, act criminally." We shall realize at once what Davidson meant if we recall the methods employed by many men to get rich. Why do they do it? Because they care too much for wealth; because they put upon it a valuation far in excess of what it really possesses.

An Effective Will. — But a man may have knowledge, a disciplined intellect, properly trained emotions, and still not act intelligently. Take the case of Coleridge. He certainly lacked neither knowledge nor the power to apply it, and there is no evidence to show that he did not estimate the goods of life at their proper worth. But the weakness of his will prevented him from holding the values of things steadily before his mind and governing his action accordingly. These four, then, knowledge, discipline, a true estimate of the values of things, an effective will, are the constituents of rational living. He who ap-

prehends the great ends of life, who knows the facts in those departments of knowledge in which he is obliged to act in order to attain those ends, and the principles that underlie them; who has the ability to apply those principles to the various cases that present themselves in the course of his daily life; whose emotional nature is so trained that his love for things is in proportion to their proper worth, and whose will impels him to control his actions accordingly—he alone is the educated man, for he alone is capable of living rationally.

QUESTIONS ON THE TEXT.

1. What blunder did the old Greeks make?
2. In what sense may the earning of a livelihood be regarded as incidental to the service of society?
3. What is the meaning of the quotation from Ruskin?
4. Show that the various elements of Mr. Spencer's conception of complete living become clear in the light of our conclusions.
5. State and illustrate the various constituents of rational living.

SUGGESTIVE QUESTIONS.

1. Do you know any men who render important services to society without compensation?
2. What statement made in the text do they illustrate?
3. Can you cite examples from your own observation which prove the truth of Ruskin's opinion?
4. Mr. Spencer writes as though the only knowledge needed to train the mind wisely is the knowledge of psychology; is he right?
5. How does it happen that so many parents and teachers who are ignorant of psychology have considerable success in training children?
6. The mind of every teacher, according to the classifications of psychology, consists of intellect, sensibility, and will; which of these have to do with the education of the pupil in Mr. Spencer's opinion?
7. In what way is a child affected by knowing what his father likes and dislikes?
8. How do you account for this?
9. Apply your conclusions to Mr. Spencer's theory of education.

CHAPTER VIII.

THE END OF ELEMENTARY EDUCATION.

"LIFE is so strange," says an old song; and few things about it are stranger than the conflict between the demands of the intellect and the exigencies of practical life. The theoretically desirable is so rarely the practically possible! Theoretically it would seem that we ought to spend our lives in reflection, the contemplation of beauty, and so on; practically we have to measure calico, wash dishes, and hoe corn. Theoretically it would appear that every one ought to have money and capacity enough to get a thorough university education; as a matter of fact from ninety to ninety-five per cent of our children never get beyond the elementary school, and the remarkable thing is that the capacity and the pecuniary circumstances of many of them probably make it undesirable for them to go farther.

Material and Intellectual Needs. — This fact must exercise a controlling influence in determining the purpose of elementary education. Mr. Booker T. Washington wisely insists that the crying need of his race is industrial education, an education that will improve the material condition of the negro. If a conflict could arise between the material and the spiritual needs of our elementary pupils, if it were necessary for us to choose between a sacrifice of the training that looks toward the earning of a living and that which lays emphasis on the cultivation of the mind, it

would be necessary for us to give up the latter, paradoxical as it may seem. The paradox, however, is only in seeming. The great soul of a Socrates may devote itself to the supreme ends of life unhindered by poor food, shabby clothing, and bare feet. But a reasonable supply of the material needs of life is indispensable in the case of the average man if he is to give any considerable attention to things spiritual. The apparent sacrifice, in the supposed case of the needs of the mind, would be for the sake of mind. It would be made in order that a foundation might be laid for the higher, nobler life.

In fact, however, there is no such conflict. The elementary school certainly renders material assistance in the earning of a livelihood. It enables those who have attended it to read, and thereby inform themselves in relation to matters of pecuniary interest to them. It teaches them writing and arithmetic. It empowers them to reason more logically and therefore so to modify tradition and custom as to bring their lives more and more into harmony with the truth of things.

Moral Causes of Poverty. — It is not in these ways, however, that the elementary school finds its best opportunity to help its pupils in a pecuniary way. The poorest people are not poor because of a lack of knowledge of the three R's. They are poor because they are lacking in self-respect, thrift, perseverance, and reliability. Their poverty is due to moral rather than to intellectual causes. The education that seeks to raise men in a purely material way must lay great emphasis on moral questions. It must develop the power to forego the pleasures of to-day for the sake of the good of to-morrow. Frugality, perseverance, honesty, relia-

bility, consideration for others, uprightness, are the qualities that count for most in the earning of a livelihood. The education that neglects to emphasize them for the sake of a purely intellectual training, because of the supposed necessity of the latter to the earning of a livelihood, is a cruel mistake, an almost criminal blunder. An employee who can be trusted is rarely without a position even though he is not above the average of his fellows in ability. But the bright, clever man whom you are afraid to leave alone, who is a tremendous worker when you are looking at him — who will employ him except as a last resort?

Intellectual and Moral Training Compatible. — It is, however, entirely erroneous to suppose that there is any incompatibility between the intellectual training that bears on the earning of a livelihood and the more important moral training. There is no reason why, in teaching a boy to read, we should not make use of such selections as he needs in the interests of his moral nature. We may put into the hands of the beginner such thrilling stories as, "This is a rat; this is a cat: the cat will catch the rat." But we may also put into his hands stories that he will care to read for their own sakes, stories that he should read if he had no body to provide for. We may indeed fill our arithmetics with problems having relation to nothing but money, as though the only use to be made of a knowledge of number is to make calculations about money. But we may also fill them with problems which tend to make more vivid in the mind of the child those truths upon which the health and soundness of his mental life depend. As we shall see in detail hereafter, it is precisely the latter method that tends most strongly to

develop that desire for accuracy which is so essential for practical purposes in arithmetical calculations. Give a boy a problem dealing with purely imaginary conditions, and it does not seem to him to matter whether he gets the correct result or not, provided he uses the right principle; give him a problem dealing with practical affairs, and he will have a desire to reach the correct conclusion, because it will represent not a hypothetical but an actual case.

No Conflict Between the Needs of the Citizen and of the Man. — Nor is there any conflict between the needs of the boy as a citizen and his needs as a human being. The same knowledge of his country's history which the American finds requisite as a citizen he also requires as a human being. We know what he must have as a man: it is that which will give him right ideals of life, that which will make him charitable and sympathetic, that which will enable him to see the tragedy and the comedy that lurk behind the deeds of commonplace men. These are precisely the things he must have as an American. We hear a good deal nowadays in depreciation of patriotism. Novelists like Hall Caine and moralists like Tolstoï vie with each other in teaching that patriotism is an obsolete virtue — if indeed it ever was a virtue — whose place ought to be taken by philanthropy. They might argue with just as much reason that philanthropy should take the place of parental affection. There are indeed fathers who commit crimes for the sake of their children, as there are citizens who say, "My country, may she be right; but right or wrong, my country." But as the best father is he who realizes that he is kindest to his children when he is most upright, so the truest patriot is he who loves his country so

devotedly as to feel a stain upon its honor as a personal matter. When John Quincy Adams said, No true-hearted American can read the account of our dealings with Mexico without blushing with shame for his country, he spoke not only as a philanthropist, but as a patriot. If, then, we may conclude that there is no conflict in the elementary school between the demands of a liberal education and those of an education for the sake of the body, that the best education is, as far as it goes, a liberal education, we may inquire what elements of a liberal education the elementary school ought to give.

A Liberal Education and the Elementary School. — A liberal education, as we should define it, is one that keeps in constant view those ends about which so much has already been said — thought, the appreciation of beauty, loyalty to duty, affection, sympathy, etc. Can the liberal education of the elementary school intelligently have all these things in view? As to all of them except the first there can be no possible question. That a very young child can be made to see beauty, that he can be touched with a sense of duty, that he can be made to feel the joys of sympathy and affection, is beyond doubt. And there is just as little doubt as to the first. Aristotle indeed declared that children, like slaves, are incapable of the exercise of reason. Of the reasonings of the full-grown philosopher of course they are. But of such an exercise of reason as leads to wonder they certainly are not. The stupendous acquisitions of the child during the first three years of his life — acquisitions which surpass in amount, so some assert, those that are made in any three subsequent years — are due to the extraordinary activity of his mind.

It would be hard to draw the line between that feeling of wonder that fills the mind of the child as he apprehends day by day some new phase of the mystery of the world, and that sense of awe that filled the mind of Kant as he contemplated the starry heavens. If the full-blown flower has the supreme fragrance and sweetness which Aristotle attributed to it, surely the young plant just putting forth its tender leaves deserves to be treated with the utmost care.

We may then sum up our conclusions as follows: Elementary education, in all its phases, should have constantly in view those things that make life worth living. But it should seek to attain them by teaching the pupil those arts and having him study those subjects which he will need as a bread-earner and a citizen.

QUESTIONS ON THE TEXT.

1. Why does Booker Washington advocate industrial education for the negro?

2. Why is poverty often due to moral causes?

3. Show that the intellectual training which bears on the earning of a livelihood is compatible with moral training.

4. Show that there is no conflict between the needs of the citizen and the man.

5. Reply to Hall Caine's argument against patriotism.

6. What is a liberal education?

7. In what sense may the elementary school give a liberal education?

SUGGESTIVE QUESTIONS.

1. Because poverty is due to moral causes, are we justified in teaching that a dishonest man cannot get rich?

2. In what sense is it true that honesty is the best policy?

3. Who is the true patriot, the man who always defends his coun-

try, or the man who condemns her under circumstances which would lead him to condemn another country?

4. What is the difference between the education which the elementary school ought to give, and that which the high school and college should seek to impart?

CHAPTER IX.

THE CHILD'S CAPITAL: GENERAL.

Begin with the Child.— It has come to be an axiom in pedagogy that we must begin with the child. The professor of physics who introduced his course of lectures by saying, "A rearrangement of the courses of study deprived you of the usual instruction in elementary physics; that is your misfortune, and not my fault," [1] and at once began his lectures on advanced physics, may have known his subject, but he was ignorant of pedagogy. The faintest glimmer of that science would have shown him that the rearrangement of the course of study had of necessity rearranged his work, that the attempt to lecture on advanced physics to students who are not familiar with its elementary concepts would only result in confusion.

We must begin with the pupil not only in that we must adapt our instruction to his intellectual conditions, but in that we must take his interests into account. As has already been stated, this book is based on the assumption that neither the duties of the boy in school nor of the man in the world can always be as interesting as any other occupation. But it does not therefore follow that the teacher shall deliberately seek to create situations in which his pupils must exert their will-power. On the contrary, at every stage of a child's development his work should be brought into the closest possible relation with his life and interests, in order

[1] Schaefer's Thinking, p. 52.

that it may have for him the utmost possible amount of attractiveness. The interests that make for education are always obliged to compete with those that tend to array the individual against society as well as his own best self. Since the anarchical interests are likely to prevail unless the will throws its weight into the lighter scale, the teacher is under supreme obligation to make those that tend to promote the child's good as strong as possible.

The Young Child and the Educated Man. — While this principle should be recognized by teachers of every grade from the university professor down, it applies with peculiar force to the elementary teacher. The mature student can see the reason for all that is demanded of him, and he ought to be able to pursue the course which reason points out, even though appetite and inclination lead the other way. But the young child has neither the power to see nor the will to do what his own best self requires. Absolutely helpless in the beginning, with no guide but blind instincts, and these not sufficiently developed to insure even his physical self-preservation, he should be so trained that when the education of the school is finished the work of self-education may go on. Life itself is a school, and the ideal of education in the narrower sense is that parent first and later parent and teacher may so do their work that when the student passes from their control he may become his own teacher, may intelligently direct his own life. Evidently the motives which should be all-powerful in the end — those growing out of purely rational considerations — are entirely wanting in the beginning; evidently, also, the motives which are alone possible in the beginning — those that in some form make an appeal to the

child's immediate interest — should be entirely in abeyance at the end. The college or university student should not do things merely because they may have an immediate interest for him. As the carpenter does not put a window here or a bracket there to suit his fancy, as he is governed in everything that he does by the plan of the house, so the advanced student, having formed an ideal of life, should do this or refrain from that, not because of its immediate interest, but because of its bearing on his life-plan.

The ideal education is that which, keeping this goal constantly in mind, demands of the child at every stage of his development those requirements that tend to lead most directly and certainly to it. Exactly what these requirements should be, educational science will never be able to say. Children are not like geometrical figures. When you know the properties of one right-angled triangle you know the properties of all of them. But when you have found out how to treat one child of seven you do not know how to treat another of the same age, because the second may be unlike the first in very important particulars. All that educational science can do is to lay down certain general principles, leaving their application to the tact of the trained teacher, guided indeed by his knowledge of children in general.

The Child Guided by Interest. — One principle that should govern the mother in the treatment of her very young child is clear: she should expect nothing from his reason. So far as she aims to control his conduct she must make some sort of appeal to his immediate interests. Dr. Hinsdale said that only two things might be said with certainty of the young child: "He is sure to have many

interests in the course of the day, and none of them will continue long."[1] One thing more may be said of him: so far as he is left to himself he will do nothing except what interests him. But long before he is old enough to go to school he has learned that some of his interests ought not to have play. He likes to dabble in the water: he has learned that that may result in a spanking and a cold. He likes to shout and make a big noise: he has learned that his boisterousness must be held in check when his baby brother is asleep.

Habits of Rational Conduct. — The wise mother will not expect her child to do what is reasonable from a sense of duty. Her task is to see that it is done, and done, too, under the influence of the least degree of compulsion. Making her child acquainted so far as possible with the reason for her requirements, she nevertheless knows that other motives — the desire to please her, fear of punishment, etc. — will for the most part control his conduct. She knows that the impulse to do what is seen to be reasonable is too feeble to direct his actions. But precisely because she realizes the incomparable worth and significance of this motive, because she knows that everything depends on so nuturing it and strengthening it that it may grow and grow until it becomes the controlling force in the life of her child, she will develop in him habits of right conduct, and as far as possible make him see their reasonableness. The nearer the conduct of the child, for whatever reason, conforms to what the child sees to be reasonable, the more natural it is for him to dwell on the fact that he is acting rationally, and the more

[1] Hinsdale's Art of Study, p. 141.

the desire so to act tends to gain in power. But it is evident that a habit of right conduct formed through fear of punishment is less likely to leave the mind free to dwell on the intrinsic reasonableness of the conduct than one formed through affection for the mother. The impulse to act rationally and the desire to please those we love are higher than the wish to avoid punishment. The child whose conduct is governed through affection for parent or teacher is strengthening at the same time his tendency to do what seems to him reasonable; the child, on the other hand, who does what is right in order to avoid punishment is in great danger of doing what is wrong as soon as he can do so with impunity. It follows that conduct regulated only by fear of punishment is rarely stimulated by the impulse to do what is reasonable just because it is reasonable.

So far the principle that should control the mother has been dwelt upon. This has been done for two reasons: (1) the best way to realize the proper method of dealing with the child at school is to contrast the influences that absolutely determine his conduct at the beginning of his education with those by which he should be guided in the end; and (2) the same principle that ought to control the mother in the treatment of her child at home ought to govern the teacher in her treatment of the child at school. If the child, at first governed by blind, unconscious impulse, and later by some form of immediate interest, is to be developed into a being who will be governed in what he does by purely rational considerations, then the problem for teacher and parent is: How to make such an appeal to the child's immediate interests as will take him most surely to the goal in which reason, not impulse and inclination, will be the ruling principle of his life. And while it has

been implied all along that no influence can be exerted upon the child that does not make some sort of appeal to his immediate interests, the intention has been to indicate with equal clearness that these immediate interests cannot always be the sort that grow out of the thing we wish him to do. A child may make his own multiplication table because he likes to do it. In that case his conduct grows out of an immediate interest in his work. But when he learns the table by heart, he does it because the teacher requires it. Here again he acts from an immediate interest, but not from one growing out of what he does. He wishes, it may be, to please the teacher, or to get a good mark, or to avoid punishment. Some form of immediate interest he must have. But no amount of pedagogical skill can bring it to pass that this interest shall so grow out of the work to be done that if the child were capable of analyzing his motives, he would say he did it because he liked it. Emphasis is laid upon this point because in the opinion of the author it should be a determining factor in all the teacher's work. Important as it is that the work of the school should be made as interesting as possible, something else is even more important: that the child and the man should do their proper work whether it be the most interesting thing or not.

The Educational Centre of Gravity. — Returning now to the point made at the beginning of the chapter, we repeat that, so far as possible, the work of the school should be adapted to the child's interests. How adapted? In the sense that he shall be set doing things which he likes to do, things the doing of which takes him toward the goal of education. We must make the child himself, his tastes,

his interests, the centre of gravity.[1] Governed as we all are to a great extent by tradition, we find it hard to cut loose from the idea that the thing to do when a child enters school is to put a book into his hands. This was the idea of the Renaissance, the period which identified education with learning, and which therefore paid little heed to the child because he had so little capacity to learn the things that the Renaissance teacher thought important. Under the influence of that mode of thought we have been sending the child's body to school, leaving his mind to look out for itself.[2] And many who have come to see that, since it is the child's mind we must deal with, we must take its impulses into account, are still so dominated by Renaissance theories that they do not realize that the child has any impulses of which the school should take note except those of a purely intellectual character. As the Renaissance teacher neglected every power of the mind except memory, so these teachers neglect all his powers and tendencies except memory and curiosity. The incessantly active child, the talkative child, the child pulling things to pieces and putting them together again, has been ignored, suppressed, taken no account of. Observe any child. Does he sit on your knee and ask you questions by the hour? Is he curiosity personified? That is what he must be if the methods that prevail in many primary schools are right. But though he has curiosity, that is not his only trait; in normal cases it is not his predominant trait. If we are to make him the centre around which the work of the school revolves, we must get rid of the Renaissance fallacy and, with the simple desire to find out the truth, inquire how we can invest the child's

[1] The figure is Dr. Dewey's. [2] Cf. Dr. Dewey's School and Society.

capital,[1] his interests, his impulses, so that they may bring him the largest return.

As a preliminary to finding an answer to this question we must ascertain what these interests are. And it may serve to give us a deeper appreciation of the importance of our question to remember that there was a time when the purely intellectual interests which alone we are inclined to take account of were almost ignored. The men of the world of the first half of the Middle Ages thought chiefly of action and of the impulses that lead to it. Perhaps they were not entirely wrong. Let us then marshal the child's interests before us so that we may see how they can be turned to account in his education.

Curiosity. — It is unnecessary to do more than mention the child's intellectual interests, his curiosity, his impulse towards better cognition, as Professor James terms it. As has already been said, this is the chief impulse to which the work of most so-called good primary schools make direct appeal.

The Constructive Impulse. — Closely connected with this is the child's constructive impulse. A little girl of seven, after burying herself for hours in a child's history of the United States, put her book down and asked for a blanket. She had been reading about Indians and she wanted to give objective expression to some of the ideas she had acquired. She got a feather and stuck it in her hat, and asked her father to help her build a wigwam. In the early years of a child's life this impulse plays a vitally important part. As Professor James says, "Up to the

[1] This phrase is Dr. Dewey's.

eighth or ninth year the child does hardly anything else than handle objects, explore things with his hands, doing and undoing, setting up and knocking down, putting together and pulling apart; for, from the psychological point of view, construction and destruction are two names for the same manual activity." [1]

The gratification of the constructive impulse forms a large part of the play of children. Indeed, if we define play as activity in which the child engages because he likes it, we may say that whatever children do through the constructive impulse is play. "They build their sand castles, they pretend to keep shop, to entertain visitors, and so forth, for the sake of the enjoyment they find in these activities." [2]

The Art Impulse. — Such activities become modified at a very early period in the life of the child by the art impulse — another of the common characteristics of children. A child of three will sometimes throw down his toys and listen to the reading of an abstract essay. Because he understands it? Certainly not; it is because the cadence of the sentences pleases his æsthetic sense. Miss Shinn observed that her niece in her twenty-eighth month showed a special fondness for daffodils. As soon as the passive appreciation of beauty becomes a part of the child's life, it begins to modify the activity of the constructive impulse. The child endeavors to make his creations conform to his ideas of beauty.

The Social Impulse. — In gratifying his constructive tendency the child acts for the sake of acting. You who

[1] James, Talks to Teachers, p. 58. [2] Sully, Studies in Childhood, p. 34.

observe what he is doing can tell what is passing through his mind. But it is not for your sake that he is acting. He does what he does because he likes to do it. The activities due to the social impulse, on the other hand, are directly stimulated by the presence of other people. Observe any child in a home where the maxim that children should be seen, not heard, is, as it ought to be, disregarded. When he reads a story, he wants to tell it to his mother; when he comes in from a walk, he is eager to tell her all that he has seen that interests him. When a story is told in his presence, he insists on correcting every inaccurate statement.

Imitation. — Half-way between the constructive impulse and the social is the disposition to imitate. Indeed the constructive impulse and the imitative, as far as the latter acts unconsciously, are bottomed on the same law — that every idea tends to act itself out. The child who wished to make a wigwam after reading about Indians did so because the ideas were in her mind, and the child who imitates the gestures of her mother does so for the same reason.

But when the imitative impulse becomes conscious, when the child tries to reproduce the action of another because he wishes to be like the other, then the imitative tendency becomes allied to the social. It is the social impulse turned other end foremost. As the child's social nature leads him to influence the minds of others by telling them what he knows, so his imitative impulse leads to a modification of his own mind through the influence of others. It is this that gives it tremendous significance. It tends, as Dr. Harris says, to emancipate the child from the mere influence of heredity and self-regarding impulses

and bring him under the influence of those around him. It lies at the foundation of manners, language, the whole of the traditional side of life. Imitation, the conservation of achievements, and invention, making new discoveries, are, as Professor James says, "the two legs on which the human race historically has walked."

Invention.— Invention is due to the combination of two impulses, one of which is always the intellectual impulse, while the other may vary with the subject-matter to which the desire to know is related. The latter impulse may lead a university student to study municipal government; but unless he is moved by ambition, philanthropy, patriotism, regard for his family, or some extraneous motive, he will not use his knowledge for the betterment of government. It is said that a well-known professor in this country is breaking himself down by his excessive study of the laws of health. His regard for health is not as intense as his desire to know its laws. But even in his case those who know him well are doubtless able to see that his knowledge of hygiene leads to some modification of his actions.

Emulation.— Closely akin to the imitative impulse is the emulative. In one of its forms the only difference between them is that of emphasis. "I wish to be like him" expresses the conscious imitative impulse. "I wish to be not inferior to him" expresses one form of the emulative impulse. In the one case attention is concentrated on the person one desires to imitate; in the other, it is self-regarding. The emotional coloring of the one impulse is admiration; of the other, the dislike of inferiority. This dislike easily develops into a desire for superiority.

The self-regarding character of emulation very clearly allies it with the combative, aggressive tendency of the child, the disposition to compel the people and things that surround him to submit to his will.

The Ethical Impulse. — The child also exhibits at a quite early age what we may call the ethical impulse, the desire to do right. Precisely what this impulse is, and how it originates, are questions that educational science does not have to solve. All we need to note here is that in the course of his experience the child becomes conscious of a desire to do right; that this desire is unique, incapable of being analyzed into anything else, and that, as we have elsewhere tried to show, it ought to be developed so that it shall become the ruling principle of his life.

The instinct of ownership, the craving for approbation, the feeling of shyness, the dislike of pain, are so manifestly universal traits that it is hardly necessary to mention them.

So, as has been said, these various impulses upon which we have dwelt in the foregoing pages constitute the "child's capital." In what way can it be most profitably invested for him?

QUESTIONS ON THE TEXT.

1. What is meant by the title of this chapter?
2. In what did the mistake of the professor who was lecturing on physics, consist?
3. "The interests that make for education must compete with those that tend to array the individual against society." Explain.
4. Why is the primary teacher under peculiar obligations to take account of the child's interests?
5. Contrast the pupil at the beginning of his education with what he should be at the end.

6. What is meant by "habits of rational conduct"?

7. In what sense should we make the child the centre of gravity?

8. Illustrate from your own observation the various impulses of the child which are mentioned in the text.

SUGGESTIVE QUESTIONS.

1. If the child had the capacity to understand, and were destitute of the various impulses mentioned in the text, would education be possible?

2. What does the text mean by "some form of immediate interest"?

3. Show that the teacher cannot, in the nature of the case, exert any influence upon the child save as he appeals to some form of immediate interest.

4. What period in history is known as the Renaissance and why?

5. What is the difference between the Renaissance and the Revival of Learning?

6. What idea of education prevailed during the Renaissance?

7. What writer on education first laid stress on the importance of basing all our work on the child?

CHAPTER X.

THE CHILD'S CAPITAL: IMITATION.

Professor Baldwin on Imitation. — In the preceding chapter we laid great emphasis on the importance of imitation in the development of the child and of the race. But prominent as is the rôle there assigned it, its part is inconspicuous in comparison with that which seems to be claimed for it by some writers. Says Professor Baldwin: "The prime and essential method of the child's learning is by imitative absorption of the actions, thoughts, experiences of other people." "Imitation is the method of his personal progress, the essential method of his growth." "Society, also," he says, "grows by imitative generalizations of the thoughts of others. Imitation is the method of social organization." Gabriel Tarde asserts the same doctrine in an even less qualified form: "All the actions of men in society, from the satisfying of simple organic needs to the inventions of science and art, are the outcome of imitation."

Imitation Defined. — Before discussing this theory, let us determine as clearly as we may what Professor Baldwin understands by imitation. He says there are three kinds: organic or biological, psychological, and plastic. Organic imitation he defines as "the tendency of an organism to maintain, repeat, reproduce its own stimulation, be it simple contractility, muscular contraction, or selected reactions which have become habitual. . . . These biological imita-

tions are evidently first in order of development, and represent the gains or accommodations of the organism made independently of the conscious reception of stimulations and adaptations to them." In psychological or conscious imitation "the presence of a copy to be aimed at, the criterion of imitation, is here fulfilled in the form of conscious sensations and images." Plastic imitation is the "tendency to yield to the impulse or emotion of conformity to social usage."

Biological Imitation. — With Professor Baldwin's biological imitation this book has nothing to do except to protest against the use of a psychological term to describe biological facts. Outwardly there may be no difference between a physical fact accompanied by, and one not accompanied by consciousness. But inwardly the difference is as great as that which distinguishes mind from body. To ignore this vast dissimilarity by using the same term to describe both phenomena can lead only to confusion.

Psychological Imitation. — His psychological imitation corresponds pretty closely to the popular use of the term, and will therefore doubtless be clear without illustration or discussion.

Plastic Imitation. — Under plastic imitation he includes facts which are the result of imitation and facts which are not due to any kind of imitation whatever. He thinks that we follow the fashion "in matters of dress, arrangements for social functions, such as calling, announcements of engagements, marriage cards, funeral customs — in short, in all those matters in which we ask, 'What is the proper thing?'" — because of plastic imitation. Now in nearly

every one of these particulars a sufficient explanation of our conduct is our unwillingness to appear odd, and that is accounted for by our love of approbation. Men do not wear shirt-waists in summer, and both sexes submit to a thousand discomforts and absurdities in matters of dress because of their dread of the opinion of society. The petty and, in many respects, ridiculous conventions of our artificial social system are submitted to for the same reason. We want to be "in society" because thereby we get, or imagine we do, a certain amount of consideration; and this, and not any imitative propensity, is our reason for conforming to the rules which society has laid down for those who would win its favor.

Imitation of Thoughts and Feelings. — We may indeed dress in the fashion for another reason: because it seems to us beautiful. That acute critic and profound student of human nature Walter Bagehot long ago pointed out that the imitative side of our nature extends to our emotions; in other words, that we mechanically adopt the likes, dislikes, opinions, tastes, etc., of those with whom we associate. Thus it happens that a particular style of architecture, writing, painting, or music is almost universally admired in one period, and another in another period. What is called the contagion of emotion is due to the same cause. As every one knows, it requires an exceptionally strong man to "keep his head," as we say, in an intensely excited crowd. All this is explained by the fact that the imitative side of our nature extends to our emotions.

Is Education Imitation? — Rejecting, then, Professor Baldwin's biological imitation and narrowing the scope of

his plastic imitation, we may define imitation in general as the tendency to do, think, or feel what those with whom we associate are doing, thinking, and feeling. So conceiving it, is it true that imitation plays the part in the education of the child and the progress of society that Professor Baldwin claims for it? The question is of fundamental importance; for if the child is indebted to imitation for his entire development, if society has made all its advances from savagery through imitation, the cause of the difference between one man and another, between one community and another, is not far to seek. Were imitation the sole factor in development, all that education would have to do would be to put good models before the growing child. What we call an educated man, a good citizen, a useful member of society, would be merely the result of patterning after those models. As a matter of fact educational science has few more important problems to grapple with than that of ascertaining the extent to which, and the limitations under which, imitation contributes to human development.

Education Due to all Our Impulses. — The solution of the problem can hardly be missed by those who accept the conclusions of the preceding chapter. It was there set forth that the child is not an imitative creature simply, but an emulative, combative, social, intellectual, and constructive as well as imitative creature, and one hardly knows what not besides. The obvious inference from this is that the child is determined in his development by the interlacing and interacting of all his impulses. We have all heard of the East Indian tailor who, when he was given a pair of trousers as a model, imitated them even to the

extent of putting a patch on the new ones. Why is this story considered worth the telling? Because, from the point of view of ordinary common-sense, the conduct of the East Indian was abnormal, and its abnormality consisted precisely in the fact that it was the result of imitation pure and simple — of imitation not modified by intelligence. As in such cases imitation thus unmodified is abnormal, so in some others it is abnormal where it exerts any influence at all.

"Why," asks Professor Giddings, "does Maudsley venture to say, without offering the slightest proof, that while men are as liable as silly sheep to fall into panic when they see panic among their fellows, they are not similarly liable when they see panic among sheep? Obviously because facts of this general character are so familiar that no one would think of questioning them." In like manner, a well-bred, refined boy or girl has little tendency to imitate the bad manners of rude, uncouth people. Professor Royce, who, like Professor Baldwin, is disposed to leave the other impulses of the child too much in the background in order to give prominence to imitation, says: "Up to seven or eight years of age, any normal child remains persistently, although perhaps very selectively, imitative of deeds, of habits, of games, of customs, and often of highly ideal and perhaps quite imaginary models, such as are suggested to it by fairy stories and other such material." Why selectively imitative? Evidently because the imitative impulse is modified by other impulses of the child's nature.

Imitation and the Constructive Impulse. — To make clear the relation that exists between imitation and the

other impulses of the child, it may be worth while to discuss at some length the influence of imitation upon the constructive impulse. It is upon this side of our nature that we are dependent for our knowledge of the properties of the external world. Many of the qualities of objects which seem to be made known through the sense of sight are, as Berkeley proved, not really seen at all. When we seem directly to *see* an object as rough, smooth, hard, soft, and the like, we really only experience a color which directly suggests the quality that we have found to be uniformly connected with it. As the significance of language depends on the association of ideas or thoughts with certain sensations of sound, so the significance of color in making known the qualities of objects depends on the association of those qualities with sensations of sight.

Now the extent to which we handle and experiment upon objects is largely a matter of imitation. If one were asked why there was so little experimental study of nature during the Middle Ages, it would not be a truism to answer, Because it was not the fashion. What is regarded as the thing to do is a matter of common opinion, and common opinion, as we shall see later, is the result of imitation. But imitation does not create tendencies to action. It derives its importance from the emphasis which it lays upon preëxisting tendencies. And this is equivalent to saying that were it not for the constructive impulse there would be no handling of things, no model of this sort for imitation to copy. If, then, the activities due to the constructive impulse, no matter how occasioned, reveal to us all that we ever learn about the external world, and if the influence of imitation in this direction is wholly de-

pendent on activities which it finds already in force when it becomes operative, then we must say that all that imitation does is to intensify the action of impulses to which alone, in the last analysis, our knowledge of the external world is due.

Interaction of Impulses.—Nor has imitation a monopoly of this kind of influence. Is it necessary to say that what begins as a blind impulse to handle things may be continued through the desire to know? Or that the boy whose combined constructive and intellectual impulses are not strong enough to induce him to experiment on things may be induced to do it through emulation? Or that the child whose constructive, intellectual, and emulative impulses together are not strong enough to incite him to do a bit of experimental work may do it through the desire to please parent and teacher? Or that the desire to do right may tip the scale when all other influences have failed?

Now this interlacing and interacting of impulses may be regarded as the normal mode of human development. Instead of saying that imitation is the method of the child's personal progress, we should say that the child develops under the combined influences of all the impulses of his nature. No one, for example, ever became a good writer or a good talker through mere imitation.

Of course the impulse that leads to both talking and writing is the social. But this alone, supported only by imitation — unaided by the desire to excel, by the wish to please, by the ambition to play one's part in life rightly and honorably — would inevitably fail to stimulate the exertion necessary to the achievement of success.

Another Interpretation of Professor Baldwin. — It may be said that I have failed to grasp Professor Baldwin's meaning. He would grant, it may be contended, that the actions which result in growth are the result of the interaction of the various impulses of the child. His position, it may be said, is that, however various and complex the motives that issue in action, the thing done depends on imitation, provided the doing of it contributes to development.

If this is his doctrine, he is not exposed to the criticisms so far made in this chapter. In any event, it has seemed worth while to make them, because that interpretation of his teaching affords an excellent opportunity for stating the true relation between imitation and the other impulses of the mind. But according to the interpretation just suggested his theory is that, although all our impulses express themselves in action, the particular things done depend on imitation. Child and man alike, in their amusements as well as in their more serious occupations, find in the various impulses of their nature the sources of all their actions. With no models for imitation, children nevertheless would play, and men would seek to obtain food and protect themselves against danger. The model only causes the imitating propensity to furnish a new vent for the other impulses. Without imitation, the actions of a human being would be due entirely to himself. The imitative propensity enables a man to combine with his fellows and learn from them. It causes children to play games which they otherwise would not, and men to seek to provide themselves with food and protect themselves against danger by methods which they would not else employ. It enables us, in a word, to gratify our impulses

by the improved methods due to the experience of the race.

It must be conceded that this theory contains a large measure of truth. No one would say that children and young animals in general are addicted to play because of imitation. But imitation is undoubtedly the reason why in one school cricket, and in another football, is the favorite game.

Imitation and Intelligence. — But even in this sense it is not true to say that imitation is the essential method of the child's growth, and that society grows by "imitative generalizations of the thoughts of others." Sometimes a child imitates a copy simply because it is before him, and sometimes because he sees that doing what another has done will enable him to reach a desired end in a simpler and better way. Looked at from the outside, both actions appear to have the same characteristics; each is an imitation of an action taken as a model. Viewed from the inside, the two actions are as far apart as the poles. The one is the result of a blind impulse to imitate; the other, of the open-eyed perception that the imitated action is a simpler and better means to a desired end. The men who imitated their fellows in carrying their corn to mill by putting on a horse a bag with a bushel of grain in one end of it, balanced by a stone of equal weight in the other, serve to illustrate one kind of imitation; the other kind is instanced by men who imitated the inventor who discovered that two bushels could be carried as easily as one by putting a second bushel in the place of the stone. To say that the latter action is due to imitation is to take no account of the essential factor in the case. With two

models before them, men imitated one and rejected the other. Why? Because of their intelligence; because they saw that one method of reaching their end was better than the other. If we are to describe the facts as they are, we must say that men influence their fellows in two ways: by performing actions which their fellows imitate simply because of their propensity to imitate, and by performing actions which are imitated not at all because of the imitative propensity, but because of the intelligence of those who imitate them.

But this statement of the case does not do justice to the influence of intelligence. The actions of the stupidest, most unintelligent men are rarely due to imitation alone. The man who balanced a bushel of grain in one end of a bag with a stone of equal weight in the other did not do so, as was stated above, through the influence of the imitative impulse. He wished to carry corn to the mill, and he saw that this was a better way than the only other one that occurred to him — carrying it on his back. His action, it is evident, was due, not to his imitative propensity, but to his intelligence.

It is evident, therefore, that the inventor who thinks out a new way and the man who adopts the method already in vogue for attaining his end do so for the same reason. The intelligence of the former enables him to see that he can accomplish his object in a new and better way; the intelligence of the latter only enables him to see that he can attain his end in the customary manner. It doubtless requires a greater amount of intelligence to invent a thing than it does to perceive its excellence. But it is not the degree but the kind of thing which is in question, and our contention is that it is utterly false to ascribe to

imitation an action which is really due to a lower degree of intelligence.

I submit, therefore, that Professor Baldwin is wrong when he says that society grows by imitative generalizations of the thoughts of others. Society grows by adopting the discoveries of others, and it adopts them because it sees them to be true. Urged by the desire to include the actions of living creatures under the most comprehensive induction, the Professor has ignored the fundamental distinction between actions which are imitated merely because of the disposition to imitate and those which are imitated through intelligence.

We shall not be mistaken, I think, if we suppose that he has made the same error when he says that the child's essential method of learning is by imitative absorption of the thoughts of other people. A boy may show his ability as a student of geometry in two ways: by the thoroughness with which he comprehends and appropriates the demonstrations of others, and by his originality in making demonstrations of his own. Each is due to the exercise of his intelligence. The only sort of geometrical study which could be properly called the imitative absorption of the thoughts of others is that which consists in the memorizing of the language of a demonstration when the demonstration is not understood. And it goes without saying that Professor Baldwin does not mean to say that a boy grows by that sort of absorption of the thoughts of geometry.

But if the Professor means the same thing by imitative absorption that I mean by the intellectual appropriation of the thoughts of others, why does it matter if we differ as to the terms to be employed in describing the fact? Because (1) there is that in the life of the child which is

accurately described when it is called the imitative absorption of the thoughts of others, while there is a very different experience which is properly called the appropriation of the thoughts of others, because they are seen to be true; because (2) both of these activities contribute to the child's development, although in very different ways; because (3) educational science needs to discriminate between them with the utmost possible exactness, and to determine with the utmost possible precision the extent to which and the circumstances under which each is to be made to contribute its part toward the development of the child.

QUESTIONS ON THE TEXT.

1. What, in Professor Baldwin's opinion, is the relation between imitation, and the development of the child and of the race?

2. State and illustrate his definition of biological, psychological, and plastic imitation.

3. Show that he ascribes to plastic imitation much that is not due to any kind of imitation.

4. State and illustrate what is meant by the imitation of thoughts and feelings.

5. What does the story of the East Indian tailor illustrate?

6. What does the fact that men are not influenced by seeing a panic in a flock of sheep illustrate?

7. Why was there so little experimental study of nature during the Middle Ages?

8. State and illustrate what is meant by interaction of impulses.

9. Illustrate the difference between doing what another does because of imitation, and doing it because of intelligence.

10. Show that what seems to be mere imitation may really be due to intelligence.

11. State clearly the two interpretations which the text suggests of Professor Baldwin's theory and show that according to either of them it is incorrect.

12. What, in your opinion, does Professor Baldwin really mean to say?

13. Why is it important to discriminate between actions due to imitation, and those due to intelligence?

SUGGESTIVE QUESTIONS.

1. Are any of your own beliefs due to plastic imitation?
2. Have you seen examples of plastic imitation in the pupils of your school?
3. Which exerts the greater influence, plastic or psychological imitation?
4. Do you know of any scientific opinions that seem to you to be due to plastic imitation?
5. What period in history is called the Middle Ages?

CHAPTER XI.

THE FUNCTION OF IMITATION.

If it be true that we have a tendency to imitate anything that comes before us, and that this tendency is modified by all the impulses of our nature, it ought to be easy to determine in a general way (1) the period when this tendency begins to assert itself, and (2) that during which it is most influential.

When the Child Begins to Imitate. — Manifestly imitation cannot become operative in the life of the child until he is some months old. In the first months of his life he leads chiefly a vegetative existence. His consciousness is in too vague and chaotic a state to render it possible for outside influences to affect it except in the way of stimulations. We are, therefore, prepared to learn from the students of genetic psychology that it begins to be a factor in the child's development during the last two thirds of his first year.[1]

[1] "The early intellectual life of the child is lost to us in obscurity. . . . But we are clear that the infant in the first months of life has nothing that we should call self-consciousness. The first clear evidence that we get of the presence of a form of self-consciousness intelligible to us comes when the infant begins to be observantly imitative of the acts and, later, of the words of the people about it." (Royce, Studies of Good and Evil, p. 182.)

"Imitation begins to appear about the fourth month." (Sully, The Human Mind, ii. 218.) "According to Tracy there are few points so gen-

When Imitation Exerts the Most Powerful Influence. — Now the considerations urged in the preceding chapter make it evident that the period in the child's life during which imitation exercises the most powerful influence on the course of his development is that in which his character is being formed, using the term character in the broad psychological rather than in the narrow ethical sense. The tendency to imitate everything that comes before us is for the most part held in check by the mature man. We deliberately strive against the tendency to imitate the bad manners, the incorrect speech, the slouching gait of those with whom we come in contact. We have formed our style, so to speak, in those particulars. But the very young child has no style; psychologically speaking, he has no character. Boorish manners, careless speech, slovenly habits offer just as stimulating a copy to his imitative impulse as do the opposite characteristics.

Influence of Heredity on Imitation. — It is in fact not true that even children are equally ready to imitate everything that comes before them. Boys do not long amuse themselves with nursery games, nor girls, as a rule, with plays in imitation of war. Heredity begins at a very early age to exercise an influence in favor of one model for imitation rather than another. But how slight is the obstacle to indiscriminate imitation which is presented by heredity in comparison with that which is offered by character as developed in the mature man, will begin to be evident if

erally accepted without question by child psychologists in general as that of the beginning of imitation in the second half-year." But "Baldwin, like Egger, could not be sure of it before the ninth month." (Groos, The Play of Man, p. 291.)

we remember that in very many directions heredity is entirely neutral. We have a hereditary impulse to talk. But this impulse is perfectly satisfied by the use of any kind of language, good, bad, or indifferent.

Probably what we have agreed to call plastic imitation encounters no hereditary obstacle whatever. How much this means will begin to appear if we try to realize the tremendous importance of its part in the development of the child and of the race.

Plastic Imitation. — Bagehot has shown that the characteristics which distinguish the literature of one period from that of the one before are due to it. "The true explanation" of how a literature in one period comes to differ from that of the preceding, he says, is "something like this. One considerable writer gets a sort of start because what he writes is somewhat more . . . congenial to the minds around him than any other sort. . . . Some strong writer, or group of writers, thus seize on the public mind, and a curious process soon assimilates other writers in appearance to them. To some extent, no doubt, this assimilation is effected by a process most intelligible, and not at all curious — the process of conscious imitation." But Bagehot thinks, and truly, that it does not generally happen this way. "Most men catch the words that are in the air, and the rhythm which comes to them they do not know from whence; an unconscious imitation determines their words and makes them say what of themselves they would never have thought of saying. And as with the writers, so in a less degree with readers. Many men — most men — get to like, or think they like, that which is ever before them, and which those around them like

[plastic imitation], and which received opinion says they ought to like; or if their minds are too marked and oddly made to get into the mould" — if their nature is so positive as to cause them to withstand the imitative impulse — "they give up reading altogether" or read old books.

Bagehot thinks that national character arose in the same way. "At first a sort of chance predominance made a model, and then invincible attraction, the necessity which rules all but the strongest men [the men of the most positive character] to imitate what is before their eyes, and to be what they are expected to be, moulded men by that model. . . . Even in useful particulars the innate tendency of the human mind to become like what is around it has effected much; a sluggish Englishman will often catch the eager American look in a few years; an Irishman or even a German will catch it, too, even in all English particulars." [1]

We all know that the popular games of a school change from season to season, and most of us, I think, will agree with Bagehot in finding the explanation in plastic imitation. "Some ruling spirits, some one or two ascendant boys," make all the difference. If one of these ruling spirits leaves a school, and his place is taken by another who likes a different game, the new game will soon become popular. A change in the model brings about a change in the copy.

Bagehot points out that belief is the main seat of the imitative part of our nature. "In 'Eothen' there is a capital description of how every sort of European resident in the East, even the shrewd merchant and the post captain, with his bright, wakeful eyes of commerce, comes

[1] Bagehot's Physics and Politics, pp. 32, 37.

soon to believe in witchcraft, and to assure you in confidence that there 'really is something in it.' He has never seen anything convincing himself, but he has seen those who have seen those who have seen. In fact *he has lived in an atmosphere of infectious belief*, and he has inhaled it."[1]

What we call *Zeitgeist* — the spirit of the time — illustrates the same law. For a long period in Roman history the father had — and every one thought it perfectly proper that he should have — absolute authority over all the members of his family, even to the extent of life and death. Each succeeding generation of Romans was born into a society in which that opinion was held and acted on, and that characteristic of human nature which we have called plastic imitation made them cherish the same conviction.

Every commercial crisis illustrates the same law. Every such crisis has two stages: (1) an almost universal overweening confidence in the possibilities of making money, which leads to wild speculation; (2) an equally excessive distrust as to the probable results of investments — which precipitates a panic. Both of these stages are due to plastic imitation.

Plastic Imitation and Higher Immediacy. — There is hardly any limit to the illustrations that might be given of the influence of plastic imitation. But if those that have been given are clear, one thing will be evident: plastic imitation is so strong a force in the lives of men that it is able to modify, or even altogether break down, the beliefs of mature and thoughtful persons. It requires a man of quite unusual strength of mind to be able to keep his opinions with no lessening of confidence in their truth, in the midst

[1] Bagehot's Physics and Politics, p. 93. Italics not in the original.

of a society that utterly disbelieves them. Is it not evident, then, that the young child, with its mind "to let" on all subjects, with no opinions to oppose to those of the minds with whom it comes in contact, must be entirely at the mercy of those opinions? In a previous chapter it was pointed out that we take some things to be true without proof, and it was shown that we come by some of them in a way which was designated by the phrase "higher immediacy." We have, as was there illustrated, certain ideas as to the universality of law, and the nature of moral obligation, which we should not have had if we had lived in an earlier period in the history of the world — which we should not have if we had been born in a different civilization. Whence came those ideas? How does it happen that the ideas and ideals of an able Chinaman are so different from those of an able American? It is due, I think there can be no doubt, to plastic imitation. Europeans and Americans believe in the universality of law, and cherish certain moral ideals because from their birth they have been surrounded by models of those beliefs, and they have been compelled by the very law of their being to copy them. The Chinaman, having been surrounded by different models, has a different set of beliefs because he has made different copies.

Signe Rink's Childhood. — From this it follows that the beliefs of the very young as to what is true, fitting, right, noble, beautiful, desirable — apart from objects which are desired because they satisfy the needs of the animal nature — *must* be the opinions of those by whom they are surrounded: they can be nothing else. An illustration may help to make this clear. Signe Rink tells of her

childhood spent in Greenland: "Like all European children in the country, my brothers and sisters and I had a genuine passion for everything pertaining to Greenland, and accordingly, as soon as the door was shut on our elders we tried in every possible way and by all sorts of mimicry to identify ourselves with our playmates. My brother got himself up as a seal-hunter from head to foot, and I became an Eskimo woman with waddling gait, who was sternly forbidden to leave the house." And in speaking of her play with a Greenlandic girl she says: "Over our heads hung boots, hose, skins, trousers, and *tuniaks* (underjackets) to dry in the warmth of the lamp or to be out of the way. All these surroundings formed elements in our play. In imagination we had sent our husbands off on a seal-hunt, and with thimbles on our first fingers, the Greenland custom, we sewed round flaps for the boot-soles of the absent ones." [1]

Imitation and Character. — Evidently the readiness to take up the psychic life of the Greenlander — his life of thought and feeling and emotion, his life of aspirations and ideals — was just as great as the readiness to imitate his outward conduct. Professor Baldwin puts the matter very suggestively when he says: "It is not only likely — it is inevitable — that he [the child] makes up his personality, under limitations of heredity, by imitation, out of the 'copy' set in the actions, temper, emotions of the people who build around him the social inclosure of his childhood. It is only necessary to watch a two-year-old closely to see what members of the family are giving him his personal 'copy' — to find out whether he sees his mother

[1] Quoted by Groos, The Play of Man, p. 305.

constantly and his father seldom ; whether he plays much with other children, and what their dispositions are to a degree ; whether he is growing to be a person of subjection, equality, or tyranny ; whether he is assimilating the elements of some low, unorganized social content from his foreign nurse. For, in Leibnitz's phrase, the boy or girl is a social monad, a little world which reflects the whole system of influences coming to stir its sensibilities. And just as far as his sensibilities are stirred he imitates, and forms habits of imitating. And habits? — they are character." [1]

If the last two sentences are to be accepted without qualification, it would seem that the contention of the preceding chapter is erroneous ; that Professor Baldwin is right in maintaining that the sole factor concerned in development is imitation. For if character is the result of imitation, and if the only resistance which imitation encounters comes from character, then resistance to imitation is itself due to a product of imitation. Being what I am, I refuse to imitate certain models, but I am what imitation has made me. I refuse to imitate later models because I have imitated earlier ones of a different type.

Professor Baldwin has himself shown us in the paragraph we have quoted how his statement is to be qualified : the child makes up his personality by imitation "under limitations of heredity" — and exceedingly important limitations. Character, therefore, — that which enables us to offer effective resistance to imitation, — is the product of imitation *and* the other hereditary tendencies and capacities of our nature.

[1] Baldwin, Mental Development, p. 357

Imitation and Reason. — We may, then, concisely answer the two questions asked at the beginning of this chapter as follows: (1) Imitation begins to be a factor in the development of the child in the latter part of the first year of his life. (2) Although it never ceases to exert an influence, that influence constantly diminishes with the development of the intelligence and of the moral and æsthetic nature. The function of imitation, then, as Professor Groos has well said, is to go before intelligence and prepare the way for it. The ideal man, the philosopher of Plato's Republic, the sage of the Stoics, the man who illustrates in his nature Mr. Herbert Spencer's conception of complete living or Dr. Dewey's notion of perfect character, would be entirely free from the influence of imitation. His life would be a strenuous and consistent effort to realize his own ethical, æsthetic, and intellectual ideals under the guidance of his own reason. Looking at the matter in this ideal way, we have at one end of the line — say when the child is about a year old — imitation as the great controlling force, apart from the impulses to eat, drink, sleep, and the like, in the child's life; at the other end reason has become supreme. But the rule of reason has been substituted for that of imitation only little by little, and imitation controlled in the beginning in order that reason might govern in the end.

QUESTIONS ON THE TEXT.

1. State in your own language the substance of this chapter.
2. Why does imitation exert a more powerful influence during the early part of a child's life than it does afterwards?
3. What is heredity, and what influence does it exert on imitation?

4. State the influence of imitation on (*a*) literature, (*b*) national character, (*c*) games, (*a*) the spirit of the times.

5. Why did successive generations of Romans think it was right for a father to have absolute authority over his son?

6. Explain "lower immediacy," "mediacy," and "higher immediacy."

7. Show that the beliefs gained through higher immediacy are due to plastic imitation.

8. What is the relation (*a*) between imitation and intelligence, (*b*) between imitation and character?

SUGGESTIVE QUESTIONS.

1. There is a period in the life of a human being which might be described as the instinctive, another as the imitative, and a third as the intelligent period; what, roughly speaking, would you say these periods correspond to?

2. Mention some of the instincts of human beings.

3. Can you cite examples which seem to you to show the influence of heredity?

4. What is the difference between heredity and character?

5. Can you illustrate from your own observation the influence of imitation on language and games?

6. Does imitation account for the beginning of the Roman custom, or merely for its continuance?

7. How does the commercial crisis of 1817–19 illustrate the influence of plastic imitation?

8. What is the relation between imitation and tradition?

9. Does imitation, or reason, exert the greater influence over the lives of most men?

CHAPTER XII.

HOW THE CHILD'S CAPITAL IS TO BE INVESTED: IMITATION.

President Eliot on the Public School. — Some important pedagogical inferences may be drawn from the conclusions we have just reached. These conclusions enable us to see that we may expect too much of the school — much indeed, in the nature of the case, that it is impossible for it to accomplish. President Eliot's recent declaration before a state teachers' association "that our common schools have failed signally to cultivate general intelligence, as is evinced by the failure to deal adequately with the liquor problem, by the prevalence of gambling, of strikes accompanied with violence, and by the persistency of the spoils system,"[1] makes one wonder whether even he realizes the inevitable limitations of the school. At whose door are we to lay the responsibility for the liquor evil, gambling, and the continuance of the spoils system? Primarily at the door of society. Society, or at any rate a portion of it, approves of gambling, drinking intoxicating liquor, the spoils system, and the average man gets his ideas as to what is proper and right, through plastic imitation, from society. The school is indeed to a limited extent responsible for the ideas and ideals of society, but only to a limited extent. If every teacher in all the schools of the country were a Socrates or a Pestalozzi, we

[1] A newspaper condensation of his argument.

should still have gambling and drunkenness and the other evils mentioned by President Eliot, although not so much of them. These evils are not due primarily to lack of intelligence. The gamblers, the drunkards, the politicians who thrive on the spoils system, and the people who approve it will compare very favorably in point of intelligence with their neighbors. So far as the source of these evils is not found in ineradicable elements of human nature, they are found in the ideals of society. Alcibiades, one of the most gifted pupils of one of the most gifted teachers in the world, was not prevented from living a life which did the utmost violence to all the precepts of Socrates. The great sophist, as Plato fitly called the Athenian public, corrupted him. Socrates told him that "spiritual wealth" is the only thing worth living for in this world. But Athenian society told him a very different story — that money, position, pleasure, are the important matters; and he listened to its voice, and that in spite of the fact that the teaching of Socrates made "his heart leap within him" and his eyes rain tears.[1]

Imitation the Chief Source of Ideals. — The truth is, the school can do much more to quicken the intelligence of its pupils than to ennoble their ideals. When the boy leaves school in the afternoon he is subjected to no influences that directly tend to weaken the intellectual fibre or dim the insight which the performance of the day's tasks has given him. His added intellectual power is his as an inalienable possession. Can this be said of any impulse which he may have received towards higher ideals of conduct? He goes, it may be, to a home in which the

[1] Plato's Symposium.

one standard by which all things are measured is money. He mingles, perhaps, with companions who value a thing only as there is money in it. He listens, possibly, to conversations in which pity and contempt are commingled for the man who for the sake of a phantom called duty foregoes an opportunity to get rich. He reads newspapers, perchance, whose columns are filled with the doings of millionaires — what they wear, what they eat, when they dine, how many hours they sleep. In this event what is to become of his impulse towards higher ideals?

The force of these considerations so crudely presented will be all the more evident if it is borne in mind that he cannot get from his intellect any firm support for his ideals. These, as in the case of every boy or man, have their roots in the emotions, and when he undertakes to transplant them to his intellect he undertakes a problem which has perplexed the profoundest of the philosophers. We were all reading, a year ago, about the titled English ladies who were devoting all their time and energies to the devising of toilets for the coronation. To most of us it seems a poor use to put one's life to, but by what arguments could we induce those ladies to accept our point of view? Could we convince any one of them that she would not *like* to be known as the wearer of the most beautiful gown or the costliest gems on that occasion? The supreme aim of many men is the achievement of some sort of reputation; one as an expert whist or golf or chess player, another as an influential member of Congress without regard to the means whereby the influence is to be acquired or the objects for which it is to be used, still another as a giver of the finest dinners, and so on. Poor aim, you say. Yes, but what are you going to do about it? How are you going

to convince those who care supremely for insignificant things that their ideals are unworthy of an intelligent being? It is only the philosopher who can subject his ideals to a searching investigation, and how many of us are philosophers? Most of us never ask ourselves whether what we care for supremely is worth our regard,—and what we care for depends, for the most part, on the likings of those with whom we associated in the formative period of our lives.

It is, therefore, vain to expect from the school as much in the way of elevating ideals of life as we may reasonably hope from it in the way of quickening the intelligence. But while plastic imitation has very much to do with determining ideals, it is not the only factor. As we saw in the preceding chapter, the hereditary nature of the child will not permit him to accept every model with equal readiness, and the earnest teacher may be perfectly confident that his efforts towards elevating his pupil's ideals will find a powerful ally in the natures of some of them, an ally so powerful as to enable them to withstand all the antagonistic influences that may be brought to bear upon them.

Cardinal Newman on Imitation. — Our point of view also enables us to perceive the mode in which the teacher must do his work in this respect, provided he is to do it at all. Those only can inculcate a reverence for high ideals who feel that reverence themselves. That profound student of human nature Cardinal Newman, in a remarkable essay on "Personal Influence the Means of Propagating Truth," dwelt on this fact at great length. "The silent conduct of a conscientious man," he truly said, "secures for him from beholders a feeling different in kind from any which

is created by the more versatile and garrulous reason"—or, as I should say, by any mere appeal to the intellect. And such conduct excites such feelings because it is itself inspired by a profound reverence for goodness, and thereby tends to awaken it in others. It is "difficult," he also says, "to estimate the moral power which a single individual, trained to practise what he teaches, may acquire in his own circle in the course of years." And that moral power is due, in the last analysis, to devotion to his highest ideals of conduct and of truth.

Imitation and Character-building. — We have been hearing a good deal of late — and none too much — about character-building as the most important aim of education, and the Herbartians have been unwearied in telling us how to arrange courses of study to that end. But they concentrate attention on the wrong point. Doubtless the true teacher will find himself handicapped by an ill-arranged, injudicious course of study. In the matter of character-building, however, it is the teacher, and not the course of study, that counts. And the teacher whose influence tells is not of necessity the one with the greatest amount of knowledge or of intellectual power, but the one with a supreme regard for the things that make life worth the living.

Imitation During the Kindergarten Period. — Our point of view also enables us to see a new reason for making the Kindergarten a part of the public-school system. It would, as we know, never be true to say that during any period of the child's life imitation has the field to itself. But that, as we have seen, is more nearly true of the Kindergarten

period than of any other. Models of all sorts make a far more powerful and undiscriminating appeal to him then than they do when, at a later period, his character has begun to develop. Now there are certain phases of education that are very well described by saying that they consist in putting before the pupil models to be imitated. It is one aim of education throughout to keep before the pupil certain models of clear and accurate and discriminating thinking, of correct feeling, and of strenuous willing, in the hope that he may imitate them. If there is a period in the life of the child when he is readier to imitate any kind of model than he ever is again, that is the period when it is above all things incumbent on society to do what it can to bring him in contact with those who are worthy of being imitated. That period is the Kindergarten period.

Imitation in Dress, etc. — The influence of imitation in such external matters as dress, neatness, deportment, language, is self-evident. A pupil whose habits in these particulars are not what they ought to be may be stimulated to form correct ones by the example of a good teacher.

But it has not been so often noticed that carelessness in these matters may materially diminish the influence of teachers in more important directions in the case of pupils who in matters of dress and deportment are above reproach. It requires a trained eye to see a diamond in the rough. And admirable traits of intellect and of character, concealed by untidiness in dress or a disregard of some of the smaller conventions of life, may either not be seen by pupils of fastidious taste, or may appear unadmirable because of their associations. It is said that in a certain school in Chicago which is attended by many children of

wealthy parents, some of the pupils do not recognize their teachers when they meet them on the street. This may, of course, be due to the fact that the teachers are looked down upon because they are poor. If so, it is simple snobbishness, and no more is to be said about it. But it may be due to the fact that the teachers are careless in matters upon which their pupils have been taught to lay great stress. In that case those teachers have deprived themselves of the power of rendering service to their pupils in the most important matters. It is a well-known fact that the average Chinaman thinks himself vastly superior to the average European or American because our manners and customs are different from and therefore, from his point of view, inferior to his. Teachers need to understand, therefore, that when they fail to set their pupils a good example in external matters, the result upon the minds of some of these will be a repugnance to patterning after them in anything — a disposition to like what the latter dislike, and *vice versa*.

Influence of the Child's Associates. — If the child is susceptible to all the influences with which it comes in contact, it is the business of the school to do what it can to protect him from influences of a hurtful character. I once heard a teacher in Dayton, Ohio, say that she made a careful inquiry as to how her pupils — boys and girls from ten to thirteen years of age — spent their evenings, and she was astonished to learn that fully one third spent them as they liked — their parents did not know how. Where this is the case it is needless to say that the work of the school during the day must be limited to the production of some small effect upon the intellect, imparting some

scraps of knowledge and developing some little intellectual power. The boy's real teachers, those who are giving him his ideals of life and conduct, are the companions with whom he spends his evenings.

It does not fall within the province of this book to point out particular modes for dealing with such an evil. The problem is a difficult one, and all the more so because of the fact that so many of the children have scarcely anything that deserves to be called a home. But if it is worth while for the American people to spend nearly two hundred million dollars for free education, it must be worth while for them to do something towards supplying the practically homeless children in our cities and towns with amusements and recreations which they may enjoy under such circumstances as will promote the work of the school. Education is a serious business. Once we come to understand how serious it is, we shall find some means of diminishing the number of those who spend their evenings in such a way as to bring to naught the efforts of the school to exert a moral influence.

QUESTIONS ON THE TEXT.

1. What criticism has President Eliot recently made on the public schools, and why is it unjust?

2. What is the chief source of a pupil's ideals, and why?

3. The pupil "cannot get from his intellect any firm support for his ideal." Explain.

4. In what way is personal influence a means of propagating truth?

5. What is the relation between imitation and the formation of character?

6. Why is imitation so influential during the kindergarten period?

7. Why does the average Chinaman think himself superior to the American?

8. What is the bearing of this fact on education?

9. Why may a child's associates exert a greater influence on his life than the school?

SUGGESTIVE QUESTIONS.

1. What is meant by the spoils system, and in whose administration did it originate?

2. What makes possible its continuance?

3. How does the story of Alcibiades illustrate the influence of imitation?

4. How was it that such a man as he could be so deeply affected by the teaching of Socrates?

5. Show that ideals are not produced by argument.

6. What sort of imitation exerts the greater influence during the period of maturity, and in what way?

CHAPTER XIII.

HOW THE CHILD'S CAPITAL IS TO BE INVESTED: MANUAL TRAINING.

Curiosity. — In the preceding chapters some of the more important of the child's impulses were considered. Among those enumerated were curiosity and the constructive impulse. As to the former of these no discussion is necessary, at least as far as the general principle is concerned. All are agreed that in the first years of his school life we must bring the child face to face with nature and man because, among other reasons, he has a desire to learn about them. No such agreement as to the use to be made of his constructive impulse exists. Judging by the practice of American schools, we are justified in concluding that the general opinion is that this impulse is to be ignored. The child, the very embodiment and personification of action, the closest approximation to a perpetual-motion machine the world has ever known, is to be treated as though his one supreme desire is to sit still and learn!

The Constructive Impulse. — How fundamentally, fatally wrong this is we shall begin to see if we but recall the methods by which the child has acquired the attainments he possesses when he begins his school life. When he was a baby in his mother's arms he began, as we may say, to make a study of his surroundings. In the nature of the case he had to proceed without help: no one could assist

him until he had gained some knowledge of the meanings of words and gestures. When his rudimentary knowledge of language made it possible for others to aid him by telling him something of the names and properties of things, the process of learning about things for himself went on unremittingly. We know how the child gained this knowledge: it was not by passive observation, but through the practical manipulation of things. The child's play, as we have seen, is largely the gratification of his constructive impulses. It is this play, this incessant handling of things, this "setting up and knocking down, this putting together and pulling apart," by which he has been learning about the world before he goes to school. Shall the school be wiser than nature? Shall it neglect an impulse which under the tuition of nature enabled the child to make such rapid advances? Shall the investigation and manipulation of objects cease when his school life begins? Shall no use be made of his hands except to hold a book and a pencil? This is of course equivalent to asking whether manual training shall have a place in the school, and that from the very start. If the analysis already made is correct, there can be no doubt about the answer. No one calls in question the value of object-teaching. Object-teaching is a continuation in the school of the same observational processes so active in the mind of the child before going to school. It aims to extend the same kind of knowledge that was acquired through observation out of school, and to make that already acquired more accurate and definite. On precisely similar grounds it is clear that the activity of the hands ought to go on, that the processes through which the child has already gained an intimate and vivid sense of reality should continue until,

perhaps, they culminate in the laboratory of the high school and the college. Professor James truly says that one not taught by these methods, one "brought up exclusively by books, carries through life a certain remoteness from reality; he stands, as it were, out of the pale, and feels that he stands so; and often suffers a kind of melancholy from which he might have been rescued by a more real education." True as this is — and many a bookishly educated man wonders how Professor James was able to describe this experience so accurately — it is but an approximation to the whole truth. The man who has been trained by exclusively bookish methods is cut off from a large and significant part of the life of his fellows. He is like a man without an ear for music trying to listen to one of Beethoven's symphonies. As such a man hears only noise, as he perceives no harmony or melody, so the book-learned man stands outside the industrial life of the world. He hears descriptions of wireless telegraphy and typesetting machines, but he does not understand them. He has not the basal concepts which this comprehension requires and presupposes.

Manual Training and Respect for Work. — Moreover, manual training tends to cultivate a respect for work. It has already been insisted on in these pages that it is the function of education to produce a certain effect on the emotions; that he who puts a false estimate on things lacks the essential quality of an educated man. It would be easy to show that havoc and confusion in life are wrought by these false estimates, and in no way, perhaps, more disastrously than in making men feel that certain kinds of work which society requires for its well-being are not respectable. It

is interesting to note how the ideals that ought to be peculiar to aristocracies linger on in democracies. Clearly a democracy ought to hold that whoever is worthily doing work which the world needs to have done is an honorable man. Democracy — the creed that asserts that in an ideal society each man will do the work in which he can render the most effective service both to himself and the community — ought surely to hold that any work that supplies a real need is honorable. A democracy conscious of its nature and its ideals would surely hold higher in the scale of worth any necessary work than white-handed idleness, however refined it may suppose itself to be. Strange that after all the centuries since Plato wrote his Republic and Aristotle his Politics the world should still need to be told that the honorable life is a life of labor!

This false notion as to labor, and especially as to the comparatively unrespectable character of manual labor, is a powerful obstacle to the realization of the ideals of democracy. It crowds the professions with men who ought to be manual laborers. "Mamma's darling must never be a blacksmith" — as though a first-rate blacksmith were not a more respectable man than a second-rate lawyer! It robs manual laborers of the consideration to which they are entitled. It tends to create and perpetuate those artificial class distinctions, those barriers between man and man, which it is the purpose of democracy to break down.

Now a manual-training course, taught by those who profoundly feel the dignity of all true labor, would surely tend to the formation of a genuinely democratic public opinion. Apart from the influence of the teacher, such a course naturally conduces to that end. The boy in whom the intellectual interest predominates, working side by side

with one in whom the impulse to make predominates, cannot help realizing his inferiority to the latter in manual capacity, cannot help acquiring some respect for his work. And the teacher, vividly realizing the position of present forms of manual labor in the development of the race, and clearly perceiving the character of its scientific basis, will surely improve every opportunity to bring these thoughts home to students of both classes, so that both may see and feel that the manual laborer also has his place in that development, that his labor also can be illuminated by the insight of the mind.

This, it is evident, is the great need of workers of all classes. Whoever works simply for his wage, no matter what his work may be or the amount of compensation he receives for it, is a drudge.[1] Whoever, on the other hand, realizes the relation of his work to the life of the world, to its historical life, to its scientific life, infuses his daily toil with the dignity of the mind. To do the work of a machine, with no thought but of the product and of the wage to be received for it, is to degrade one's self to the level of a machine. To do one's work, no matter how mechanical, with a full consciousness of its relation to the life of the past and the present is to live a worthy life. The motorman on the street-car, who knows only enough to stop his car and start it, who never thinks of the relation between

[1] In his able and suggestive inaugural address President Woodrow Wilson said: "We ought distinctly to set forth, in our philosophy of this matter, the difference between a man's preparation for the specific and definite task he is to perform in the world and that general enlargement of spirit and release of powers which he shall need if his task is not to belittle him." To prevent the work we have to do in the world from dwarfing us, to compel it to become a means of growth and development, is one of the most important purposes of education.

the electric car and the countless machines that link it with the time when men knew no better way than to travel afoot and carry their burdens on their shoulders, who never gives a thought to the strange and wonderful force which he is constantly guiding and which obeys him so implicitly and so unhesitatingly, lives a life, so far as his work is concerned, not much above that of the dog who has only sufficient intelligence to fetch and carry at his master's bidding. The motorman, on the other hand, with the realization that he is, so to speak, the living embodiment of countless thoughts about transportation, that nature is obediently putting at his disposal one of her marvellous forces, that she stands thus ready to do work which the world has scarcely dreamed of when she receives the right word of command, is doing work which is of value in and of itself, not simply because it gives him a living. To appreciate the significance of work, to realize what it represents in the life of the race, is to rob it of its legendary curse. And to help in this direction is one of the functions of manual training.[1]

Manual Training Adapts the School to the Many. — It directly follows from this that manual-training courses adapt the school to those whose dominant interest it is to *do* as well as to those whose dominant interest it is to *know*. When the history of education in the nineteenth

[1] It is indeed true that in this country, at least, a motorman who puts that kind of intelligence into his work is almost certain of promotion. President Vreeland, for example, of the Metropolitan Street Railway Company of New York was, in early manhood, a brakeman on the Long Island Railroad. But quite independently of that, the argument of the text is that any legitimate work may be done in such a spirit as to make it a thing worth doing for its own sake.

century comes to be written in the light of the ideals of the twentieth, it will surely seem remarkable that in a large number of the States of the Union compulsory-education laws were enacted — laws to compel those to go to school who would stay away if they could, while at the same time the training which was thus forced upon them was primarily adapted to those who went to school by preference. The aristocratic ideals of the Old World, which in so many particulars continue to dominate the New, have shaped our courses of study in the interests of the few who desire a thorough education, of the small minority in whom the intellectual interest is predominant. No wonder that compulsory-education laws have been necessary; that as soon as the law permitted, the great majority of our boys and girls have left an institution whose work was not primarily adapted to them. If our public school is indeed for the people, to qualify them to make the most of themselves and life, it will cease to ignore the fact that the overwhelming majority in this and in every other country earn their livelihood by some form of manual labor. It will give them such a training as will equip them most completely for earning a living, as well as dignify their labor and make it respectable in their own eyes and that of the world, and with all the more earnestness since, in being adapted to the manual laborer, it is none the less adapted to the man who has mainly an intellectual interest.

QUESTIONS ON THE TEXT.

1. How has the child acquired the attainments which he possesses when he begins his school life?

2. Of what does the child's play consist?

3. "Shall the school be wiser than nature?" Explain.

4. Show that the same argument may be made for manual training as for object teaching.

5. In what way would manual training tend to cultivate a respect for manual work?

6. What is the creed of democracy?

7. In what way does a false notion as to labor prevent the realization of the ideals of democracy?

8. "Whoever works simply for his wages is a drudge." Explain.

9. What is the meaning of the sentence quoted from President Wilson's inaugural address?

10. What is the illustration of the motorman intended to show?

11. "Manual-training courses adapt the school to those whose dominant interest it is to *do*." Explain.

12. What is implied by the aristocratic ideas of the Old World?

SUGGESTIVE QUESTIONS.

1. In what sense and to what extent should we "follow nature"?

2. What is meant by "basal concepts"?

3. What is the relation of a farmer or a watchmaker to the historical and scientific life of the world?

4. "To do one's work, no matter how mechanical, with a full consciousness of its relation to the life of the past and present is to live a worthy life." What is the relation between this statement and the conclusion reached as to the end of education?

5. In what ways may the necessity for compulsory-education laws be diminished?

CHAPTER XIV.

HOW THE CHILD'S CAPITAL IS TO BE INVESTED: HIS ART, SOCIAL, ETHICAL, AND EMULATIVE IMPULSES.

THE preceding chapter sought to show that, for a variety of reasons, courses in manual training ought to form a part of the work in every grade of the elementary school. Of the child's constructive impulse, then, the same conclusions hold as of his curiosity. The only question we have to consider is the adaptation of manual training to the various stages of his development.

The Art Impulse. — No argument is needed to show the importance of taking the child's art impulse into account. For the learning of memory gems, which is universally required of children, some justification is found in the fact that children have the capacity to appreciate the beautiful in literature. What the school needs to do is to recognize the art impulse of the child in its entirety, to treat it as a thing which demands to be brought into a many-sided relation with life. Whenever a child does a thing less beautifully than he might have done it, the difference between what he has done and what he ought to have done should be impressed upon him. Tactfully and considerately, his dirty hands and soiled shoes, his disorderly desk and dog-eared books, should be made to offend his æsthetic sense so that in its promptings the teacher may find at once an ally in the maintenance of

good discipline, and a stimulus to actions which grow out of the art impulse.

The Social Impulse and Language Training. — The social impulse should be utilized in language training. If we remember that it is society that makes language possible and useful, that the same impulse lies at the foundation of both, it will be easy to get a criterion to test the value of language training. In language training only that method is wise which is based upon the social nature of the child. Dr. Dewey very aptly remarks that "there is all the difference in the world between having something to say and learning to say something."[1] He who teaches the use of language by contriving that the child shall know something that he wishes to say conforms to the child's nature; he who compels the child to talk or write without having previously furnished a motive for saying something does violence to that nature. All that is needed to give the child an impulse to talk is to fill his mind with facts that interest him. You may indeed by discipline, or by appeals to emulation or to the child's desire to please, create an artificial motive. But discipline which does not strengthen a natural impulse to action, appeals to emulation or to the desire to please for the sake of making a pupil do what he has no inclination to do at all, are perverted. What a child does under such influences is always done in a half-hearted, perfunctory way.

This is the reason why teaching language without reference to the other work of the school is absurd. When that subject is taught apart, the child is compelled to talk for the sake of saying something; when taught in connec-

[1] Dewey, School and Society, p. 63.

tion with the child's work, the pupil is easily stimulated to talk about what he is interested in.

This kind of language teaching will react on the other work of the school. If the child does not want to talk about his lessons, it is because they are not adapted to the state of his development.

The Social Impulse and the Moral Nature. — It goes without saying that the child's social impulse should be utilized in the development of his moral nature. It is hardly too much to say that without society, that relation of man to man which is the product of his social nature, the development of the moral nature would be impossible. That is the meaning of Aristotle's paradox: "The state is prior to the individual." In other words, apart from organized society the most distinctive and characteristic elements of human nature would remain for the most part mere unrealized possibilities. It is by contact with the minds of his fellows as manifest not only in art, literature, history, government, but by daily intercourse, that the individual gradually attains to a realization of himself.

Now it is the constant duty of parents first, and later of parents and teacher, to see that the child does not infringe upon the rights of others. Far wiser than Rousseau, Locke saw that the baby in its mother's arms could begin to acquire what he rightly regarded as the most precious wisdom of life, the ability to cross one's own inclinations and follow where reason directs even though appetite leads the other way. As has already been said, the whole object of education is to train the human being so that he will be governed by his reason. And the most important feature in elementary education consists in the adoption of such meas-

ures as will result in the child's being guided by another's reason until he is capable of being governed by his own. This must not, of course, be construed as meaning that up to a certain point in his development the child will be controlled entirely by another's reason and then wholly by his own. The true meaning is that there must be a gradual transition from the one state to the other. Little by little he comes to see the object of the teacher's requirements, and in so far as he does he substitutes his reason for the teacher's. Now these requirements, growing out of his own nature and that of the world in which he lives, will relate to him not merely as a physical and an intellectual but also as a moral being. And the wise preceptor, whether parent or professional teacher, will not only see to it that the requirements are fulfilled, but also that the reason for them is understood as early as may be.

Rousseau and Pestalozzi on Moral Training. — One of the cardinal blunders of that paradoxical but wonderfully suggestive book on education, Rousseau's Émile, consists in the doctrine that there can be no training of the moral nature until the adolescent period. And few things in the history of education are more interesting than that Pestalozzi, who received his inspiration from the erratic Frenchman, differed from him so fundamentally on this point. In his detailed account of his epoch-making experiment at Stanz, Pestalozzi shows us in the most vivid way how the child's social impulse can be utilized in the development of his moral nature in the early years of school life.

"Although," as John Morley says, "none can be vicariously wise, nor sage by proxy, yet is it not a puerile wastefulness to send forth the young all bare to the

ordeal, while the armor of old experience and tempered judgment hangs idle on the wall?" So Pestalozzi regarded it. In place of the cold, apathetic automaton that stands by the side of Rousseau's Émile, passionlessly manipulating the forces of nature in order to suggest or inhibit certain conduct, he puts an earnest, warm-hearted human being, kindling into flame the moral impulse of his pupil through his own enthusiasm for goodness.

The Social Impulse and the Study of History. — It is the child's social impulse, his interest in his fellows and society generally, and his relation to them, which justifies the important place which the study of history should occupy in the school. Not an anti-social being, as Rousseau crudely thought, but the heir of all the ages, the child should get, even in the elementary school, some glimpses of the road over which the race has so laboriously travelled, in order that he may get something of that enlargement of spirit, that insight into existing social conditions, that knowledge of what constitutes the real welfare of a people, and that sympathy with, and charity for, his fellows which are so essential to rational living.

Intellectual, Constructive, Art, and Social Impulses Contrasted with Imitation and Emulation. — A study of the child's intellectual, constructive, art, and social impulses directly suggests lines of activity which lead to important educational results. Because he is curious, we should teach him such facts about the world and about men as will at the same time gratify and stimulate curiosity; his disposition to make things should be encouraged because important educational results are thereby obtained;

his art impulse should be developed by directing his attention to beautiful things, because the appreciation of beauty is one of the things that make life significant; his social impulse should be utilized not only by teaching him to speak and write in such a way as to gain the power of effective speech, but in leading him to form habits that will make him a useful member of society.

But the other impulses of the child do not of themselves lead to any definite lines of activity. A child's imitative impulses tend to make him imitate any model that is put before him, good or bad; his love of superiority creates the desire to excel his fellows in anything they are doing; his love of approbation occasions the desire to be commended by his companions whether or not his acts are commendable. What a child does in consequence of these impulses, then, depends not so much on what he is as on what his surroundings are.

It is of course true that the children by whom he is surrounded are giving expression to the various impulses of their nature in the activities in which they spontaneously engage. And inasmuch as he and they have a common nature, the impulses which stimulate them to activity are sure to be shared by him. But while children have a common nature in the sense that all of them have the same impulses, they do not have these impulses in the same degree. When, therefore, it is said that a child in consequence of certain impulses does what he does, not so much because of what he is as because of what his surroundings are, the meaning is that the impulse which, apart from his surroundings, would tend to express itself in those lines of activity is too weak to spur him to action.

The Place of Emulation in the School.— If this be true, it seems evident that it is the business of the school to utilize these impulses in the education of the child. If the child can be put in a position where his surroundings will make him desire to do what he would not otherwise want to do; if he can be brought into contact with certain standards of excellence and, by having his emulative impulse stimulated, prompted to equal if not surpass them; if, by appeals to his love of approbation, he can be moved to do what he would not otherwise care to do, the teacher would seem to be making wise investment of the child's capital — an investment that cannot but redound to his highest good. Those who refuse to make an appeal to such impulses say in effect that a part of the child's nature is evil and evil only, so evil that to make a wise use of it in his education is impossible. At the risk of wearisome repetition, I wish to point out that those who would rely entirely on interest in the subject studied believe that such impulses as emulation, the love of approbation, the fear of punishment, should not be stimulated in the school. So general is this view that to oppose it requires some little courage in one who would fain be regarded as a progressive thinker. This book maintains that the spirit of emulation may properly be aroused, on the ground that (1) the interest growing directly out of the work will not be strong enough in many cases to induce the child to do it; (2) the idea that by a proper course of training emulation can be suppressed is absurd; (3) it is a question, then, not of the suppression of emulation, but of a wise use of it. Utilize judiciously the spirit of emulation and you get work better done by means of it than you could without it; refuse to make use of it, and you have only left it to express itself in ways

that have no value for education. To educate emulation out of a human being is neither possible nor desirable. It is not possible because education can neither make nor suppress any impulse. It is not desirable. Deal with the whole child in such a way that he will not wish to emulate unworthy examples. The result will be that his disposition to emulate will powerfully coöperate with his better nature to promote his own best interests and those of society.

QUESTIONS ON THE TEXT.

1. What is meant by the art impulse, and how may it be utilized in the school?
2. Show by illustrations what the social impulse is, and explain the uses to which it may be put in the school.
3. What is the relation between the social impulse and the moral nature?
4. "The state is prior to the individual." Explain.
5. What did Locke regard as the most precious wisdom in life?
6. What is the most important feature in elementary education?
7. How did Rousseau and Pestalozzi differ as to moral training?
8. What did Moseley mean by "the armor of old experience"?
9. What is the place of emulation in the school?
10. Why is it impossible to suppress emulation?

SUGGESTIVE QUESTIONS.

1. What is the relation between the cultivation of the art impulse and the end of education?
2. Write an essay setting forth the difference between yourself as you are, and as you would have been if you had been brought up among a tribe of savages, cut off from the sciences, art, and literature of the race.
3. Froebel said that a human being is a member-whole: that is, that from one point of view he is a member and from another he is a whole. What do you suppose he meant?

4. In what way has the telegraph helped the people of the world to realize that each individual is a part of a great whole?

5. Can you state the difference between Rousseau's conception of human nature and Froebel's? Between Froebel's and Aristotle's?

6. Write an essay on the uses and abuses of emulation.

CHAPTER XV.

The Foundation on Which the School Must Build. — We have seen that when the child begins his school life he has already gained considerable knowledge of his fellows and of the world about him. Evidently one of the things which the school must do is to enlarge and deepen this knowledge. The thought, reflection, and contemplation in which with Aristotle we find a supreme end of life must relate either to men or to nature; the beauty in the appreciation of which we find another supreme end exists either in the world of society or of nature; the duty in the perfect devotion to which we find the highest end of all is learned through a knowledge of one's fellows and his relations to them. And all the subordinate ends of life — health, the intelligent performance of the duties of citizenship, the earning of a livelihood, the wise training of children — are to be reached only through obedience to laws resulting from a knowledge of these two worlds.

The knowledge, then, of men and things which the child of six has when he first goes to school furnishes the foundation upon which we must build. This foundation, as Comenius long ago pointed out, includes some knowledge, vague and rudimentary as it of course is, of nearly all the sciences. Shall we, as seems to be recommended by high authorities, take no account of this knowledge and of the methods by which he acquired it when the child first

becomes a pupil? Surely the methods by which he has made his acquisitions should not be ignored. The chief difference between the child's life in school and his life previous to the school age (supposing that it was wholesome) should be that the school should have him do consciously and systematically what before he did blindly and unsystematically. Armed with all the resources of child psychology, the school should surround the child with such influences that those original investigations by which he has gained a large part of his acquisitions may not only continue but bear the richest fruit possible, and this fruit not only in the form of immediate results, but of a growing love of study. The child's curiosity, let it be repeated, is his intellectual capital. Wisely invested it will yield compound interest; it will grow and grow so as, under favorable circumstances, to make him an inquirer all his life. Not only so: the knowledge implanted by the school should be most carefully adapted to his state of development. It should as far as possible bear on his original investigations. These should whet his appetite for second-hand knowledge; this in turn should stimulate his curiosity: it should both broaden his vision of the world and intensify his desire to know more of it. The school itself, however, cannot do much to help the child acquire a first-hand knowledge of men. His schoolmates and playmates, his parents, brothers, and sisters, the teacher herself, will constantly furnish material for this kind of knowledge. Perhaps the chief thing the school can do in this direction is to determine to some extent the kind of material presented to him. By its discipline the school can exert a great influence, and it can also do something towards determining the character of his associations out of school

— in other words, the sort of knowledge of his fellows which he will acquire. But from the beginning the school should determine the sources whence his further acquisitions of second-hand knowledge of men are to be derived.[1]

Reading and Story-telling. — Important, however, as is this work — and it would be difficult to overestimate its importance, — the school should by no means rest content with it. The teacher should at once begin to read to the child any easy selections and relate to him any simple stories in which she can interest him — not only those about the heroic figures who have played a great part on the world's stage, but those of common men and women as narrated in the daily papers, showing that even humble laboring men may also be cast in the mould of heroes.

Language Lessons. — If these are made the basis of language study, not only will it have a scientific foundation, but it will add to the educational value of reading and story-telling. The more completely these become a part of the very life of the child, the better they will accomplish their purpose; the more, on the other hand, his mind is active about them, the more they will enter into the very warp and woof of his being. Hence it happens that by gratifying, under guidance, his social impulse he is strengthening his intellectual impulse.

Nature Study. — The stories and readings, and the language lessons in conjunction with them, will occupy but a

[1] This requires the intelligent coöperation of parents and librarians. "It is said on good authority that some years ago the librarian of Worcester, Mass., S. S. Green, succeeded in connecting the schools so closely with the

small part of the child's time. Some of the time remaining should be devoted to a first-hand study of nature. When the weather permits, a considerable part of this study should be done out of doors. Such work in the company of a devoted, enthusiastic teacher, a teacher who is a close observer of nature and also a lover of children, will do more to quicken their observing powers than can be done in any other way. This work also should be made the basis of language lessons.

Drawing. — We have noted the great activity of the constructive impulse. One of the forms in which this impulse manifests itself is in the attempt to draw things. Observers of children tell us that this impulse begins to show itself at a very early age. It hardly needs to be said that manifold educational results can be obtained by its direction and guidance. Most of the arguments adduced for manual training can be urged in favor of drawing. Besides, drawing cultivates the powers of observation and strengthens the memory of natural objects, their precise appearance, size, shape, etc. How valuable all this is for purposes of thought is self-evident. A large part of the material of thought is furnished by our sense-impressions, and the more definite these are the clearer will be the thinking that is based upon them. Besides an accurate knowledge of natural objects greatly increases our power to enjoy literature, a considerable part of which deals with these; and the more vivid the images of the objects referred to by it the greater will be our capacity to appreciate it. Moreover, such knowledge is a source of keen

library that he and the teachers controlled the reading of the whole rising generation of the city." (Hinsdale, Art of Study, p. 68.)

æsthetic enjoyment in another direction. Cowper said that there was not a sound in nature that it did not give him a pleasure to hear; not excepting, even, the cackling of a goose. He probably meant that so closely associated with the recollections of early childhood were these sounds that the recalling them was a source of pleasure.

Drawing may help to fill the mind with visual images that have a similar relation to the memories of childhood. Who is there that has left the home of his boyhood, never to return, that does not regret that he cannot recall the precise look of the old trees, the maples that stood in the yard, the cedars and walnuts along the lane, the brook and the rough boards across it, the bends in the country roads — every detail that may help the scenes of his childhood to live again in his memory?

Drawing also, like manual training, may be used to increase the interest of children in the more purely intellectual work of the school. "Take," as Mr. Tadd says, "a rural school where the children get a little reading, writing, and arithmetic, in homœopathic doses, and very little of anything else. See what glorious possibilities there are here if the teacher has any idea of drawing as it should be taught. Right at the door is the whole field of nature; plants, flowers, insects, animals, stones, fruits, vegetables, can be produced without any trouble. The children are delighted to bring almost anything in the way of models of this kind. If they are near the seashore, the boys can get endless forms of life in the way of seaweeds, shells, crabs, fish, etc. These forms can be drawn and the reading, writing and arithmetic, and other studies, hung on as incidentals. The children will be fascinated and inspired at first hand. They will take an added interest in their

work, especially when the doors of their minds are opened, and the things of which they see so much and know so little are transformed for them." [1]

Music, Physical Culture, and Manual Training. — Singing and lessons in vocal music, physical culture, and manual training should also form a part of the exercises of the school from the start. The argument for manual training has already been stated. Singing should be included in the exercises, not only in order to develop the musical capacity of the pupils, but because of its bearing on discipline and the general tone of the school. Vocal music should be taught for similar reasons, and also because children are as competent to learn the elements of music when they first begin going to school as they ever are. They should receive physical culture for the sake of health and gracefulness, and also because, affording as it does scope for the exercise of the active propensities, it adds to the interest of the school.

Number Lessons. — Lessons in number should likewise form a part of the work of the child during his first year at school. These lessons should be connected with, and be primarily for the sake of, the other work he is engaged in.

Distribution of Time. — We have now covered the work that seems proper to be undertaken during the first school year: reading, writing, language lessons, number work, nature study, stories, easy literature, physical culture, manual training, singing, vocal music, and drawing. How

[1] Tadd, New Method in Education.

shall the time of the child be distributed among these various subjects ?

The Committee of Fifteen recommended two lessons a day in reading and two in writing, each fifteen minutes long ; an oral lesson in language, one in arithmetic, one in general history, and one in natural science, each twelve minutes in length ; an exercise in physical culture, one in vocal music, and one in drawing, these averaging twelve minutes each — making in all two hours and twenty-four minutes as the total time occupied in class exercises. They made no mention of literature as distinct from reading, or of singing as distinct from vocal music, or of manual training. If we add these exercises, and give to each of the first two twelve minutes, and to the last an hour, we shall have provided for about all of the time in school, assuming that a daily period of four hours is sufficient during the child's first school year, and that the other recommendations of the Committee of Fifteen are accepted without modification.

Young Children's Need of Supervision. — But it may be said that this leaves the child no time to work by himself, and that if he does all his work under supervision, he will not acquire the power of independent work. This question has been ably discussed by the late Professor Hinsdale in his "Art of Study." He insists with great emphasis on what no one will question — that when children begin to attend school they do not know how to study, and that their first work, therefore, should be done under direction and supervision. To say that because a teacher is moving about among her pupils, making a suggestion to this one and to that, they will not acquire the

power of independent work, presupposes that she will give them assistance when they ought not to have it. But there is no ground for that presupposition. We should not condemn an educational theory as unsound because poorly trained teachers cannot apply it. Such a judgment would bar the path to every improvement in education. A wise superintendent, appreciating the fact that his primary teachers are unable wisely to devote all their time to a single class of students, would not require this until he had qualified them for it by careful training. But there is surely a wide difference between maintaining that a given primary teacher will do more effective work by dividing her time among two or more classes, and contending that a properly trained primary teacher cannot best promote the interests of her pupils by devoting all her time to a single class.

The Economic Difficulty. — Some people who are convinced by this argument may urge the economic difficulty. They may say that boards of education cannot be prevailed on to employ primary teachers enough to carry out this plan. Of course if they will not, they will not. But if they are amenable to reason they can readily be made to see that their attitude is a block to progress — that the schools under their control, at least with regard to the primary grades, will only "mark time." It was only in the last century that the economic difficulty seemed to almost every people an insurmountable obstacle in the path of popular education. But little by little the world is beginning to see that whatever the interests of the rising generation demand must be made possible; that everything is secondary in importance to giving to children

such an education as will enable them to make the most of themselves in the world. Once convince a man that the school is an institution by means of which society undertakes to bring about a realization of its ideals, and you have gone a long way towards wringing from him the admission that whatever it requires for its most effective work must be furnished.

Second-year Work.—The work of the second year should be of the same general character as that of the first. The child should be able to read by the end of the first year. The additional hour that he may be required to spend in school each day may be occupied in reading at his seat, with the exception of a short period that might be devoted to an oral lesson in geography.

QUESTIONS ON THE TEXT.

1. What are the worlds with which the child has some acquaintance when he begins his school life?

2. What is meant by "first-hand knowledge of men," and what, in the case of the child, is the source of it?

3. What can the school do in the way of determining the character of the child's second-hand knowledge of men?

4. How may readings and stories and nature study be made the basis of language lessons?

5. What purpose is served by the teaching of drawing?

6. Why should singing be included in the exercises of the primary school?

7. What follows from the fact that young children do not know how to study?

8. Reply to the economic objection to giving children in the primary grades the entire time of their teacher.

SUGGESTIVE QUESTIONS.

1. Show that the child has a rudimentary acquaintance with astronomy, zoölogy, physiology, botany, chemistry, psychology, meteorology, and history when he enters school.

2. Show from your own observation that children can be interested in readings and stories as early as the first year of their school life.

3. Through what law of the mind does the enthusiasm of a teacher influence her pupils?

4. "A large part of the material of thought is furnished by our sense-impressions." Will you show by illustrations that a part of the material of thought comes from another source?

5. Illustrate the relation between an accurate knowledge of objects and the enjoyment of literature.

6. Why ought the school from the beginning to aim at developing the capacity to enjoy literature?

CHAPTER XVI.

SHOULD READING AND WRITING BE TAUGHT BEFORE THE AGE OF TEN?

In the preceding chapter we discussed the course of study in the primary grades from what may be termed the traditional point of view. But high authorities claim that reading, as well as writing and other processes involving precise measurements, should not be taught before the child is ten years of age. Before stating the argument of the reformers in the case of reading, it is desirable to make a distinction. Reading for the sake of reading is one thing; reading for the sake of getting knowledge is quite another. And it is evident that perfectly conclusive arguments against the teaching of reading in the one sense may have no weight whatever against the teaching of reading in the other.

It is Argued that Reading should not be Taught Before Ten Because (1) the Function of Books is Supplementary.— It is urged that it is a mistake to teach reading before ten for the sake of getting information, because the function of books is supplementary — to supply second-hand knowledge when first-hand cannot be obtained — and that the learning about things for himself is the best use the child can make of his time during the first ten years of his life. This argument is defective in two particulars. In the first place it overlooks the influence which second-hand knowledge

may exert on the child's desire to acquire knowledge for himself. That this influence is very powerful is proved by the universal experience not only of grown-up people but of children. In the second place it assigns no reason for limiting to ten years the period during which the child shall be entirely occupied in gaining first-hand knowledge. That before information can be got from books the child must have learned many things for himself; that, when he is able to acquire knowledge by reading, it may be desirable for him to be confined entirely to first-hand knowledge, is not questioned. But precisely how long after the child's development makes it possible for him to enlarge his experiences by reading must we wait before teaching him to read? Evidently those who say until he is ten years old answer the question just as arbitrarily as it is answered by current practice. We can determine whether it is wiser to teach the child to read at ten than at six only by prolonged and careful experimental study. Only by the careful comparison of multitudes of children who have been taught to read at six with equal numbers of those with whom the process has been deferred until ten can any one say that those who spend the first ten years of their lives in enlarging their experiences at first hand have been the more wisely trained.

(2) **Because the Child has no "Natural Desire to Learn to Read."**—The claim that reading is a process distinct in itself, that it is not a thing that a child "takes to naturally," and that therefore it should not be taught before the child is ten, rests on different grounds. It may at once be granted that if reading is dissociated from the gaining of information, if it is taught merely as a translation of a lot of

visual symbols into sound symbols — not for the purpose of getting the thought that such symbols may signify, — no child ever learns to read because he has a desire to, unless that desire results from his association with those who do. We have already had occasion to note that the child's impulses may be put into two classes: those that grow out of his own nature independently of his environment, and those that grow out of and depend upon his social nature. Now when a child sees other people reading, his imitative propensities make him want to do likewise. In that sense a child may have a desire to learn to read when learning to read is not associated with the acquiring of knowledge. In that case, however, a child wishes to learn to read simply because he sees other people reading. But in the very same sense it is equally true that the child of ten, or, for that matter, the young man of twenty, has no desire to learn to read. Indeed it may be said that the older the child the more impossible it becomes for him to have such a desire. Reading is a means to an end, and the inherent rationality of human nature makes it impossible for us to have a desire to use a means apart from an end it is fitted to reach. When a human being, child or man, seeks to attain a certain object, he at once has an interest in what he perceives to be the means of reaching it. To dissociate the teaching of reading from the end that makes it valuable — the enrichment of the experience of the individual by the experience of his fellows — and then object to that teaching until the child is ten because till then he has no natural desire to learn to read, is surely a curious stand. Man has been called a tool-using animal. But if you put him in a situation where he must use his tools, if at all, for the mere pleasure of using them, where he can produce

nothing with them, hammer and saw and chisel will remain untouched.

(3) **Because Reading is a Recent Accomplishment of the Race.** — It is said again that reading is a comparatively recent accomplishment of the race — that ages and ages before it read, it talked. From this it is inferred that the child, who is supposed to reproduce in his experience the main features of the life of the race, should talk a long time before he is taught to read.

This argument, when adduced to prove that we should wait until the child is ten before we teach him to read, is found to contain the same fallacy as the one first considered. What it proves is that some time, indefinite in length, should elapse after the child has learned to talk before he is taught to read; what it is assumed to prove is that this time is a determinate period.

(4) **Because of the Development of the Nervous System.** — Another argument in favor of the proposed reform is based on the development of the nervous system. It is assumed that the cerebral centres used in reading are different from those used in speaking, and that the former mature much more slowly than the latter. Now if the facts as to the nervous system were as the argument assumes, then they would not prove what they are adduced to prove, for the reason assigned in the preceding paragraph. But the facts themselves are in doubt. All that is known about the intricacies of the nervous system is of the nature of surmises which give a more or less plausible explanation of certain phenomena. That the function of speech is intimately connected with a certain part of the

brain we may regard as highly probable; that reading depends upon a different centre is by no means so certain.

Moreover, this argument, in common with the preceding, has to reckon with a multitude of indisputable facts proving that children do learn to read at a very early age without any apparent injury to their health. When they can read fluently at seven it is a proof that the nervous mechanism at that age is so far developed as to make reading possible. The argument, then, falls unless it can be demonstrated that the health of children has suffered. That has not yet been done.

(5) Because the Fundamental Muscles Develop before the Accessory.—It is urged also that the child should not be taught to write before the age of ten because his writing mechanism is not fully developed, and that exercise will interfere with its growth and fix unnatural habits on its plastic elements. In a word, a theory has been carried over from the biological workshop to determine practice in respect to writing and drawing. This theory is that the child develops the power to use the main or "fundamental" muscles, those of the arm, for example, before the "accessory" muscles like those of the fingers; it is based upon many facts of embryology and observations of infants. But it is one thing to prove that, since the movements of the arm are more fundamental than those of the fingers, writing, which makes demands on the fingers, must not be taught until after the child has had sufficient experience with the fundamental movements, and quite another that this experience cannot be acquired until the child is ten years of age. Besides, it is a matter of common observation that infants at birth use their fingers for grasping, and

soon begin to use the index-finger for poking at holes, etc. Now when we know by observation that very young children take to some delicate movements and prosecute them persistently, the question as to the age when it is proper to require them to perform the movements used in writing is obviously one of fact, to be determined only by actual trial.

Objections Summarized.— From three points of view we may sum up the arguments against the traditional practice in teaching reading and writing. We are told that we should not teach these subjects to the child of six because he is not equal to the strain. But, in the first place, he evidently stands the strain; and, in the second place, those who decry the injury to health from reading and writing tell us to employ him in paper-cutting, paper-folding, clay-modelling, etc.—as if these things required no effort! One cannot help wondering whether the ardor of the reformers is not due quite as much to a disposition to assume that what is traditional is wrong as to the strength of the arguments in favor of their contention.

Again, it is argued that it is better to defer teaching reading and writing until the child is ten because he can then acquire these arts with so much more facility as to effect a wise economy of time. To this we can only reply with the Scotch verdict, "Not proven." No one knows how much more easily a child could learn to read and write in consequence of additions to his stock of knowledge. It would surely be presumptuous to assume that the traditional practice is in perfect accord with the nature of the child; but it is almost equally presumptuous to assume that departure from it in a definite and arbitrarily assumed way is any more rational.

"Old things may not, therefore, be true:
No, brother man, nor yet the new.
O yet awhile the old thought retain,
And yet consider it again."

Practical Argument in Favor of Current Practice. — So far the question has been considered from the point of view of educational philosophy. From that of educational statesmanship the question does not admit of debate. However true it might be that, so far as the nature of children is concerned, it would be better to wait until they are ten before teaching them reading and writing, we are confronted with conditions that make it absurd to consider the question in connection with the American public school. In spite of our compulsory-education laws, the education which a large number, perhaps a majority, of American children receive they get before they are ten years old. To have them wait until they are ten before learning to read and write would be to have them wait forever.

Relation Between the Real and the Ideal. — It does not follow, therefore, that the consideration of the question is without value. Far from it. There is nothing that the world needs so much to know as how to educate the child most wisely. And anything that tends to make us open-minded, to make us substitute the attitude of intelligent inquiry for that of narrow-minded dogmatism, is helpful. If the ideally wise is not the practically possible course, we have a supreme interest in knowing what the wise course is in order to do all that we may to transform real conditions into those that are ideal. The idealist may see never so clearly that he must come to terms with existing conditions.

But he knows also that existing conditions must come to terms with the ideal; that in the never-ending struggle between the real and the ideal, although the real is always victorious, the ideal is unconquerable; that ideals are immortal, while the real of to-day dies to give place to a new ideal to-morrow; that each new real, in the course of time, must meet the fate of its predecessors and give place to a real which is a closer approximation to the ideal.

QUESTIONS ON THE TEXT.

1. What is meant by saying that the function of books is supplementary?

2. State and criticise the argument that is based upon this.

3. How are we to ascertain when the child should begin to supplement his first-hand with second-hand knowledge?

4. State and examine the argument that is based upon the ground that the child has no natural desire to learn to read.

5. State and illustrate the two classes into which the child's impulses may be put.

6. What is it that makes reading valuable?

7. Point out the fallacy of the argument that is based (*a*) on the ground that reading is a recent accomplishment of the race: (*b*) on the character of the development of the nervous system.

8. What is meant by "fundamental" and "accessory" muscles? Illustrate your answer.

9. State the argument that is based on the development of fundamental before accessory muscles.

10. Summarize the arguments against the traditional practice of teaching reading and writing.

11. What benefits result from such a discussion?

12. State the practical argument in favor of the current practice.

SUGGESTIVE QUESTIONS.

1. Show that a child must have some first-hand knowledge before he can be taught to read, but that the question as to how much he must have can only be determined by experience.

2. What is meant by the localization of cerebral functions?

3. Can you cite examples from your own observation or reading to show that there is such localization?

4. What sort of facts would be necessary to prove that the reading is different from the talking centre?

5. How are we to ascertain when it is wise to begin to require children to use the accessory muscles?

6. State in the most general form the criticism to which all the arguments against the current practice are exposed.

CHAPTER XVII.

CONCENTRATION AND CORRELATION.

The Law of Interest.— Although the subject of the preceding chapters was the *what* rather than the *how* of the primary grades, it was sought to show that in teaching the various subjects they should be related to each other as closely as possible. The reading, writing, language lessons, drawing, number, and hand work should be based on the nature study, the stories, and the literature. So interwoven should be the various parts of a child's work that the pupil himself should scarcely be conscious that he is "studying" different subjects at all. Occupied all the time with subjects that interest him, he should be led from one to another by transitions so gradual and at the same time so natural that he will seem to himself to be doing the precise thing that he wished to do. The reason for this is found in what is known as the law of interest. An object lacking interest becomes interesting through being associated with an interesting object. "The two associated objects," says Professor James, "grow, as it were, together; the interesting portion sheds its quality over the whole, and things not interesting in their own right borrow an interest which becomes as real and strong as that of any natively interesting thing." [1]

Concentration Defined. — Now in so far as the work of the school forms organically connected parts of an interrelated

[1] James' Talks to Teachers, p. 49.

whole, in so far as every part of that whole is connected by intimate inner relations with every other part, in so far the work illustrates the pedagogic doctrine of concentration. Says Dr. Charles McMurry: "By concentration is meant such a connection between the parts of each study and such a spinning of relations and connecting links that unity may spring out of the variety of knowledge. . . . Concentration is chiefly concerned with the relation of different studies to each other." And he proceeds to illustrate the theory of concentration by an account of the procedure of Zeller, who attempted to group all the work of eight school grades around a body of historical narrative, so that the reading, language, geography, drawing, music, arithmetic, nature study, and literature should spring out of and depend upon it.[1]

The Principle upon Which Specialization Depends.— No one is so zealous for the doctrine of concentration as to contend that it should be carried out in all the grades of education. All admit that differentiation must take place, that the student must begin to devote his time to special subjects, at some point in the university, college, high or grammar school. Upon what principle is this differentiation based? If, according to universal admission, concentration must some time give place to what we may term specialization, there must be a reason for it; and that reason will be the principle which, correctly applied, will determine the point at which concentration should cease and specialization should begin. To put it differently, every one admits that specialization must begin some-

[1] See also De Garmo's "Herbart and the Herbartians" for a detailed illustration of the theory of concentration.

where. What we have to do then, is first, to ascertain the reason for it,— the principle in consequence of which concentration must give way to specialization ; and, secondly, to determine at what point in the education of a child this principle becomes applicable.

Interest in the Individual and Scientific Interest. — From the point of view of the educationists who contend that interest is the only motive that ought to be appealed to, the determination of this principle is easy. As long as the connection between facts belonging to different subjects is more interesting than the relation between the facts of a single subject, so long the method of concentration should be followed. When, however, the relations between the facts of a given science become more interesting, specialization should begin. We may draw a distinction between an interest in plants and an interest in botany, between an interest in animals and an interest in zoölogy, between an interest in men and an interest in psychology. Science cares nothing for the individual as such. So far and only so far as the individual is a type of a class, an illustration of the universal, is it an object of interest to science. The particular flower which grew from a seed and which you yourself have planted, which you have nursed and cared for from the beginning, botany cares nothing for. You may be a botanist, but as such you are interested only in the universal aspects and relations of plants. The same is true, of course, of all the sciences. Your dog that you have taught to know and love you, that barks with delight when you come, and looks at you so longingly when you go, is an object of interest to you, but not to the zoölogist. Zoölogy cares for

him only as a type, queries whether creatures of his class can reason, studies the resemblances and differences between the class to which he belongs and other closely related classes. The same is true of psychology. Contrast the point of view of psychology with that of the mother toward her only child. To the mother he is the centre of life and affection for whom she has lived and suffered, for whose sake she would willingly die. To the psychologist he is merely a specimen of the human race; all that makes him precious in his mother's eyes the psychologist cares nothing about. It is hardly necessary to say that it is individual men and women — father, mother, uncle, aunt; individual animals — Ponto, Marcus, Sport; individual flowers — violet, castor-bean, and rose; individual heavenly bodies — sun, moon, that interest the child. And I repeat, if his interest is to be the criterion, it is only when the child's interest in the type or class becomes livelier than his interest in the individual that the scientific interest should receive attention. But to determine our methods in accordance with the scientific interest is to break up the unity of nature into groups of facts — is to have our methods determined by the differences between things instead of their likenesses, is to forsake the principle of concentration for the principle of differentiation.

Interest not a Criterion of Educational Method.— From a new point of view the doubt arises whether it is wise to make the interests of children the criterion by which we are to judge of the soundness of our educational methods. If we must not wait until the scientific interest is more intense than the interest in individuals before abandoning the principle of concentration, it is hardly open to doubt

that at some point in the history of the child the greater interest must give way to the lesser. Bold would be he who should contend that the average man, even the average educated man, to say nothing of the average child, cares more for the individual as the type of a class than he does for the individual for its own sake. Is it, in fact, desirable that he should do so? It is individuals as such, not as types, that appeal to our affections, to our sense of beauty. The supreme sway of the scientific interest is the rule of an interest that leaves no room for love or hate or the sense of duty. It is the rule of an interest that dissects and analyzes and cares for objects only as materials for dissection and analysis; of an interest that insists on the universal domination of law—that cannot abide the presence of a free man, an independent, unique source of energy, because such a man is not to be analyzed into the factors which infallibly explain his actions. It is the rule of an interest that insists on regarding the self-sacrifice of the mother, the devotion of the father, as the automatic result of brain activity with which the conscious being has no more to do than he has with the rotation of the earth. Now if this interest is not to predominate in the average educated man, is there not something wrong in the doctrine that the one thing that must determine the methods and subjects of study of the school is interest? If even in the high school and the college students are more interested in biography than they are in history, how can the theory of interest justify the study of history?

Cultivation of Intellect: Its Place in Education. — This point is again raised because the conditions just presented make it evident that we cannot find in the child's interest

the principle whose application is to determine when the method of concentration must cease to be controlling. To discover this principle we must decide an important question : the place the cultivation of the intellect occupies in the education of a human being. In considering this question we must not suppose that we are obliged to choose between the training of the intellect and the training of the emotions. This alternative is not rejected on the ground that you cannot make an appeal to the intellect except through the emotions. For the only form of emotion to which you must appeal in order to reach the intellect is the cold love of truth, the desire to know what is—a desire that is entirely consistent with the most absolute and profound indifference to the fate of every human being. No, the alternative is rejected because the complexity of our nature makes it impossible for us to deal wisely with one side of it without dealing wisely with the whole of it. Deal with the intellect alone, ignoring every feeling except that desire for knowledge which enables you to stimulate intellectual activity, and so far as your methods succeed you have a monstrosity, a human Mephistopheles, a being who is perfectly capable of trying the effect of a new poison upon his mother, not from a desire to kill her, but in order to gratify his scientific interest. Deal with the emotions alone, or with the intellect only so far as it enahles you to reach the emotions, and you will have a drivelling, ineffective, superstitious sentimentalist whose love brings nothing but misery to the objects of his affection, because his conduct is not guided by the insight of a trained intellect. The patriotism of a citizen however pure and unselfish, the regard of a friend no matter how self-sacrificing, is no guarantee of wise action. As intel-

lect without love leads to the actions of a devil, so love without intellect leads to the actions of a fool. Manifestly, therefore, the school must see to the training of both. It is of course evident that exercises which train the observation and memory of pupils, in a sense train the intellect. But it is equally evident that the sole intellectual value of observation and memory depends upon their relation to higher intellectual powers. Merely to observe and then to remember serves no purpose but to retain a brute fact in the mind. Now in order that this fact may have any intellectual value, thought must take it up, must perceive its relations to prior and succeeding facts, must view it as an illustration of a general law. To train the intellect, therefore, in the specific sense in which such training has ultimate educational value is to train the power to think.

Training to Think. — Such training is acquired in two ways: by thinking which is for the pupil original, or by rethinking the thoughts of some one else as set forth in a book or conversation or lecture. Now original thinking in the case of school children must be disconnected and unsystematic. The thinker takes one step, thinks back, it may be, to the cause of a fact, or forward to its effect. Systematic, connected thinking, the thinking that enables us to see a fact in a vast network of connected relations, is the thinking that constitutes the special sciences.

From every point of view it is evident that only systematic thinking has high educational value. We hear a good deal about the importance of teaching the pupil to think. Dr. Schaeffer has aptly remarked that you cannot keep him from it. But you can very easily keep him from

connected logical thinking. That is the reason why rethinking any branch of science, arithmetic, physiology, botany, is so valuable — it is going over the process by which truth is obtained, and strengthening the power to obtain it independently.

Very much of the thinking that bears upon practical life ought to be of the connected, systematic sort. That statesman can deal most wisely with the question as to whether the United States shall enter upon a colonial policy who sees most clearly not only its effect upon our immediate financial future, but also its bearing upon our entire national life for an indefinite period. That father is best fitted to train his child who is best able to realize the effect of particular influences upon the whole future of his son. But even in those cases where the practical needs of life require that thought should take only a single step, it is always important that this step be taken logically, that the mind be able to realize the difference between a guess or a surmise and a well-grounded inference. This power is best acquired by rethinking the systematic, connected thoughts which constitute a science, because such thoughts are logical. When, therefore, the intellect of the pupil is sufficiently developed to enable him to rethink such thoughts, and when his interest is sufficiently great to enable him to do so without unduly taxing the will, such activity should be required of him.

As to when, in the case of the average pupil, this period is reached nothing definite can as yet be said. The progress of education has but recently reached that stage where the individual pupil is deemed a subject worthy of investigation. Not until generations of trained teachers have observed the results of intelligent efforts to stimulate school

children to rethink the simpler connections which constitute science can anything definite on this subject be said.

Correlation. — Correlation as distinguished from concentration means two things: (1) such an arrangement of the programme that the work in one subject may, so far as possible, throw light on the work that the pupil is doing at the same time in another; (2) such a method of teaching as will cause the pupil to see the particular fact he is studying in its relation to all that he knows. To understand the Missouri Compromise, for example, is to see that fact not only in its relations to preceding historical facts, but also in its relations to geographical facts.

QUESTIONS ON THE TEXT.

1. State and illustrate the law of interest.
2. State and illustrate the difference between concentration and specialization.
3. What is meant by the "principle upon which specialization depends"?
4. What is meant by scientific interest?
5. Show that interest cannot be made a criterion of educational method.
6. What place has the cultivation of the intellect in education?
7. Show the necessity for training both the intellect and the emotions.
8. What is the difference between unsystematic and systematic thinking?
9. Show that the various sciences are the results of systematic thinking.
10. When should the pupil be required to rethink some of the systematic thoughts of science?
11. Define correlation.

SUGGESTIVE QUESTIONS.

1. Do you see clearly why education requires the more intense interest to give way to the less?

2. On what law of association is concentration based, and on what is specialization?

3. Illustrate the last part of your answer by the science of arithmetic.

4. Are you clear as to what the principle of specialization is?

5. Are you equally certain as to its application, and if not, why not?

CHAPTER XVIII.

THE FETICH OF GENERAL METHOD.

General Method Explained. — There is no part of the Herbartian pedagogy to which more universal assent is given than to its doctrine of general method. Ratich's idea of a uniform method to be observed in the teaching of all subjects seems to professed Herbartians not merely, but to large numbers of educationists who call no man master, to have been embodied in this theory. What is the theory? That, whatever the subject taught, the first stage consists in preparing the mind to receive what is to be presented to it; the second, in presenting the matter upon which the mind is to act; the third, in generalizing from the presentation; the fourth, in applying the generalization to all the cognate facts known to the student. Preparation, presentation, generalization, and application, in a word, are successive steps or stages essential in the method of teaching all subjects without exception. As the journey of a traveller through an undulating country is a succession of ascents and descents throughout the region traversed, so the work of an intelligent teacher consists of a series of ascents from particulars to generals, and of descents from generals to particulars. And as the number of ascents a traveller must make in a given journey is determined by the number of hills he is obliged to climb, so the number of ascents which the teacher should lead his pupils to make is determined by the number of generals or universals — concepts

or generalizations — involved in the particular facts of the lesson, each group of particular facts involving a universal being called a method-whole.[1] For example, if a lesson in grammar is intended to teach not only what a verb is, but the distinction between active and passive verbs, it contains three method-wholes, the first comprising that part of it which brings out the nature of the verb; the second and third, those parts that make clear the difference between active and passive verbs.

What Determines the Validity of Method? — This is the doctrine. Is it true? It will be generally conceded that there can be such a thing as General Method, a method applicable to the teaching of all subjects to the extent only that the mind grasps all the subjects with which it deals in the same way. Methods derive their validity wholly from the mind. If a method is good, it is because it conforms to the laws of the mind; if it is bad, it is because it fails to conform to these laws, or conforms to them very imperfectly. If, then, the same method should be followed in the teaching of arithmetic, geography, grammar, history, language, literature, etc., it is because the mind moves in the same way throughout in dealing with each of these subjects. The whole matter hinges upon a question of fact — the nature of the action of the mind when it is engaged in studying the various school subjects.

[1] Compare with De Garmo's Essentials of Method, McMurry's General Method, Rein's Pedagogics, Lange's Apperception. The exposition of the Herbartian doctrine set forth in the text is based upon the work first named, which differs only in unimportant details from similar contributions by other members of the school.

Action of the Mind (1) in Connection with Grammar. — What, then, is the mind of the student doing when he is analyzing a sentence in grammar? Classifying the parts of the sentence according to the functions they perform, or, using more technical language, applying grammatical concepts to the words of the sentence. When the student says that such and such a word or phrase is an adverbial modifier, he is trying to put it in its proper class, and he is able to do this only because he already has the idea or concept of the class of adverbial modifiers. Surveying, then, all of the teaching processes that terminate in the teaching of grammatical analysis, we certainly find the four formal steps of the Herbartians. The pupil must be taught — to omit the first step — that this, that, or the other word or phrase is an adverbial modifier — presentation; then helped to see what it is that makes the various words adverbial modifiers — generalization; then enabled to exercise the power to use his generalization — application.[1] But in the lesson in analysis only one of these steps, the last, is taken if the pupil has done his preceding work well. The sentence he is studying does not correspond to the presentation at all: it is material which he is using to show his mastery of the generalizations he is supposed to have made already. It represents not the foot of the hill up which he is to climb, but the bottom of the hill he is supposed to be descending.

Omitting the stage of preparation, we may state all the movements of the mind which the teaching processes that

[1] For the sake of brevity the first step will not be illustrated in these discussions. It consists essentially in asking the pupil such questions and imparting to him such information as will best prepare him to appreciate and understand what you wish to teach him. A student would be pre-

terminate in grammatical analysis are intended to occasion, in the form of two syllogisms:

1. This, that, and the other word are adverbial modifiers — accepted on the authority of book or teacher;

The only common characteristics of these words are that they qualify the meaning of certain other words;

Therefore an adverbial modifier is one that qualifies the meaning of certain words.

2. Whatever qualifies the meaning of a verb is an adverbial modifier;

Swiftly, in the sentence, "The man runs swiftly," qualifies the verb *runs*;

Therefore *swiftly* is an adverbial modifier.

(2) **In Connection with History.** — The movements of the mind of the pupil who is studying history are quite different. In grammar — to confine our attention to a single phase of the subject — he is engaged in forming concepts of classes and applying concepts already formed. In history he is seeking to know, not to what class such or such an event belongs, but its cause. Why was the Federal Constitution adopted? Why did the South oppose Hamilton's financial policy? Why did Adams send the mission to France in 1800? What was the effect of the embargo? The answer to all these questions consists in an application of some truth about human nature. The Constitution was adopted by the conventions of the various States because the delegates thought their interests would be promoted by a stronger government. The Southern States opposed Hamilton's financial policy because they thought it subversive of the interests of the agricultural States. Adams sent the mission to France because he

pared to understand a lesson on adverbs by questions which should recall to his attention the function of adjectives, and which should make it clear that there are other classes of words besides nouns which require to have their meaning modified in the same way.

thought an honorable peace even with the dishonorable government of France preferable to war. The embargo prostrated the commerce of New England and thus occasioned the violent opposition of that section. We see, then, that explanation in history consists in referring an event to the motives of the men who were responsible for it. It presupposes that the pupil already knows the motives that influence men, and points out the motive in the case under investigation. Surveying all the mental activities that terminate in historical explanation, we discern a process bearing some resemblance to the three formal steps of the Herbartians. By observing myself in this, that, or the other instance, I learn that I am influenced by such or such motives — presentation; I infer that all men resemble me in this particular — generalization; and supposing that such or such an historical event was due to such or such a motive, I can tell why it was brought about — application. To illustrate: by observing myself, I learn that many of my actions are due to self-interest — presentation; I infer that other men act from the same motive — generalization; and I assume that I understand New England's opposition to the embargo by referring it to the same cause. But we see that here also the facts in the history lesson usually form no part of the presentation; that they are matters to be explained by principles of human nature with which the pupil is supposed to be already acquainted. When this is not the case, when the historical fact is to be explained by being referred to some characteristic of human nature of which the pupil is ignorant, the statement of the fact forms a small and a very unimportant part of the presentation. No one, for example, can understand the Chinese system of education and

Chinese life in general without understanding the extent to which that people is governed by tradition. The particular fact, in a word, must be made to disclose its relationship to a huge family of facts, and this can of course be done only by making these known to the student — in which consists the real presentation in the case. And if tradition in Chinese life is to be really understood, if the Chinaman is not to be made to appear to have a radically different nature from ours, if we are to realize our kinship and fellowship with him in fundamental matters, we must be helped to see the part tradition plays in our own lives. And the statement of the facts which enable us to see that we, like the Chinaman, have our opinions determined for us, and our actions in many cases decided for us, by plastic imitation, not by reasoning, will be the true presentation.

Moreover, the movements of the mind which in the study of history terminate in explanations are very different from those which in the study of grammar terminate in analysis. Let us state the former in syllogisms, the latter having already been so given (see page 199).

1. By observing myself and other people, I notice that some people are influenced by this, that, or the other motive;

Men in general resemble each other in fundamental matters;

Therefore men in general are influenced by the same motives that influence me and the people whom I have observed.

2. Suppositions which are in harmony with all that I know and which explain men's conduct are likely to be true;

The supposition that members of Congress are often influenced by the desire to be re-elected is in harmony with all that I know, and also explains their conduct;

Therefore it is likely to be true.

Now a comparison of these syllogisms with those which express the movements of the mind that terminate in gram-

matical analysis will make it evident that the mental activities of the student in dealing with the two subjects are very different. We see by comparing No. 1 of the syllogisms on page 167 with No. 1 of those just given that they lead to conclusions of widely different degrees of certainty. If the student has been careful enough in comparing the characteristics of the various words known as adverbial modifiers, he can say with absolute certainty that an adverbial modifier is a word having such and such characteristics. But it is perfectly evident that no amount of carefulness in self-observation and in observation of others will enable him to say that he, and the men he has observed, are types of men in general, and for that reason more or less uncertainty always attaches to historical explanations. In illustration of this we may cite the universally conceded fact that Hume utterly failed to explain those periods of English history when enthusiasm was a potent and decisive force. Being of a bold, analytical temper, his historical explanations proceeded on the assumption that he was a type of men in general, an assumption manifestly false. If now we examine closely the two syllogisms to see how it is that they terminate in conclusions of such different degrees of certainty, we find that the one ends in a concept founded upon materials directly before the mind, and the other in a wide induction resting on a narrow basis.

A comparison of the No. 2 syllogisms results similarly. We see that the conclusion of the grammatical syllogism may be and generally is absolutely certain, while that of the historical syllogism is often very uncertain. It is well known, for example, that while historians as a rule agree as to their facts, they differ very widely in their interpretation of them. As an illustration, take the contradictory esti-

mates of Jefferson, one class of writers regarding him as a self-seeking demagogue, the other as a far-sighted statesman and patriot. Here again the reason is not far to seek. By exercising sufficient care the student may be certain of the truth of the major and minor premises of his grammatical syllogism. The data are all before him. But the validity of the historical syllogism depends wholly upon the truth of the assumption that the assigned motive was the true one — an assumption which is often at variance with fact, an assumption the possible error of which there is no guarding against. The student of history, in a word, is confronted with this alternative: he must either refrain from making any explanations at all, in which case there is nothing corresponding to the Herbartian generalization, or, if he explains, his explanation is nearly always exposed to doubt. But what we are especially concerned to note is that the historical syllogism is an illustration of that type of inductive reasoning which consists in finding hypotheses to explain facts. The supposition that the man or the group of men acted from such and such motives will explain the facts; therefore we assume that they really were influenced by those motives, although it is possible that they were actuated by motives of an entirely different sort. The grammatical syllogism, on the other hand, is an illustration of deductive reasoning pure and simple.

(3) **In Connection with Arithmetic.** — In arithmetical reasoning the mental processes differ widely from those just discussed. If one man can perform as much labor as two boys, and if it takes three men five days to do a piece of work, how long will it take one boy? The

answer to this question is reached in two steps, each of which consists in the application of self-evident truths. If one man can do as much work as two boys, it is patent that three men can do as much as six boys. And if six boys require five days to accomplish a task, it follows that it would take one boy thirty days.

Expressing these processes in syllogisms we have:

1. Three times two are six;
   One man can do as much as two boys;
   Hence three men can do as much as six boys.

2. Six times five are thirty;
   Six boys can do the work in five days;
   Hence it will take one boy thirty days.

Here No. 1 does not terminate in a conception as in the corresponding grammatical syllogism, nor in an induction as in the corresponding historical syllogism, but in the application of a self-evident truth. And No. 2 is of the same sort. If now we make a survey of all the mental processes which terminate in the solution of this problem, we shall find nothing whatever corresponding to the Herbartian presentation and generalization unless we give these terms a meaning entirely different from that which they must bear in grammar or history. How does a boy learn that three times two are six? Not surely by trying with oranges, pears, apples, marbles, pens, etc., and, finding it true as to these, inferring it to be true in all cases. If that were so, there would be no accounting for his absolute certainty that three times two are everywhere and always six.

No one so far as I know has ever seen a white crow. Nevertheless, if a man in whose veracity I have entire con-

fidence were to tell me that he had seen one, I should believe him. But all the men in the world could not convince me that three times two are seven. Whoever asserts the proposition with an air of conviction succeeds only in demonstrating to me that he is a fool. Why is it that I could so easily be made to believe in the existence of white crows when no amount of evidence could convince me that three times two make seven? It is because the proposition, All crows are black, is an induction based on particular observations, a generalization from particular facts, while the proposition, Three times two make six, is the expression of intuitive insight. The particular groups of threes and twos in connection with which I first apprehended this truth were the *occasion*, not the *source*, of my belief in it. To hold that the same relation exists between those groups of threes and twos and the truth which I cognized in connection with them, as obtains between my observation of individual cases and the opinion which I base upon it, is utterly to misrepresent the operations of the mind. And precisely this is done when the observation of groups of threes and twos and the observation of individual cases are both called presentation, and the insight occasioned by the former and the inference based upon the latter are both called generalizations. Better a thousand times to leave the teacher to the guidance of his own native common-sense than have him try to make himself believe that there is no essential difference between his intuitions in arithmetic and the generalizations of induction.

If this reasoning is sound, it is evident that the first two of the Herbartian steps disappear in the teaching of arithmetic, and that arithmetical study consists entirely in the application of axioms to particular cases — problems; the

latter, so far from furnishing the material which is to end in a generalization, being nothing but individual instances presenting questions that are to be determined by general principles already known. How true this is will be evident when we reflect upon the steps taken by the teacher to make a pupil see the incorrectness of an arithmetical solution. He does not help him to make an induction that he has not made before, or to see more clearly the significance and scope of one that he has already made. No; his entire attention is concentrated on making the pupil see that he has applied an arithmetical truth not appropriate to the particular case.

(4) **In Connection with Literature.** — If now we turn to the study of literature we find that still other mental processes are involved. Take the first stanza of Gray's Elegy:

> "The curfew tolls the knell of parting day;
> The lowing herd winds slowly o'er the lea;
> The ploughman homeward plods his weary way,
> And leaves the world to darkness and to me."

Is the student to treat this as mere matter for the understanding, to be treasured up in memory? Is he to note the fact that a little after sunset the curfew tolled, and the lowing kine came slowly over the meadow, and the tired ploughman went home? Of course not. Taken apart from the rest of the poem, its whole value consists in the effect it produces on the emotional nature, and the condition of this effect is its realization by the imagination. The pupil must see in his mind's eye the gathering darkness, the herd as it winds over the meadow, and the weary ploughman wending his way homeward, and hear in imagination the tolling of the curfew and the lowing of the

cattle. To what end? In order that he may appreciate the beauty of the picture. If he faithfully reproduces in his imagination the thought of the poet, and if he feels that it was beautiful, the stanza has produced its proper effect upon his mind.

Now of course there were two steps involved: the process of imagination and the perception of beauty. But to undertake to express these in the form of a syllogism would be absurd. A syllogism is a complete statement of an act of reasoning, and there is no reasoning involved either in the exercise of the imagination or in the perception of beauty. The science of æsthetics may perhaps be able to tell us why Gray's Elegy is beautiful. But we do not find the poem beautiful because that science has formulated such and such laws; on the contrary, the science is what it is because we find the poem beautiful. The normal mind, in other words, dictates to the science of æsthetics, instead of being subject to it.

Summary of Conclusions Relating to the Action of the Mind in Connection with Grammar, History, Arithmetic, and Literature. — Summing up our conclusions, we find that the first step in grammatical analysis is conception; in historical explanation, an induction; in arithmetic, the intuitive perception of an axiom; in literature, an act of the imagination. As the second step in grammatical analysis, we have deductive reasoning; in historical explanation, a particular sort of inductive reasoning; in arithmetic, deductive reasoning; in literature, a certain response of the emotional nature. We perceive also that in grammatical analysis this second step is an application of a principle learned in the study of grammar; in historical explanation,

of a principle not derived from the study of history, but determined by common observation; in arithmetic, of a principle acquired not through the process of induction, but through the mind's immediate perception; and in literature, that it is not the application of any principle whatever.

Possible Defence of the Herbartian Theory. — One might attempt to defend the procedure of the Herbartians by saying that there is a point of view from which all differences disappear. When the Shah of Persia declined to witness the great English races on the ground that he already knew the result — that one or the other of the horses would win — he was abstracting from the difference between the individual horses, from all that made them interesting to their owners and the spectators, and regarding them simply as horses. Since as horses they were all the same, what mattered which won? So, it might be said, there is always something — a fact of history, a poem, a problem in arithmetic, etc. — that stimulates the mind to action, and some activity — inductive reasoning, exercise of the imagination, etc. — to which the mind is stimulated. Why not, for the sake of simplicity, call the first presentation and the second generalization? To this the first reply is that a method is formulated for the sake of guidance. For example, if one wishes to buy or sell or drive a horse, it is not the qualities the animal has in common with horses in general that one needs to be informed about, but its individual peculiarities. In like manner, if a teacher is to help a pupil study a particular lesson, what she needs to know is the peculiar action of the mind in dealing with such a subject. And unless teaching is a purely mechanical process, the more clearly one apprehends the nature of

the activity of which he wishes to supply the conditions, the better he can supply them.

Three Processes not Usually Required. — Moreover, a careful study of the conclusions we have reached makes it evident that in most of the cases examined there are really not three processes to which the terms presentation, generalization, and application can be applied. The teaching of grammar is indeed intended to enable the pupil to take three steps to which those names can be given. But in history and arithmetic there is but one, and in literature there are but two such processes. For explanation in history, and the solution of a problem in arithmetic, as we have seen, consist of the application of what the student already knows. As grammatical analysis corresponds to one only of the Herbartian steps — application — so also does reasoning in history and arithmetic; while in literature the mental activities involved are imagination and the perception of the beautiful.

How Psychology may Help the Teacher. — A study of the history of education makes one more than doubt whether there is not a large measure of truth in Professor Münsterberg's contention that we are disposed nowadays to lay undue stress on the relation between psychology as a science, and education. When we remember the profound conception which Plato and Comenius had of the philosophy of education, each of them living ages before there was anything that deserved to be called a science of psychology, it is difficult not to believe that the most important knowledge of the mind which the teacher can acquire is that which a thoughtful observer of his own

mental states can obtain. However this may be, surely nothing but confusion can result from an analysis which, in the supposed interest of simplicity, tends to blur the peculiar features of individual activities. In all teaching there is some material upon which we wish the mind of the pupil to act, and, conversely, some kind of action which we wish the apprehension of that material to occasion. That study of psychology is helpful which enables the teacher to determine most clearly just what mental activities are to be aroused in the pupil and how this is to be accomplished.

Without doubt the doctrine of General Method has done some service in emphasizing the fact that unless the acquisitions of the pupil are worked over, unless they occasion some sort of mental activity, they are without value. But even this service has not been without its drawbacks; for it has helped to intensify the wide-spread belief that education is an affair of the intellect alone.

QUESTIONS ON THE TEXT.

1. What is meant by General Method?
2. State and illustrate what is meant by preparation, presentation, generalization, and application.
3. Define method-whole.
4. Upon what does the validity of methods depend?
5. State clearly what the mind does when a sentence in grammar is analyzed.
6. To which of the Herbartian steps does it correspond, and why?
7. What are the acts of the mind of the pupil who is studying history?
8. In what does historical explanation consist?
9. To which of the Herbartian steps does historical explanation correspond?
10. Point out the difference between the activities of the student in connection with grammar, and those in connection with history.

11. Describe the mental processes involved in the solution of a problem in arithmetic.

12. What is the difference between the source of your belief in the proposition, All crows are black; and that of your belief that two and two make four?

13. How does a teacher help his pupil to see that he has made a mistake in solving a problem in arithmetic?

14. Describe the action of the mind in connection with the study of arithmetic.

15. Sum up the conclusions reached relating to the action of the mind in connection with grammar, history, arithmetic, and literature.

16. How may the Herbartian theory be defended?

17. Is the defence valueless? If so, why?

18. What sort of psychology is helpful to the teacher?

SUGGESTIVE QUESTIONS.

1. May a given lesson — say in history — contain one method-whole for pupils of a given grade, and more for those farther advanced?

2. What law of the mind makes preparation helpful?

3. How can you learn through observation what motives influence people?

4. Do you always know what motives influence your own actions?

5. What is an hypothesis? How does it differ from a theory?

6. Give examples to show that all inductive reasoning consists of a process of finding hypotheses to explain facts.

7. What else do you know in the same way in which you know the axioms of mathematics?

8. Are these axioms examples of necessary truths or necessary beliefs?

9. Study carefully the whole of Gray's Elegy, and describe in detail what your mind does as you study it.

10. What effect will this attempt at analysis have upon your enjoyment of the poem?

11. What habit is cultivated by applying the same term, for example, generalization, to widely different things?

CHAPTER XIX.

THE GRAMMAR-SCHOOL CURRICULUM.

Difficulty of Mapping Out the Work Through the Grades. — In one of the preceding chapters we undertook to lay out the work of the child in the primary grades. That attempt ought logically to be followed by an effort to map out his work through all the grades. But the science of the growing mind is too much in its infancy to permit anything beyond more or less happy conjectures as to the *amount* of work that can be wisely undertaken by the average child during the various periods of his school life, and as to the time when various *kinds* of work can be most economically done by him. And we are certainly as much in the dark as to the maximum of work which we may exact of the very bright pupil, and the minimum that we ought to require of the very dull one. For every human being in pursuit of education must traverse the course in his own way. We teach our pupils in classes. But no two pupils think the same thoughts, experience the same emotions, or put forth the same effort in studying a lesson. Some master it with ease, others comprehend most of it after a good deal of labor, while to others still it is a puzzle which they are quite incapable of solving. Suppose that prior to the invention of the steam-engine a hundred men had started from the Atlantic to the Pacific, each one bent on reaching his destination as soon as might be. It goes without saying that only the hardiest and most per-

sistent among them would have arrived there at all; that those who succeeded would have made the journey with varying rates of speed, and that those who failed would have given up at different points along the way. Nowadays mechanical means enable the puniest infant to cross the continent as readily as the strongest man. But there is no royal road to education. The mind must depend upon its own powers. And though the teacher may tell his pupil where the ascents are easiest and the waters most shallow, the mountains must be climbed and the rivers forded by the pupil himself: there is no other way.

Kind of Work to be Done. — But because we cannot say how much work should be required of the average pupil, or what particular work he is best fitted to do at a given age, it does not follow that we may not reach sound conclusions as to the kind of work we ought to have him undertake. He must, of course, learn the three R's with more or less thoroughness. But experience has shown that the best way to give a child facility in reading is to have him read something that he cares about for its own sake; and it has shown with equal clearness that the time spent in teaching writing and arithmetic may be very much shortened. We may, then, fairly assume that the work upon which the school formerly concentrated its entire attention may be as well or better done incidentally; that instead of keeping — or rather trying to keep — the child employed with the wearisome tasks of learning to read, write, and "reckon," apart from anything he has any interest in, we can teach him these arts quite as rapidly by teaching them in connection with things which it is important for him to learn. What are these things?

History and Literature. — In the first place, the work in history and literature, which should begin in his first year at school, should continue through all the grades. Reserving for a separate chapter the discussion of the educational value of those subjects, it suffices here to point out that it is from them that the child derives all that the school teaches him about man. Regarded simply from the point of view of its utility, such knowledge will bear favorable comparison with that of any other subject. For we all live in society, come in daily contact with men and women, wise dealing with whom depends upon a knowledge of human nature. And when we remember how the cultivation of sympathy and charity, and the formation of right ideals, are dependent upon a knowledge of human nature, and how all these objects, along with a taste for good reading, are promoted by the study of literature, we begin to see how necessary it is that the child's knowledge of the lives and thoughts of men should be constantly enlarging all through the grammar- and, I may add, the high-school course.

Boston, French, and Old Athenian Schools Compared. — President Eliot made a very instructive comparison some years ago between the programme of the first three years of the Boston grammar schools (supplemented by the complete course of the Boston Latin School) and that of the French secondary schools. He found that the French *lycée* begins the teaching of history (in the form of biography) when the pupil is eight years old, while the Boston school postpones it until the pupil is eleven. If he had compared the programme of the Boston school with that of the elementary school of Athens in the time of Socrates,

he would have found materials for an equally suggestive study. With the exception of an hour a week in music, the Boston school devotes the entire time of its pupils during the first three years to the study of various phases of external nature — elementary science, geography, arithmetic, science lessons as a part of the work in English — while the Athenian school reversed this, since it required its pupils to devote practically all of the time spent on study to literature. No one would say that the Athenian plan is worthy of imitation. But just as little can the Boston plan be considered wise. If it is wrong not to make the child acquainted with such facts of nature as can be brought within the range of his comprehension and his interests, is it not equally wrong not to make him acquainted with such thoughts of the great men of the world, and such facts in their lives, as will enlarge his knowledge of human nature, quicken his emotions, and ennoble his ideals? If we remember that it is reflection upon men, so far as the studies of the school are concerned — upon the lives of struggling human beings — that helps us to see what is worthy of our admiration and love, we shall begin to wonder, if blind imitation of either model were the alternative, whether the Athenian model is not more worthy of imitation than that of the Boston school.

The Amount of Reading Required by Massachusetts Schools. — From another point of view this comparison of the Athenian school with a typical American school may be made to indicate even more suggestive conclusions. President Eliot made a careful study of an "average Massachusetts grammar school." Some of his results had

better be stated in his own language: "I turned next to an examination of the quantity of work done, . . . and, first, of the amount of reading. The amount of time given to reading and the study of the English language through the spelling-book and the little grammar which are used in that school, and through a variety of other aids to the learning of English, is thirty-seven per cent of all school time during six years. But what is the amount of reading in this time? I procured two careful estimates of the time it would take a graduate of a high school to read aloud consecutively all the books which are read in this school during six years, including the history, the reading lessons in geography, and the book on manners. The estimates were made by two persons reading aloud at a moderate rate, and reading everything that the children in most of the rooms of that school have been supposed to read during their entire course of six years. The time occupied in doing this reading was forty-six hours. . . . It took one and a half hours to read aloud the whole of one of the earlier readers"!

No critic of old Greek education has left behind him the results of such a study as this. But we have reason to believe that when the Athenian boy of sixteen left school he had an intimate acquaintance with the great poets of Greece, especially Homer and Hesiod, large portions of whose works he had learned by heart.

Arithmetic. — The amount of time usually given to the study of arithmetic should be much curtailed. President Eliot found that the Boston boy is required to study arithmetic three hours to every one that the French boy is required to study the same subject. American schools

are still under the influence of the notion that the study of arithmetic is especially valuable because of its cultivation of the reasoning powers. I have attempted elsewhere to show that there is no such thing as a general cultivation of the power to reason; that facility in reasoning gained in connection with any particular subject is helpful in reasoning on similar subjects, and that its helpfulness decreases as subjects become more and more dissimilar, until it finally disappears altogether. It follows from this that the cultivation of the reasoning power gained from the study of arithmetic is useful in the study of all other branches of mathematics, and in the study of those subjects, such as physics and astronomy, in which the quantitative relations of the facts are an important element, but that in the study of such subjects as history, literature, and psychology it is of little or no value. It is more than doubtful, for example, whether the severe study of arithmetic would make any material difference in a man's capacity, as a juryman, to draw sound conclusions from a tangled mass of evidence, or, as a citizen, to trace admitted governmental evils to their source. His training in arithmetic has only taught him how to apply self-evident principles to their proper cases; his work as a juror demands the careful weighing of doubtful evidence, and the rigid exclusion of all influences that might arise from prejudice, sympathy, and the like. Facility in the one kind of reasoning is no more a guaranty of facility in the other than is proficiency in playing golf of proficiency in playing chess.

The primary purpose, then, of the study of arithmetic is the ability to determine the quantitative relations of facts not only in connection with business, but with all the facts of that description with which the mind has to do. To

this end, a knowledge of the four fundamental rules, of simple and decimal fractions, of the simple applications of percentage, of simple interest and discount, with a few of the simple rules of mensuration, will suffice.[1]

Political Geography. — Much of the time spent in the study of political geography should be given to a different phase of the subject from that which generally receives the lion's share of attention. The centre of gravity should be shifted. Instead of learning about places primarily and people incidentally, the important matter should be the people of a country, the country itself only receiving attention as it throws light on the people. Many gray-haired men to-day are unable to recall without a feeling of exasperation their having been required as boys to learn that Dover, the capital of Delaware, is situated on Jones's Creek! As though, in the first place, it made any difference in what town the legislature of the State met, and, in the second, on what creek it was situated. That sort of knowledge, like the knowledge of the boundaries of our States, has no intrinsic importance. No one is wiser or more capable through knowing them. We need to know

[1] Dr. Wm. H. Maxwell has made some suggestive remarks about arithmetic which deserve to be quoted at length: "There is probably more time wasted in the teaching of arithmetic than in the teaching of any other subject. Long problems are given instead of short; intricate ones instead of simple; things unlike the operations of actual life instead of what is practical. Children are burdened with dreadful 'examples' for 'home work' which, if solved at all, are solved by the aid of parents or older brothers and sisters. Time is consumed in work which children cannot possibly understand or appreciate. The most widely used arithmetics are attempts to present the arithmetical operations supposed to be involved in every line of human activity, commercial, monetary, and manufacturing. Time was when it was considered sufficient to learn by rote definitions

in what part of the country a given State is — whether it is in New England, or is one of the Middle, or Southern, or Middle Western, or Pacific Slope States. But no very important purpose is served by attempting to carry in the mind such knowledge as the detailed boundaries and the capitals of the various States. It is a sort of knowledge which every one except the teacher of geography will forget, leaving no trace behind except an irritating recollection of misspent time.

Nature Study. — That first-hand study of nature — study by means of "demonstrations and practical exercises rather than from books," including botany, zoölogy, geology, and physical geography in the earlier, and ele-

of technical terms employed, to memorize a rule without understanding its reasons, and to apply it to the solution of problems precisely worded. When the rule was forgotten, or the problem differently worded, the power of solution was obliterated. But no matter; unreasonable work of this kind was thought in some inexplicable way to train the reasoning powers; the child was supposed to learn to think by a process that required no thinking. The doctrine of apperception has changed all our ideas on this matter. . . .

"If the presence in the pupil's mind of an experience necessary to interpret the new facts, and utility in practical life, are to be taken as criteria, the following topics may not only with safety, but with positive benefit, be eliminated from the grammar-school course: cube-root, equation of payments, compound proportion, partnership, exchange, true discount, partial payments, bonds and stocks, and the greater part of what goes by the name of mensuration. If, in addition to this wholesale elimination, useless tables and parts of tables were dropped; if properties of numbers, factoring, cancellation, least common multiple, and greatest common divisor were taught incidentally, as they are needed, in connection with fractions, much time that now goes to waste would be saved. Cities that now give twenty-five per cent of the whole time of school to the teaching of arithmetic might with advantage cut that amount down by at least one half." (Educational Review, Vol. III. pp. 475–477.)

mentary physics in the later, years of the course — should continue all through the grades, is an inevitable inference from conclusions already reached. Obedience to the laws of nature forms a large part of the rational living which it is the object of education to prepare us for. Now in order to obey these laws we must know them so thoroughly as to realize that no one can violate them without suffering the consequences. That sort of knowledge can only be got by an experimental study of the subject.

Electives. — I believe also that a foreign language — French or German preferably — and algebra and geometry should be offered as electives in the grammar school: the former to pupils of eleven or younger, and the latter to boys and girls of thirteen or fourteen. I cannot agree with the Committee of Ten in thinking that the grammar-school students should study the same subjects whether they intend to go to college or not. That the child of ten or eleven can learn French or German with as much facility as at any later period of his life may fairly be regarded as an established fact. If he is to go on to the high school and college, it seems clear that it would be an economical use of his time to begin the study of a foreign language at that age. But if he is not to go beyond the grammar school, it would seem unwise to require him to lay the foundation of a structure that he is almost certain never to complete. Few thoughtful persons would say that the leisure hours of a workingman would be most wisely spent in the slow and laborious reading of French or German books. If his tastes are sufficiently intellectual to make that possible, it would be much easier to develop in him such an interest in literature or science or history

as will enable him to use his spare time in a more profitable way.

Similar considerations justify the belief that the student who intends to go on to the high school should be encouraged — perhaps required — to elect geometry and algebra in the later years of his course. Experience has shown that many grammar-school students have the capacity to understand the more elementary phases of these subjects, and the relation of the latter to the work of the high school makes it desirable that they should be taken up in the grammar grades by those who intend to get a high-school education.

Language and Grammar. — The work in language and grammar ought to be incidental to the other work of the school, particularly history and literature. Such instruction in grammar as the student needs in his language work can easily be given in incidental oral lessons. The systematic study of technical grammar should be postponed to the high school, since that subject deals with conceptions quite beyond the grasp of the average grammar-school pupil.

Elements of a Liberal Education from the Start. — Such, if we consult reason rather than tradition, would seem to be the character of a course of study which aims to give the elements of a liberal education from the start. For we need clearly to understand that the difference between the proposed and the traditional course is precisely this: the one never loses sight of the fact that the pupil is to be trained all through the grades for the noblest purposes of life; the other treats him primarily as a tool which

is to be sharpened for its work by being qualified to do mechanical tasks more or less, and does not even do this intelligently. As Dr. Maxwell puts it in the article already quoted from: "The existing course is chiefly a memory course. It consumes the most plastic years of life in the futile attempt to memorize the spelling of thousands of words that find no place in the pupil's vocabulary; to memorize innumerable details in geography that are of no practical value; . . . to memorize rules and processes in arithmetic that he will never use, and the reasons of which are beyond his 'ken'; and to memorize the Constitution of the United States before he is capable of giving it a liberal interpretation. The proposed plan, on the other hand, would confine the study of subjects now in the curriculum to what is well within the mental grasp of children, and utilize the time thus gained by the introduction of studies, such as elementary algebra, inventional geometry, elementary experimental physics, and a modern language. After such a course the average public-school pupil would not only *know* what he has learned — something that cannot now be said of him with truth — but he would have begun to acquire the knowledges and to develop the powers that mark the liberally educated man."[1]

QUESTIONS ON THE TEXT.

1. Why is it impossible to map out definitely the work all through the grades?

2. Why should history and literature be taught through all the grades?

3. In what particular is a comparison of Boston and French and old Athenian schools suggestive?

[1] Educational Review, Vol. III. p. 480.

4. How much reading is required by an average Massachusetts grammar school?

5. Why do American schools give so much time to the study of arithmetic?

6. Is the reason sound?

7. What is the primary purpose of the study of arithmetic?

8. "The centre of gravity" in the teaching of political geography "should be shifted." Explain.

9. What is meant by "first-hand study of nature"?

10. Why should it go on all through the grades?

11. What electives should be offered in the grammar school, and why?

12. In what way may the elements of a liberal education be given from the start?

SUGGESTIVE QUESTIONS.

1. Is it precisely true that there is no royal road to education?

2. Has the case of Abraham Lincoln any bearing on this point?

3. Do you believe that the elements of a liberal education may be given from the first day a child enters school?

4. Do you think that grammar-school pupils should be required to study the same subjects whether they are going to college or not?

5. What does Dr. Maxwell mean by the "neat, plastic years of life"?

6. What are the "knowledges" and the "powers" that mark the liberally educated man?

CHAPTER XX.

THE MOST IMPORTANT PROBLEM OF PUBLIC-SCHOOL ADMINISTRATION.

Man and Nature the Central Subjects. — It will probably be objected that the work suggested in the preceding chapter cannot be accomplished. The reply to this is that no definite amount of work has been proposed. The contention is that man and nature should be the central subjects of study from the time the child begins his school life until he leaves the grammar school. How much history and literature, how much botany, zoölogy, geology, geography, and physics the average pupil can learn no one can yet say. But it does appear indubitable that these ought to be the central subjects of study; that instead of treating grammar and arithmetic and language lessons and spelling as the primarily important matters, the world, the human race, with members of which he must come in daily contact, should receive the greater part of his attention.

But we cannot form an intelligent opinion as to how much work can be done in the grammar school until we make persistent and intelligent efforts to give our pupils an opportunity to do the work they are fitted to do. As long as we deal with an abstraction called "the average pupil," until we concentrate our attention on individual boys and girls in order that we may adapt their work to their needs and capabilities, until we realize that it is as

absurd to confine the mind of one boy to a thin diet because the mind of another can assimilate nothing more substantial, as it would be to feed a healthy boy on gruel because his sick brother requires that sort of food, we ought to know that we have no right to talk about what the grammar school can do. I believe that President Eliot uttered a profound truth when he remarked that "to discriminate between pupils of different capacity, to select the competent for suitable instruction, and to advance each pupil with appropriate rapidity, will ultimately become the most important functions of the public-school administrator — those functions in which he or she will be most serviceable to families and to the state."

Need of Adapting Work to Individual Students. — Why serviceable to families? Because the fathers and mothers of our children, dull as well as bright, are deeply interested in having the work of their boys and girls adapted to their capabilities. When that is not done, injury results to the dull boy by being burdened with more than he can carry, and to the bright boy by being held back for the sake of his slower classmates.

Why serviceable to the state? Because the state, and a democratic state most of all, has a vital concern in the proper education of its citizens.

Why the Integrity of the College is Threatened. — The integrity of the American college is very seriously threatened because our school superintendents have not yet generally realized their obligation to promote bright pupils to a higher grade as soon as these are capable of doing the work of that grade. Because this is not done, our sons

and daughters are often sixteen or seventeen before they enter the high school, and twenty-three or twenty-four when their student life at college ends. If they intend to enter one of the professions or fill any position which requires a technical knowledge of applied science, they must spend three years more in a professional school, so that they are at least twenty-six before they are ready to begin their life-work. Now it is only the well-to-do who can afford to prolong the education of their children to such an age. The sons and daughters of people in ordinary circumstances must, for their own sakes and for the sake of their parents, take up the burden of self-support at an earlier age. In order to meet this difficulty it has recently been proposed by President Butler to reduce the college course to two years for students who purpose taking a further course at a technical or professional school. In other words, he proposes to make the completion of a two- instead of a four-year college course the condition of admission to professional schools, in order that the graduates of those schools may engage in "the active and independent participation of the practical work in life" two years earlier than they are now able to do.

President Hyde said not long ago that "nearly all the distinguished alumni of Bowdoin College graduated at about the present average age of entrance, and were well launched on their professional careers at about the age at which our students now graduate." Among the cases which he cited were those of Jacob Abbott and William Pitt Fessenden, who were graduated before they were seventeen; Longfellow, who was through college at eighteen; Franklin Pierce, John A. Andrew, Fordyce Barker, and Egbert Smyth, who had completed the course at nineteen; and

William P. Frye and Melville W. Fuller, graduated at twenty.[1]

Does any one seriously doubt that a Longfellow could to-day complete an eight-year grammar-school course in five years? Or that he could finish the four-year secondary and the four-year college course in seven more? Probably every one of the men mentioned by President Hyde could have done so rapidly the work now prescribed by the grammar and high schools as to enter college almost as soon as he actually did. President Eliot cites a grammar-school principal who testified that nearly one quarter of the pupils in his school of about six hundred and fifty children were doing two years' work in one.[2] Few thoughtful persons would say that American society ought to encourage even one fourth of our grammar-school pupils to look forward to a college education. It is only a small minority, composed of conspicuously capable pupils, who can benefit either themselves or society by endeavoring to acquire that thorough and severe training which the college is intended to give. The case, then, may be put as follows: the college course need not be shortened in order that really able students may finish their professional education fully three years earlier than they now can. But to shorten the course in order to enable mediocre men to complete their professional education and begin the practical work of life earlier would be to encourage men to enter the professions who ought not to enter them at all.

Responsibilities of the Learned Professions. — The reason for this statement will be evident if we consider "the

[1] Columbia University Bulletins of Information, No. 1 (1902), p. 39.
[2] Educational Reform, p. 254.

responsibilities and opportunity of the learned professions." They were forcibly stated in a recent address made by President Eliot, as follows: "It is plain that the future prosperity and progress of modern communities is hereafter going to depend much more than ever before on the large groups of highly trained men which constitute what are called the professions. The social and industrial powers, and the moral influences which strengthen and uplift modern society, are no longer in the hands of legislatures, or political parties, or public men. All these agencies are becoming secondary and subordinate influences. They neither originate nor lead; they sometimes regulate and set bounds, and often impede. The real incentives and motive powers which impel society forward and upward spring from those bodies of well-trained, alert, and progressive men known as the professions. They give effect to the discoveries or imaginings of genius. All the large businesses and new enterprises depend for their success on the advice and coöperation of the professions."

If this is true, if society is guided in its onward and upward march by the professions, then the qualifications which professional men ought to possess should be clearly determined. Positively, they needs must have that largeness of vision, that soundness and soberness of judgment, without which they cannot exert a beneficent influence on society. Negatively, they ought not to be narrow specialists however able, or men of mediocre abilities no matter how well trained. In endeavoring to ascertain the qualifications of a man we are prone to content ourselves with one question when we ought to ask two. If a man has had the advantages of the best schools in this country and

Europe, we are wont to assume that he is well equipped to undertake any work within his field.

We ought to know that all that education can do is to make potential capacities actual, and that a student who brings to the school only mediocre potentialities can take away from it little more than mediocre powers. But, as has been said, mediocrity cannot acquire that breadth of view which the directing powers of society ought to have.

This understood, the duty and the interest of American society are clear. It ought to employ every proper measure to keep all but able men out of the professions. The fact, therefore, that existing educational conditions make it difficult for mediocre men to enter them is a strong argument for keeping those conditions as they are. The Utopia of the great philosophic dreamer was only a means of getting the directing powers of society into the hands of those best qualified to wield them. Society in America will work consciously and definitely towards that end when it strives to put the formation or modification of public opinion into the hands of those most fit to do it intelligently. We cannot, perhaps, keep incompetent men out of our State legislatures and the halls of Congress; but if we can coerce them by a sound public opinion to do their duty, we shall not suffer greatly.

Do Existing Conditions Discriminate Against the Poor?— It may be said that existing educational arrangements practically discriminate in favor of the rich against the poor; that while the rich aspirant can afford to wait until he is twenty-six or twenty-seven before he enters a profession, the poor man cannot; also that the poor man of mediocre abilities has as good a right to enter the professions as the

rich man with no better qualifications. To this the reply is that in such a world as ours we must be content with approximations to ideal conditions. But it is not so clear as it may seem that the rich man is favored by being permitted to undertake work for which he is not fitted, or that it is a hardship to the poor man of mediocre talent to be debarred. The desirable thing is that every member of society shall do with all his might the work he is best fitted to do. Will any one venture the assertion that this is not also the way to live a happy life? Louis XVI. of France would have made an excellent locksmith, but destiny in the form of unintelligent governmental machinery imposed upon him a task for which he was utterly unfitted, and the result was a short and unhappy life summarily ended by the guillotine.

Injury to all Grades of Schools Through Disregard of the Unequal Capacities of Pupils.— It cannot be too emphatically proclaimed, then, that a system of promotion which disregards the unequal capacities of pupils, or only takes note of them by compelling the duller and less industrious pupils to perform a second time the work of an entire grade, not only strikes at society through the colleges and universities, but through the schools all along the line. Dr. Maxwell has forcibly and succinctly stated the case as follows: "On account of this system of retardation, fewer children reach the higher grades, fewer youths reach the high schools, fewer young men reach the universities, the professional schools are filled with students of grossly defective scholarship, and the learned professions are choked up with men of inferior education and training." [1]

[1] Educational Review, Vol. III. p. 474.

QUESTIONS ON THE TEXT.

1. What is the most important problem of public-school administration?

2. In what way would adapting work to individual students promote the interest of families and the state?

3. How and why is the integrity of the American college threatened?

4. Show that the college course need not be shortened to make it possible for able students to finish their professional education three years earlier than they now do.

5. What is President Eliot's opinion as to the responsibilities of the learned professions?

6. How does that affect the argument for shortening the course of the American college?

7. What two questions ought we to ask where we are endeavoring to ascertain a man's qualifications?

8. Show that existing educational conditions do not discriminate against the poor.

9. Show that disregard of the unequal capacities of pupils inflicts injury upon the college and university as well as upon schools of a lower grade.

SUGGESTIVE QUESTIONS.

1. Do you accept the conclusion of this chapter?

2. Why do so few superintendents attempt to promote their pupils as fast as they can do the work of the higher grade?

3. Do our conclusions in relation to imitation throw any light on the desirability of forming a sound public opinion?

4. Whom does the text mean by "the great philosophic dreamer"?

5. How would you determine success in life — by the positions a man fills, or by the thoroughness and completeness with which he does what he undertakes?

CHAPTER XXI.

DEPARTMENTAL INSTRUCTION IN THE GRAMMAR SCHOOL.

Proposed Transformation Objected to as Impracticable. — An earlier chapter has insisted that the course of study in the grammar school should be arranged with a view to providing the elements of a liberal education, and that therefore it should be transformed by making man and nature the central subject of study. But the practical schoolman objects that this cannot be done; that the teacher is already overworked; that the proposed transformation, laying emphasis as it does upon content rather than form, would require not only detailed knowledge of a great variety of subjects, but special preparation to teach them, and that this, under existing conditions, would be impossible.

Is the Existing System Sacred? — This may be freely granted. As Dr. Maxwell puts it: "Under the existing system it is not possible to lay any greater burden on the shoulders of either teacher or pupil than they are now called upon to bear. Each teacher teaches a little bit of each of the subjects — often as many as eight or ten — assigned to her grade. Each pupil learns a little bit of the eight or ten subjects. . . . To introduce new subjects would increase the burden intolerably. The introduction of new subjects under existing conditions is out of the question."

But if the proposed course is demanded by the best interests of the pupil — if it proposes to treat him as a human being with capacities that are to be developed and freed for the highest uses of humanity; if it looks upon him as having powers that may be so trained as to make his nature an addition to the things that make the world worth while — instead of weakly abandoning this proposed course without more ado because existing conditions make its introduction impossible, we are bound to raise the question whether there is any reason in the nature of the case why a single teacher should continue to teach her pupils all the subjects assigned to them in her grade; whether the existing system is so sacred that to lay hands upon it would be sacrilegious.

The Grammar and the High School Compared. — Teaching in the high school is done by specialists. Under the existing system the student leaves the grammar school in which a single teacher has taught him all the subjects he has studied in a particular grade, to enter a school in which he may have as many different teachers as he has studies. Upon what ground can this abrupt change be justified? What constitutes the line that separates the grammar school from the high school, a Rubicon the crossing of which portends such fundamental changes in the nature of the educational influences that are brought to bear upon the student? The more this question is considered the more unanswerable will it seem. Either our method in the high school is right and that in the upper grades of the grammar school wrong, or the latter is right and the former wrong. If specialists to teach history and literature and natural science and mathematics are needed in

the high school, it would be difficult to show why not in the upper grades of the grammar school. If they are not required in the latter, it would be difficult to explain why they are to be deemed necessary in the high school.

Why Specialists are not Needed Through All the Grades. — It may be urged that this argument proves too much; that the same reasoning might be used to prove that we should have specialists in all the grades because we have them in the high school. This objection will not bear examination from the point of view of those who accept the conclusions of a preceding chapter of this book.[1] It was there pointed out that while in the first years of a child's school life concentration should be the rule, every one admits that at some point in his education specialization must begin; and it was argued that specialization — the study of facts in their logical relations — should begin when his intellect "is sufficiently developed to enable him to rethink systematic, connected thoughts, and when his interest in such activity is sufficiently great to enable him to perform it without unduly taxing the will."

Now those who admit this will certainly not deny that the transition from a system in which concentration (the consideration of facts from the point of view of the principle of mechanical association) is the rule to a system in which specialization (the consideration of facts from the point of view of logical association) is the rule, marks an epoch in the child's educational history. This transition denotes a psychological era in the child's development; that from the grammar school to the high school does not. Therefore no psychological reason exists why there should be any

[1] Chapter XVII.

difference between the mode in which the work is done in the high school and that in which it is done in the upper grades of the grammar school; there is a reason for making a distinction between the method employed in the primary grades and that adopted in the upper grades of the grammar school. Those, therefore, who defend the existing system ought to be able to prove that the psychological epoch from which dates the transition from the system of concentration to that of specialization is found in the average pupil at the close of the grammar-school period — that specialization should be deferred to the high school. Now, although a few enthusiasts seem to have convinced themselves that this is true, their position is not supported by actual conditions. Will any practical teacher deny that children ought to begin the study of the facts of arithmetic, history, geometry, algebra, botany, and physics in their logical relations somewhere during the grammar-school course? If not, we find a point in the grammar school where the same principle begins to obtain which has universal sway in the high school — where begins the systematic study of facts or phases of the universe in their logical relations, the study of subjects. If, therefore, it is wise to have a teacher of a single subject or a group of closely related subjects in the high school, it is difficult to see why it would not be equally wise to have them in all the grades of the grammar school except those in which the work is done in accordance with the principle of concentration.

When the Study of Facts in their Logical Relations should Begin. — Dr. Maxwell thinks that the period when the study of facts in their logical relations should begin is reached by the average child about the twelfth year.

"From the sixth year to about the tenth or eleventh," he says, "the child is occupied in acquiring the arts necessary to the attainment of knowledge — reading, writing, and the elements of number — and in obtaining through observation of natural objects" (and, I should add, through the study of history, in the form of biography, and of simple literature) "that experience of the world" (and of man) "which is necessary to the interpretation of more complex and general notions. During this period the knowledge acquired is necessarily loose and unsystematic," and the interest of the child grows out of the external, mechanical relations of the facts he studies rather than out of their inner, logical relations, and for that reason the principle of concentration should obtain. "About the beginning of the twelfth year, however, comes the time when it is necessary to systematize the facts learned. . . . This is the point at which specialization in teaching [and in study] should begin. The retardation of progress in public-school work is chiefly caused by this one thing — that specialization in the work of teaching is delayed until the child's fifteenth or sixteenth year instead of beginning at the eleventh or twelfth."[1]

Advantages of Specialization in Teaching. — Specialization in the teaching of the upper grades of the grammar school would make it much easier to keep the work of a pupil adjusted to his needs and capacities in the way which was insisted on in the preceding chapter. If each of the staple subjects of instruction in the last three or four years of the grammar school were taught by a single teacher, it would be easy for an intelligent teacher to as-

[1] Educational Review, Vol. III. pp. 481, 482.

certain when a bright pupil could with advantage to himself undertake the work of a higher grade. By means of reviews which would not be disadvantageous to the rest of the class she could make him acquainted with important matters which the class had gone over before he entered it. She would have perfect knowledge of the work of both classes, since both of them would have done it under her direction; she would therefore be ideally qualified to supplement the pupil's knowledge in the higher class in those particulars in which this might be desirable. In a word, specialization in teaching would facilitate in two ways that promotion of the pupil which his interests demand: first, when the class from which and the one to which he might be promoted were taught by the same teacher, she would be in the best possible position to determine when such promotion was desirable; secondly, knowing precisely what ground the higher class had traversed before he entered it, she would be able to meet his needs in the most intelligent way by classroom recapitulations and by suggestions as to outside reading.

Objections to the Existing System. — The existing system is not only unfavorable to a proper method of promotion in these particulars; it not only makes it impossible for the class teacher to have that knowledge of a pupil's capacity to do the work of a higher grade which a departmental teacher may have, and impossible for the pupil who is promoted before his class to have the work of the higher class properly adjusted to his needs: it interposes a powerful obstacle to a wise system of promotion in another way. To teach bright, eager, enthusiastic boys and girls is a real pleasure to the genuine teacher. Would it be a

matter of wonder if, without admitting it to herself, she should be unwilling to lose this pleasure — if she should unconsciously overemphasize the importance of the work yet to be done when promotion of her best pupils to a higher class meant promotion to another teacher? And it is worth while to notice that this motive would tend to operate most strongly with the best teachers — with the very class of teachers who under the departmental system would most earnestly desire to have their pupils so promoted as to keep them doing the most helpful work.

The Existing System Requires Teachers to Teach Subjects in Which They are not Interested. — Another argument in favor of the proposed system is that the traditional system requires the teacher to teach subjects for which she has little taste or aptitude and of which her knowledge is very superficial. It is not uncommon for a teacher to have a genuine interest in the subjects pertaining to nature, or in those that pertain to man, but it is only the teacher with encyclopædic knowledge and of varied talents who has a real interest in both of these great subdivisions of human knowledge. Now it is a great misfortune for children to be obliged to study a subject under a teacher who does not care for it. For apathy, like interest, is contagious, and it is almost impossible for even bright pupils to develop interest in a subject in which the teacher lacks interest.

Moreover, a lack of interest implies superficial knowledge. The teacher who is not interested in history, for example, does not see the facts of the subject in their logical relations, does not see them in their relation to the life of the individual, the nation, and the race. They are, for her, dead, meaningless facts — facts that are "going nowhere

for nothing." She teaches them because she is required to, and the pupil learns them for the same reason. Teacher and pupil alike are heartily glad when they have finished the subject, only "finishing" it means for the former getting round to the point where she takes up the same monotonous "grind" again, and for the latter, the point where he is to take up similar "grinds" under the same kind of teacher. To suppose that work done under such conditions can be genuinely educative, that it can illuminate the mind, quicken the emotions, ennoble the ideals of the student, is absurd. There are two things which in the majority of cases such work may be counted on to accomplish: add to the burden of meaningless facts which the pupil's memory is expected to carry, and intensify his longing for the time when he shall have done with school.

The specialization of teaching in the higher grades of the grammar school is urged, then, for the following reasons:

1. It renders possible that enrichment of the course of study in the higher grades of the grammar school requisite to make the work there genuinely educative.

2. It facilitates that promotion of a pupil which is made to depend primarily on his knowledge and capacity instead of on the calendar.

3. It facilitates the plan by which teachers are required to teach only those subjects for which they have a decided bent and of which they have special knowledge.

4. It enables the teacher to make specific and careful preparation for each day's work, so that her own mind may be constantly growing and her own interest in her subject constantly deepening.

QUESTIONS ON THE TEXT.

1. What is meant by the title of this chapter?

2. Show that the same argument which proves that specialists are desirable in the high school may be used to show that they are desirable in the upper grades of the grammar school.

3. Why are specialists not needed all through the grades?

4. What is meant by "the psychological epoch" which dates the transition from the system of concentration to that of specialization?

5. Explain and illustrate what is meant by the study of facts in their logical relations.

6. Enumerate the advantages of specialization in teaching.

7. Specify the objections to the existing system.

SUGGESTIVE QUESTIONS.

1. Do you accept the conclusions of this chapter?

2. Are there any obstacles in the way of introducing departmental instruction in the grammar-schools of your town?

3. What effect would departmental instruction in the grammar-school have on the training needed by teachers?

4. Is that fact an argument for, or against, the proposed change?

5. In German, French, and English schools of a corresponding grade is the instruction given by specialists?

CHAPTER XXII.

THE EDUCATIONAL VALUE OF HISTORY.

Educational Values and Methods. — The preceding chapter incidentally discussed the methods that should be employed in teaching various subjects. But in order that our knowledge of method may bear its proper fruit we ought to have definite ideas of the sort of benefits which the study of a subject may be expected to confer. To know no more of the educational value of history, literature, arithmetic, grammar, geography, and so on, than that they tend to "develop the mind" is to know little to the point. As the doctor needs to ascertain the precise effect the various drugs may be expected to have on the body, so we need to determine the precise effect the study of different subjects will have on the mind. We begin the discussion by attempting to determine the educational value of history.

History (1) Increases One's Knowledge of Himself and His Fellows. — Among the benefits to be derived from the study of history may be mentioned the enlargement of one's knowledge of himself and of human nature. As a child becomes conscious of other people through becoming conscious of himself, so he is able to explain the actions of others only in so far as he can refer them to motives such as he has himself experienced. And this is as true of the men and women whom he comes to know in history as it is of those whom he meets in every-day life. What made

the Puritans leave their homes to brave the dangers of the sea and an unknown country? What made men who cared so much for religious freedom so willing to deprive others of it? These are questions relating to human nature, and if we are able to answer them, it is because we find something in ourselves which enables us to see that under similar circumstances we might have done the same thing. In like manner we should never be able to understand the civilization of China, its superstitious reverence for the past, its contemptuous rejection of everything that would imply a doubt of the perfect wisdom of antiquity, until we had made a study of our own lives and formed some idea of the influence which tradition exerts upon us. It may be said, with Froude, that "in history the outward fact is all that we can know, and that insight into the heart is impossible. . . . It often is so. But when it is so no true history is possible."[1] True history is the outward fact *and* the motive that lay behind it.

The intelligent study of history, then, is a constant study of human nature, and the intelligent study of human nature is a persistent study of one's self.

(2) **Develops Sympathy and Charity.** — Such a study of history tends to develop the capacity for intelligent sympathy and charity. It is worth a boy's while to learn that although Hamilton and Jefferson disliked each other intensely, each was devoted with his whole heart and soul to the well-being of the country, which he thought the policy of the other would ruin. It is worth his while to know that each of the two great generals of the Civil War was entirely clear that he was doing his duty, al-

[1] Educational Review, Vol. V. p. 182.

though one was fighting to preserve the Union and the other to destroy it. Such things are worth his knowing not only because they afford opportunity for the exercise of that "theorizing activity" in which we have found one of the ends of life, but because they help him to a point of view from which he may look upon the lives of the men and women about him with sympathetic eyes, and perhaps in after-years be able to realize that a man may oppose him with passionate intensity and nevertheless be as honest as himself.

(3) **Makes us Realize that Nations, like Individuals, Must Act in Accordance with Moral Law.** — It may be said that such teaching tends to develop that invertebrate, gelatinous sentimentalism which leads silly people to make a hero of any man accused of crime. But if history is properly taught it will furnish an effective antidote against any such tendency. No other subject affords such splendid opportunities for showing that not what we think to be true but what really is true is the important matter. He would be a narrow and unsympathetic student who did not believe in Calhoun's perfect sincerity. But the great Nullifier's honesty could not change the character of the moral laws by which this world is governed. Slavery *is* wrong. A country that permits it permits a violation of moral law, collides with one of the fundamental realities of the world. Just as two trains cannot come into collision without disaster, so a man or a nation cannot violate a moral law with impunity. To say that all you have to do is to *think* you are right, that your honesty of conviction will save you from any unpleasant consequences, would be quite as absurd as for an engineer to say that if he only *thinks* the

track is clear, a collision, if it occurs, will not hurt anybody. Calhoun was sincere. But his sincerity did not prevent the Civil War — that tremendous result of the collision of the American people with one of the abiding realities of the world. What is it to live wisely but to take account of the facts, of the realities in the midst of which we live? And where else can we learn so impressively as from the study of history that there are realities not perceptible by the senses, and that the man or the nation that disregards them acts the part of a fool?

(4) **Prepares for Citizenship.** — The study of history ought also to be a preparation for the duties of citizenship. Who is the good citizen? He is the man who has a certain kind of knowledge, a certain kind of reasoning power, and a certain effective ideal of civic duty.

(a) **By the Knowledge It Imparts.** — It would be out of the question to enumerate the various kinds of knowledge which a good citizen ought to possess. Suffice it here to point out some of the more obvious lessons we ought to learn from the study of history, ignorance of which would make it impossible for us to act the part of grateful American citizens. If we do not know that national greatness is not measured by extent of territory or largeness of wealth, if we have not learned that a splendid material civilization may coexist with deteriorating national character, if we do not see that the one thing which makes a nation respectable is the character of the men and women who comprise it, and that its sole title to greatness is derived from the qualities of mind and heart of its citizens, we cannot help throwing our influence on

the wrong side in important crises. And if we do not understand the ideas which lie at the foundation of our national history — that America has stood for equality before the law, and that any discrimination between man and man is disloyalty to our national ideals, — if we do not clearly perceive that a policy of colonization for mere aggrandizement is a Europeanization of our government, an obliteration of all that distinguishes it from the governments of the Old World, we are in danger of proving unfaithful to our country. That we should have an intimate acquaintance with our Constitution, that we should know what are the duties of our officials, that we should understand that the government of the city, the State, or the nation is a wonderfully complex organization and that it should be conducted on business principles, that the mayor, governor, or president who appoints to office for any reason which would not appeal to the owner of a private enterprise is unfaithful to his trust, are matters too evident to make extended comment necessary. But the frequent corruption of our city and State governments, the passage of laws by our national legislature to promote the interests of a class or section rather than those of the whole people, are eloquent testimony to the fact that we have not learned these things with sufficient clearness.

(b) **By Developing a Certain Kind of Reasoning Power.** — The good citizen needs also a certain kind of reasoning power. Unless a man has the sort of training that enables him to trace national conditions to their origin he is sure to be imposed upon by the fallacy which logicians call "false cause." A countless multitude of facts precede every event. To assume that any one of these is its real

cause, without considering its natural fitness to produce the effect, is to be guilty of that fallacy. The man who fails to see that the mere fact that so complex a thing as national prosperity was preceded by a certain event hardly warrants the inference that the particular antecedent was its cause, that man becomes the catspaw of the designing party newspaper and the professional politician. To be able to vote intelligently we must be able to detect the fallacies of those who have a pecuniary interest in deceiving us, and such ability will grow only through exercising the sort of reason which the intelligent teaching of history cultivates. For in reasoning about historical subjects we are dealing with matters of the same sort that confront us in current political questions; because, as Freeman so aptly remarked, "politics is present history, and history is past politics."

(c) **By Fostering a High Civic Ideal.** — A good citizen needs, also, a certain civic ideal. A very suggestive question was raised in a conversation that occurred between a banker and one of his friends during the presidential campaign of 1896. "We condemn in unmeasured terms," said the banker, "the man who sells his vote. But you and I intend at the coming election to vote the ticket that will put most money into our pockets. Since that is the motive which actuates the voter who accepts a bribe, what is the difference between his conduct and ours?" I do not wish to insinuate that the act of a man who casts his vote solely with reference to his own interests is on a par with that of the man who sells his vote. But it ought to be evident without much discussion that if a voter feels that he has a right to cast his vote in brutal disregard of

the interests of other people, he can hardly be expected to be conscious of the clear demarcation between that sort of right and the right to use any power he possesses with equal indifference to the public good. If a sharer in the profits of a trust has the right to vote for a candidate whose sole recommendation is that he may be depended upon to act in the interest of corporations, why has the former not a right to bribe other voters or to corrupt members of Congress in order to further his private ends? Why may he not debauch the voters of an entire State in order to gain office?

The Theory of the Sophists. — The student of the history of civilization has frequent occasion to note that society rarely casts off an error without giving up its hold on some connected truth. Up to the time of the Sophists, who began to teach in Greece about 450 B.C., the universal theory was that the individual was entirely subordinate to the state; that he belonged to it body and soul; that it was the source of all his duties and the measure of all his obligations. The Sophists called this theory in question. They saw that the individual, not the state, was the measure of all things. But from this truth it was but a step to the fallacy that the wisest life we can live is that which disregards the interests of society. To the erroneous theory that the state is everything and the individual nothing they opposed one more fatally erroneous — that the individual is everything and society nothing. The old theory had held that the individual could make no claims upon the state, that he had no rights before it; they maintained that society had no claims upon the individual, that he should take no account of it except to

promote his own material interests. In a word, in getting rid of the old error they lost their grip on the fundamental truth that he only is mindful of his own highest good who has regard for the interests of others.

Its American Counterpart. — Now classification is not proof; and when it is maintained that the notion that a man may vote to put money into his pocket whether it be for the public good or not is identical with the theory of the Sophists, it is not asserted that anything is proved thereby. But either morality is the name, not of a fundamental reality which a wise man must take account of, but of the factitious code which he should observe in seeking his material interests so far as convenient, or the Sophists, both Greek and American, are wrong. Either the difference between a moral and an immoral man is like that between a prize-fighter and an ordinary rough-and-tumble fighter, in that the latter seeks to inflict all the injury he can upon his opponent, while the former is hampered by the rules of the "ring," or else there is such a thing as civic duty. Either the Golden Rule is obsolete, a canon which the world has outgrown, or its binding force holds when a man casts his vote. To disregard it is to disintegrate society into a host of self-seeking anarchistic individuals, when each man's hand will be against every man, and every man's hand against him. It is only by adherence to the Golden Rule that we can bind society into a living organic whole each member of which shall seek his own good only to that degree that he intelligently subordinates his own material good to the welfare of society.

A teacher who has a keen perception of this truth —

and only one who has can be of service to her pupils in this direction — will find no other of the school subjects so helpful as history to inculcate it. The lessons for the intellect are to be found here: the connection between the national well-being and the subordination of the material welfare of the individual to the public good. The persuasive appeal to the emotions may be made here — the presentation of the characters of those who owe their place in history to their readiness to forego the gratification of their individual desires in the interest of the public good.

These, then, are the ways in which the study of history contributes to the purposes of education: it promotes the study of human nature, cultivates sympathy and charity, deepens the sense of the reality of moral laws, and prepares for the duties of citizenship by imparting the knowledge, developing the kind of reasoning power, and fostering the ideals without which good citizenship is impossible.

Children May Study History with Profit. — It may be urged that such benefits presuppose that the student brings to the consideration of history the maturity of the high school or the college. To this objection two replies may be made. In the first place, the six-year-old just entering school has already been a student of human nature for several years. Without help from any one he has discovered the existence of other people and made some progress in the study of individuals. The intelligent teacher of history will only build on the foundation the child has already laid. She will help him continue his study of human nature by telling him about people whom he has not seen; she will broaden his sympathies by making him acquainted with the people of other lands and times.

Moreover, if this were not true, the facts would still oblige us to maintain that if history should be studied at all, it is because of the benefits we have enumerated. If the boy in the elementary school cannot obtain these benefits, he cannot obtain any benefit whatever.

We have got in the habit of talking about elementary, high-school, and college education, as though the things were as different as their names, and this has given currency to the notion that the educational value of a subject depends on the grade of the school in which it is taught. We need to remember that in every stage of education it is a growing mind with which we have to do, and that the educational value of our efforts consists in the extent to which we have caused that mind to exercise its capacities to know, feel, and will. Now an elementary pupil either can or cannot be made to understand some of the simpler facts of biography and history; if he can, he may be taught some of the simpler facts of human nature. He either can or cannot understand some of the simpler explanations of history; if he can, he is capable of being trained in the kind of reasoning that the correct explanation of current political conditions requires. He either can or cannot be made to see the beauty of the lives of some of the noble men and women of the world; if he can, it is possible that his own ideals may be changed through his study of history.

QUESTIONS ON THE TEXT.

1. What is meant by educational value?
2. What is the comparison between medicine and studies intended to show?
3. In what way does history increase one's knowledge of himself and his fellows?

4. What does Froude mean by the outward fact?

5. How does history tend to develop sympathy and charity?

6. In what way does it help us to realize that nations, like individuals, must obey moral laws?

7. What are the qualifications of a good citizen?

8. Illustrate the sort of knowledge needed for citizenship.

9. What kind of reasoning power must a good citizen possess, and how can he acquire it?

10. What sort of ideal must a good citizen have?

11. What is the story of the campaign of 1896 intended to show?

12. What theory as to the relation of the individual to society prevailed up to the time of the Sophists?

13. What was their theory?

14. What is its American counterpart?

15. Show that children may study history with profit.

SUGGESTIVE QUESTIONS.

1. Why is it so hard for most people to believe that the only realities are material?

2. How may history help to show that there are other realities?

3. Show that there is no such thing as a general cultivation of observation, memory, imagination, or reasoning.

4. Who were the Sophists?

5. What bearing do our conclusions as to plastic imitation have on the teaching of high civic ideals?

6. What should be the characteristics of the teacher who imparts such ideals, and why are they essential?

CHAPTER XXIII.

THE EDUCATIONAL VALUE OF SPELLING, LANGUAGE LESSONS, AND GRAMMAR.

Spelling Has Little Educational Value. — As to the educational value of spelling it is sufficient to say that it has little. The good speller has no clearer insight into the laws of nature or of mind than the poor speller, responds no more readily to any phase of beauty or call of duty. The sole distinction between them consists in the difference of a certain kind of memory, the cultivation of which has little value for any other purpose.

The Uses of Forgotten Knowledge. — Sir Joshua Fitch has an interesting paragraph on the uses of forgotten knowledge. "It would not be right to conclude," he says, "that all knowledge which is forgotten has failed to serve a useful purpose. It may be forgotten in the form in which it has been received, but it may reappear in another. . . . It is true that what is consciously got up for some temporary purpose drops out of the ground and leaves no trace. Like Jonah's gourd, it comes up in a night and perishes in a night. It is not of this I speak. But all knowledge once honestly acquired and made a subject of thought germinates, even though in time it becomes unrecognizable, and seems to disappear altogether. It has fulfilled its purpose, has deepened a conviction, has formed the legitimate ground for some conclusion on which in

turn something else has been built; and it gives to the learner a sense of freedom and of elbow-room when in after-life he is dealing with it and cognate subjects, such as he could not possibly experience if the subject were wholly new to him. Rules serve their purpose if they form our habits of speech or of action, even though these habits are not consciously obedient to the rules, and although the rules themselves could not be restated in an explicit form. A demonstration in mathematics has done its work if, for the time, it gave an insight into the true method of reasoning, even though in later life we utterly fail to remember the theorem or the proof. So the exact character of a set of experimental illustrations in physics may be entirely forgotten; yet if the truth they illustrated was by their help fastened on the mind, and has subsequently been seen in wider and more varied application, we have no right to say that the original effort has been wasted. . . . Here, then, is one of the tests of our school-lessons. Grant that as school-lessons they will be forgotten. Let us reconcile ourselves to this as inevitable, and ask in relation to everything which we teach: Is it germinating and fruit-bearing or not? When the husk and shell shall have decayed, will there be anything left? If so, what? Will this bit of knowledge drop wholly out of the memory and leave no trace?" [1]

An application of this test will make it evident that spelling as such has no educational value. When the spelling of a word drops out of the memory, it leaves no trace behind. No conviction has been deepened on account of it, no sense of freedom has resulted from it. By a dead heave of mechanical memory the combination of letters

[1] Fitch, Lectures on Teaching, p. 145.

which composed the word was fixed in the mind, and when it dropped out the mind was relieved of the burden of unintelligent facts which it is obliged to carry —and that is all. The stress, therefore, that is laid upon correct spelling is a mere fashion and, as every one knows, of comparatively recent adoption.

Conventional Value of Spelling. — But no one supposes that we are therefore warranted in not taking the trouble to learn to spell properly. Society, as we know, imposes severe penalties upon those who disregard its fashions, and the man who is not a good speller is assumed to be an uneducated person, incapable of filling a position that demands training and intelligence.

What Words Children Should Be Taught to Spell. — But since spelling has little intrinsic educational value, the ability to spell words that one cannot use is of no benefit. We are therefore bound to prevent our pupils from wasting their time in learning to spell words of whose meanings they are ignorant. To know how to spell words which one is unable to use can only serve to prepare one to shine in a spelling-match, and life is too short to make it expedient to indulge in such ornamental accomplishments.

Conventional and Real Value of the Ability to Use Good English. — That capacity to speak and write well which language lessons aim to develop has a greater conventional value even than spelling. Incorrect, slovenly English at once stamps its user not only as uneducated, but as ill-bred. But to this conventional value the ability to use correct, clear, forcible, and elegant English adds a high degree of

intrinsic worth. Whether a man talks to give pleasure, or to persuade, or to convince, the probability that he will accomplish his purpose depends in part on his capacity for effective speech. Moreover, the ability to write well contributes appreciably to the pleasure and profit one may get from reading.

Language Lessons Should Deepen a Child's Interest in His Work. — It may be worth while to repeat that since language lessons should grow out of the social nature of the child, they ought to deepen his interest in the school subjects to which they are related. Now when he tells his classmates, for example, about a book they have not read, the effort to make it clear to them will increase his capacity for effective speech and, at the same time, deepen his own interest in the book. This, therefore, is another element of the educational value of language lessons: they ought to increase the interest in the other work of the school.

Grammar (1) Cultivates the Power of Discrimination. — The study of grammar is primarily a study of the functions of words. "By grammar we do not learn to speak, no, nor even to read and write," says Dr. Earle, "but we learn the relations of words to one another in the use of speech. . . . The subject-matter of grammar is . . . the relations which words bear to one another in formed sentences." The study of grammar tends, therefore, to cultivate in a high degree the power of discrimination. Now growth in intellectual power in one of its phases consists in the development of this capacity. The mind begins its career in this world without the power to see any differences, even the most obvious. Every step in its progress from infancy to

maturity is marked by an increase in its power of discrimination. A growth in its power to observe means a capacity to see differences where only likenesses were seen before ; a growth in its capacity to think means a power to distinguish thought relations that previously were confused. A study, therefore, that is largely devoted to the determination of the precise meaning of words has great educational value.

(2) **Promotes the Study of the Mind.** — The study of grammar may also be made to promote the close and critical study of the mind. It is not the physical relations of words to one another that grammar seeks to discover. If it were, the university student of grammar would have no advantage over a three-year-old child. The only physical relations into which words can enter are those of space, and no maturity is required to tell which words come first in a sentence and which second, which words are adjacent to one another and which are separated by other words. No ; the relations of words with which grammar is concerned are those which they bear to one another as expressive of thoughts. To understand, for example, the relation of *bright* to the other words of the sentence, "A bright boy learns quickly," is to know that when we are thinking of boy in general we have in mind the entire class, able, mediocre, stupid, idiotic, and that *bright* limits it in a certain way, makes a sub-class of those possessing certain qualities. Now this study of the thought relations of words often requires a close study of the mind. What, for example, is the force of the conjunctions in the sentence, "Peas *and* beans may be severed from the ground before they be quite dry ; *but* they must not be put into sacks *or*

barns until perfectly dry ; *for if* they be, they will molder" ? If we say that *and* joins together *peas* and *beans*, we have either stated an irrelevant truism, or we have left the matter entirely unexplained. If the statement means — as it probably does in the mind of many grammar-school pupils — that two printed words are connected by a third, it is an irrelevant truism. The object of the study of grammar is not to ascertain the physical relations of physical things. But if the statement is intended as a description of the fact of consciousness which *and* expresses, it fails to accomplish its purpose. For we do not learn anything about what takes place in the mind when we are told that *and* connects *peas* and *beans*.

Similar criticism applies to the way in which *but* is often disposed of. When it is said that *but* expresses the relation of the first to the second member of the sentence, the question which must be answered is, What kind of relation ? Not to raise that question is to permit the pupil to content himself with knowing, or rather feeling, that the thought expressed by the first member stands in some indefinite relation to that expressed by the second — is to encourage just that hazy sort of thinking which it is an important object of education to put an end to.

(3) **Should Illustrate the Difference Between Knowledge and Opinion.** — The study of grammar should also help the pupil to realize the difference between what he knows and what he merely believes. When a child first enters school he knows very little. He understands that such and such objects are called trees, but he does not know precisely in what respects such objects differ from all others, nor in what respects they agree. If he is confronted with a big

palm and is asked whether it is a tree, he cannot tell. He has what may be termed a feeling as to what a tree is, but no genuine knowledge. And this is his state of mind with reference to all the objects which he seems to himself to know. He is in the same condition in which the whole world was up to the time of Socrates. Socrates first saw, historians of philosophy tell us, the difference between knowledge and opinion, and thereby marked an epoch of the first importance in the history of thought. Now the study of grammar should help to create just such an epoch in the history of the pupil. It should help him to form logical concepts of the various parts of speech, and thereby enable him to realize the difference between a logical concept — one whose content is clearly and definitely marked off from everything else in the mind — and a psychological concept — a state of mind in which one *feels* the resemblances between those members of the class for which the concept stands without definitely knowing what those resemblances are.

These, then, it is submitted, are the chief elements of the educational value of grammar: it cultivates the power of discrimination, promotes the study of the mind, and helps to make clear the difference between knowledge and opinion. The notion that it contributes materially to help the student to speak and write the language correctly is so generally discredited that no space will be wasted in discussing it. All progressive teachers understand that language lessons must be chiefly relied on to promote correctness in the use of language.

At What Age Should Grammar be Studied? — To what extent may the pupils of the elementary school derive this

kind of benefit from the study of grammar? The present state of pedagogical knowledge does not permit a precise answer to this question. The acts of discrimination required in the mastery of grammar vary between those that may be performed by the average ten-year-old pupil and those that would tax the powers of a college freshman. Manifestly this applies also to the knowledge of the mind which an intelligent study of grammar requires.

There are, then, phases of the subject easily within the grasp of the pupils of the elementary school. But it does not follow that because they are, grammar should be made a part of the elementary-school course. No one has a right to form a definitive opinion on that point until he has made an exact comparison of the precise benefits to be derived from the study of grammar with those that might be derived from the study of some substituted subject. That comparison no one can now make in any exact sense; it is safe to say that no one will ever be able to make it. We shall probably always be obliged to content ourselves with a feeling as to what is true in this direction — a feeling that can never be expressed in the terms of an exact science.

QUESTIONS ON THE TEXT.

1. Show that spelling has little educational value.
2. What are the uses of forgotten knowledge?
3. What does Fitch mean by "fruit-bearing"?
4. What is meant by conventional value?
5. What words should children be taught to spell?
6. What is the conventional value of the ability to use good English?
7. How does grammar cultivate the power of discrimination?
8. Illustrate how it promotes the study of the mind.

9. What is the difference between a logical and a psychological concept?

10. What is the difference between opinion and knowledge, and in what way does the study of grammar help to make it clear?

11. At what age should the study of grammar be undertaken?

SUGGESTIVE QUESTIONS.

1. Can you illustrate from your own experience the fact that you have derived benefit from learning some things which you have entirely forgotten?

2. Illustrate the fact that growth in intellectual power consists in the development of the capacity of discrimination.

3. What relation does grammar bear to logic, psychology, and history?

4. Mention some parts of grammar that the primary pupil can comprehend, and some that are beyond the range of the grammar school pupil.

CHAPTER XXIV.

THE EDUCATIONAL VALUE OF READING.

Reading and Education. — This chapter could with almost equal propriety be entitled The Educational Value of Education. For the process of education might without serious inaccuracy be defined as reading the right books in the right way. He who leaves school with his taste so cultivated that he can discriminate between good books and bad, and with his powers so developed that he can assimilate what he reads, has the essentials of an education; while he who cannot do this is at bottom an uneducated man, no matter what universities he may have attended or how many degrees may have been conferred upon him.

Nevertheless the training resulting from such subjects as arithmetic, grammar, language lessons, nature study, and even history could not, without an undue extension of the term, be included under reading as the word is used in this country. What is here proposed for discussion is the educational value of that school exercise which goes by the name of reading.

Dr. Harris on the Educational Value of Reading. — Dr. Harris maintains that the mere process of learning to read is "far more disciplinary to the mind than any species of observation of differences among material things, because of the fact that the word has a twofold character — ad-

dressed to external sense as spoken sound to the ear, or as written and printed word to the eye — but containing a meaning or sense addressed to the understanding and only to be seized by introspection." "The pupil," he continues, "must call up the corresponding idea by thought, memory, and imagination, or else the word will cease to be a word and remain only a sound or character. On the other hand, observation of things and movements does not necessarily involve this twofold act of analysis, introspective and objective, but only the latter — the objective analysis. It is granted that we all have frequent occasion to condemn poor methods of instruction as teaching words rather than things. But we admit that we mean empty sounds or characters rather than true words. Our suggestions for the correct method of teaching amount in this case simply to laying stress on the meaning of the word, and to setting the teaching process on the road of analysis of content rather than form. In the case of words used to store up external observation the teacher is told to repeat and make alive again the act of observation by which the word obtained its original meaning. In the case of a word expressing a relation between facts or events, the pupil is to be taken step by step through the process of reflection by which the idea was built up. Since the word, spoken and written, is the sole instrument by which reason can fix, preserve, and communicate both the data of sense and the relations discovered between them by reflection, no new method in education has been able to supplant in the school the branches, reading and penmanship. But the real improvements in method have led teachers to lay greater and greater stress on the internal factor of the word, on its meaning, and have in manifold ways shown

how to repeat the original experiences that gave the meaning to concrete words, and the original comparisons and logical deductions by which the ideas of relation and causal processes arose in the mind and required abstract words to preserve and communicate them."[1]

The Educational Value of Reading and Observation Lessons. — While what is here said as to improvements in the methods of teaching reading may be readily granted, the validity of the argument to show the superiority of the educational value of learning to read over observation lessons is not beyond dispute. For, however true it may be that the observation of a flower, for example, calls for nothing but objective analysis, while learning to read a simple sentence, as *The dog runs*, involves not only this, but the recalling of the thought which it expresses, we have no right to draw from this any conclusions as to the comparative disciplinary effect of the two processes on the mind until we have learned which of the two calls forth the more strenuous exertion. If the objective analysis involved in the study of the flower demands more concentrated attention than do both the objective and the introspective analysis required in reading a sentence, then the single act of analysis necessary in the one case is more disciplinary than the double act involved in the other.

From this point of view it is at once evident that the question whether the observation of things or reading is the more disciplinary cannot be answered. For while in some cases the introspective analysis required in intelligent reading is so simple that the school child in the lowest grades has no difficulty in performing it, in others it tests

[1] Report of the Committee of Fifteen.

severely the powers of mature and able men. No child has any doubt as to the meaning of

> "Twinkle, twinkle, little star,
> How I wonder what you are!
> Up above the world so high,
> Like a diamond in the sky."

But who can be sure that he realizes the thought which Shakspere meant to express when he wrote these lines:

> "What may this mean,
> That thou, dead corse, again in complete steel
> Revisit'st thus the glimpses of the moon,
> Making night hideous; and we fools of nature
> So horridly to shake our disposition
> With thoughts beyond the reaches of our souls?"

Or that sublime cathedral the vision of which entranced Wordsworth when he wrote:

> "But for those obstinate questionings
> Of sense and outward things,
> Fallings from us, vanishings;
> Blank misgivings of a creature
> Moving about in worlds not realized,
> High instincts, before which our mortal nature
> Did tremble like a guilty thing surprised:
> But for those first affections,
> Those shadowy recollections,
> Which, be they what they may,
> Are yet the fountain-light of all our day,
> Are yet a master light of all our seeing"?

On the other hand, that a fish has gills, two eyes, and a tail is evident at a glance to a child; but the ability to see in it all that Agassiz saw results only from long and strenuous years of study.

It appears, therefore, that the question as to the com-

parative disciplinary value of reading and observation lessons cannot be answered because it deals with incommensurable things. The discussion, however, has served its purpose if it has made clear the fact that reading has a disciplinary value — that an increase of intellectual power may as certainly result from the study of a poem as from the study of a problem in geometry.[1]

Mistakes in the Teaching of Reading. — But it is not primarily because of its effect on the intellect that reading deserves the place that will one day be accorded to it in the school. The notion that it is responsible for some grievous errors. In the college and the university it causes professors to mistake a learned acquaintance with editions and analyses and annotations and allusions and etymologies for an appreciative knowledge of literature; in the grammar school and the high school it makes teachers confound a detailed knowledge of the lives of great writers with a love of the works to which those writers owe their place in the world. Knowledge of editions and etymologies and biographies is at best only knowledge *about* literature. To confuse this with literature itself is like confusing an account of a banquet with the banquet itself, or a description of Beethoven's symphonies with the symphonies themselves. The ultimate purpose of all knowledge about literature is to help the student to rethink the thoughts and refeel the feelings of an author. So far as this knowledge contributes to that end it is good; so far as it is taken as a substitute for literature itself it is absolutely pernicious. Better by far an intimate, loving

[1] See Ruskin's Sesame and Lilies, pp. 26–34, for a splendid illustration of the way in which this intellectual cultivation may be derived.

acquaintance with Wordsworth's Ode on the Intimations of Immortality or Gray's Elegy written in a Country Churchyard, without any knowledge whatever of the personality of the authors, than an external, mechanical acquaintance, however extended, with their lives, without any knowledge of their works. "The essence of literature," it has been finely said, "is beauty. To study it mechanically is like grasping a butterfly."

Value of the Knowledge of Real Men. — It is indeed true, as Socrates long ago insisted, that a knowledge of human nature is of all knowledge the most valuable. And to know the great men of the world is peculiarly valuable. By becoming intimately acquainted with the seers of the race we may learn what they thought about the art of living — the art of so ordering our lives as to make them in the deepest and truest sense a success. Standing on their shoulders we may perhaps see above the fogs and vapors that dim the eye of public opinion, and realize that the only genuinely successful life is that which is knit most closely to the human race; that the only wealth that counts is that greatness of soul which enriches not only its possessor, but all other men; that our real purpose here is "to make ourselves brave, true, just, and honorable men."[1]

How to Become Acquainted with a Man of Thought. — But you can no more get a vital knowledge of a man of thought by learning what he did than you can of a man of action by learning what he wrote. The one put his deepest, truest self into his deeds, the other into his writings. That is what Noah Porter meant when he said that a good

[1] Educational Review, Vol. V. p. 169.

book is of more value to the world than a good man. A good book is a good man at his best — a good man idealized. To be content, therefore, with biographical knowledge — with knowing, for example, when Wordsworth was born, where he lived, when he travelled, with whom he talked, what poems he wrote — is like going to a museum and spending the time in ascertaining the size of the building and the amount of room given to its various departments.

Literature in the Elementary School — Homer and Shakspere. — Can the pupil of the elementary school sit at the feet of the sages of the world and be taught by them? To some extent he can. The deepest lessons that Homer and Dante and Shakspere and Milton have to teach he could not learn, even if he had the time to study them. But there are detached passages from all these writers which can be made to appeal to him not only because of their literary beauty, but because of their persuasive presentation of some helpful view of man and life.

From "the great Homeric story" he may learn how Achilles, "though aided continually by the wisest of the gods, and burning with the desire of justice in his heart, becomes yet, through ill-governed passion, the most cruel of men."[1]

From a study of Shakspere's historical plays he may learn "how a man may succeed in attaining a practical mastery of the world,"[2] and be made to see the stern reality of the moral laws by which the world is governed, and that a man cannot outrage them without being over-

[1] Ruskin, Sesame and Lilies.

[2] Dowden, Shakspere's Mind and Art.

whelmed. Learning from the teacher the less interesting parts of the story, he may be taught in the master's own language those lessons of life which are valid for all time.

Elsewhere in this book stress has been laid upon the importance of biography. In connection with these historical plays, the educational value of biography and that of literature may be so combined that each may be made to heighten the effect of the other. To illustrate. Take the story of Cardinal Wolsey. Shakspere tells us that "from his cradle he was a scholar, and a ripe and good one, exceeding wise, fair-spoken and persuading," avaricious indeed, but of princely generosity, endowing, after the fashion of the rich men of our time, "those towers of learning, Ipswich and Oxford." But he was, withal, a man of unbounded and unscrupulous ambition, "ever ranking himself with princes," ready to employ any means to attain his ends. "Simony was fair play. In the presence [of the king] he would say untruths; and be ever double both in his words and meaning"; pitiless except when he meant to ruin, mighty in his promises, but in his performance nothing. And so he fell. In language as beautiful as it is pathetic he is himself made to set forth the causes of his fall:

"Farewell! a long farewell to all my greatness!
This is the state of man: to-day he puts forth
The tender leaves of hope, to-morrow blossoms,
And bears his blushing honors thick upon him;
The third day comes a frost, a killing frost;
And, when he thinks, good easy man, full surely
His greatness is a-ripening, nips his root,
And then he falls, as I do. I have ventured,
Like little wanton boys that swim on bladders,
This many summers in a sea of glory,
But far beyond my depth: my high-blown pride

At length broke under me and now has left me,
Weary and old with service, to the mercy
Of a rude stream, that must for ever hide me.
Vain pomp and glory of this world, I hate ye:
I feel my heart new open'd; O, how wretched
Is that poor man that hangs on princes' favors!"

And still more plainly in the following passage:

"Cromwell, I did not think to shed a tear
In all my miseries; but thou hast forc'd me,
Out of thy honest truth, to play the woman.
Let's dry our eyes: and thus far hear me, Cromwell;
And, when I am forgotten, as I shall be,
And sleep in dull cold marble, where no mention
Of me more must be heard of, say, I taught thee,
Say Wolsey, that once trod the ways of glory,
And sounded all the depths and shoals of honor,
Found thee a way, out of his wreck, to rise in;
A sure and safe one, though thy master miss'd it.
Mark but my fall, and that that ruin'd me.
Cromwell, I charge thee, fling away ambition:
By that sin fell the angels; how can man, then,
The image of his Maker, hope to win by it?
Love thyself last: cherish those hearts that hate thee;
Corruption wins not more than honesty.
Still in thy right hand carry gentle peace,
To silence envious tongues. Be just, and fear not:
Let all the ends thou aim'st at be thy country's,
Thy God's, and truth's; then if thou fall'st, O Cromwell,
Thou fall'st a blessed martyr. Serve the king;
And,—prythee, lead me in:
There take an inventory of all I have,
To the last penny; 'tis the king's: my robe
And my integrity to heaven, is all
I dare now call mine own. O Cromwell, Cromwell!
Had I but serv'd my God with half the zeal
I serv'd my king, he would not in mine age
Have left me naked to mine enemies."

And so he who had "trod the ways of glory, and sounded all the depths and shoals of honor," went, an "old man,

broken with the storms of state," to the Abbey of Leicester, and asked permission "to lay his weary bones among ye," and begged "a little earth for charity," and there died.

Burns, Lowell, and Holmes. — But not alone from the great writers who "roll on like mighty rivers through the country of thought," but from the "little Valclusa fountains," the Burnses, Lowells, Holmeses, and hosts of other men, may our pupils refresh themselves. Burns shall teach them the dignity and grandeur of simple, unassuming manhood. Lowell shall make them feel that there is a lofty patriotism which does not say, "My country, may she be right! but right or wrong, my country!" but which fairly quivers with anguish at the thought of national dishonor and national wrong-doing. Holmes shall tell them how, as the swift seasons roll, they may build for their *souls* more stately mansions.

What Literature is Available for School Purposes. — How much may be done in this direction, how much precious ore may be mined from our own great literature and the other literatures of the world for the enrichment of the school, I do not know — I do not believe that any one does. The world has not yet come to see that the art of living is *the* art, and that whoever is ignorant of that, whatever else he may know, knows nothing to the point. Nor has the world yet realized that the only criterion by which we can determine the value of an institution to society is the extent to which it contributes to this art, and that therefore to the school belongs an unquestioned preëminence among the institutions of civilization. Nor, again, has the world yet come to learn that the school can best perform its transcend-

ently important work by passing on to the rising generation the deepests insights and highest aspirations of the race. Nor has it yet come to feel that literature is not, as Spencer seems to think, a sort of toy to amuse one in his leisure moments, but an educational force of profound importance. When that day comes, as come it will, some tasks now thought beneath their dignity will appear not unworthy of great men. Then great scholars will realize the extent of the service they can render to society by ransacking the literatures of the world for the fittest material to be used in the education of the young. When generations of able and devoted scholars shall have worked at this task, when generations of thoroughly trained teachers shall have availed themselves of their work, and that in a society where ideals of life and conduct have been more and more moulded by the deepest insights of the race, I believe that results may be accomplished by education which we hardly dare hope for now. In this connection we should do well to remember that perhaps the greatest mind that ever worked out an elaborate philosophy of education — a mind that no one will accuse of undervaluing the importance of intellectual training and the dignity of intellectual life — reached the conclusion that the one aim of elementary education should be the formation of character, and that the great instrument to be employed in attaining this is literature. Very suggestive, also, is one of the figures he used to express his idea of the way in which literature might be made to produce this effect. The study of literature, said Plato, should dye the character so indelibly with a love of the principles by which life is to be guided, that all the temptations to which life may be subjected will not avail to wash it out.

Pleasure to be Derived from Literature. — In addition to the intellectual and moral effects which should be aimed at in the teaching of literature may be mentioned the capacity to enjoy it. The boy who thoroughly enjoys Gray's Elegy has studied it to some purpose even if he is no better — although he probably will be — for having studied it. Indeed the peculiar moral effect which may be produced by the study of literature is probably due to the fact that it is beautiful as well as ethical. However this may be, literature that is simply beautiful has a right to a place in the school programme. Take, for instance, such lines as these of Shelley's:

> "In a dell 'mid lawny hills
> Which the wild sea murmur fills,
> And soft sunshine, and the sound
> Of old forests echoing round,
> And the light and smell divine
> Of all the flowers that breathe and shine."

They fill the mind with beautiful thoughts of Nature and her sensuous delights, and therefore represent a type of literature which the school should teach. For, we remember, delight in and appreciation of beauty is one of the ultimate ends of life, one of the things that make life worth the living.

QUESTIONS ON THE TEXT.

1. Why does Dr. Harris think that learning to read is more disciplinary than the observation of things?
2. Is his argument sound?
3. What does he mean by introspective analysis, and what by objective analysis?
4. Upon what improvements in method does he lay stress?

5. How are the comparative values of reading and observation lessons to be ascertained?

6. Emphasize some mistakes that are made in the teaching of reading.

7. What is meant by a "man of thought," and how are we to get acquainted with him?

8. Show that the elementary pupil may be taught to appreciate the great writers of the world.

9. What did Plato regard as the aim of elementary education?

10. What study contributes most directly to that end?

SUGGESTIVE QUESTIONS.

1. Do you think the phrase "thoughts beyond the reaches of our souls" expressed a definite idea in Shakspere's mind?

2. Do you know what the quotation from Wordsworth means?

3. How can you ascertain whether the pupils in the upper grades of the grammar school can be interested in Shakspere's story of Wolsey?

4. Why has so little been done towards making the great literatures of the world available for the school?

5. What literatures have received most attention in the school, and why?

CHAPTER XXV.

THE EDUCATIONAL VALUE OF ARITHMETIC.

Arithmetic as a Science and as an Art. — Arithmetic is both a science and an art. As a science it is concerned with the principles that underlie arithmetical operations; as an art, with the rules in accordance with which those operations are performed and the requisite facility in applying them. As an art it is occupied with the result and the result only; as a science, with the method by which the result was reached, and the logical relations of its various steps. One asks *what* is true; the other, *why* it is true. So far as it is an art, all that the boy needs to know when he is dealing with the division of fractions is that he must invert the terms of the divisor and proceed as in multiplication; from the scientific side it behooves him to know why this is so — what is the particular property of number that makes necessary this process in order to arrive at the truth. Evidently, therefore, the educational value of the subject differs according as it is considered as an art or as a science.

Educational Value of Arithmetic as an Art. — As an art arithmetic should be taught to give accuracy to the child's concepts. As Professor Jackman puts it, "It is the function of the mathematical element in education to give accuracy and exactness to ideas, to render hazy notions clear, and to evolve the definite from the indefinite."[1]

[1] Educational Review, Vol. V. p. 41.

The prevalent opinion is that the importance of arithmetic as an art is due to its bearing on the problems of every-day life, commerce, etc. But wherever knowledge is needed for any purpose, whether for thought or for action, exact information is manifestly more useful than indefinite knowledge. If it is worth while to know that the sun is a long way off, it is still better worth while to know that it is ninety-three millions of miles away; if it is useful to know that light travels with almost inconceivable rapidity, the knowledge that it travels at the rate of one hundred and eighty thousand miles in a second is still more useful; if any purpose is served in knowing that the yearly income of some of our rich Americans is almost fabulously great, that purpose is served in a still higher degree by knowing that the income of John D. Rockefeller is probably more than twice as great as was that of the American government during any year of Washington's two administrations. In a word, whether knowledge is for the sake of thought or of feeling or of action, it will perform its function well or ill according as it is exact or inexact. Thinking that is based on inexact knowledge issues in incorrect conclusions, feeling that results from it may be positively harmful, and action that is prompted by it is likely to be injudicious.

Arithmetic as an Art Should Give Definiteness to all our Concepts. — The difference between the ordinary and the true conception of the educational value of arithmetic as an art becomes apparent when we remember that while the erroneous theory regards its value as consisting in its capacity to give definiteness to a certain restricted class of the child's future concepts, the true theory finds it valuable because it helps to give definiteness to all his ideas, as

well those that he has now as those that he may form throughout life. A pernicious fallacy strongly entrenched in current educational thought is that since education is of value only in so far as it is of service in the making of a livelihood, it has no relation to the life of the child during the formative years. As thus conceived his education is like the nuts the squirrel stores up in summer — for the future. It is a process of storing up facts and intellectual power, and acquiring capacities, that will be useful to him when he begins to make his own way in the world — not before.

If any reader of this book is still of this opinion, we can only say that since Ephraim is joined to his idols, there is nothing to be done but to let him alone. But those who agree with us in holding that education is a process of preparation for living need not be reminded that the only way to get ready to live is to live. The child acquires the capacity for the larger physical and mental tasks of the morrow by doing the smaller ones of to-day. Life consists of an uninterrupted series of changes: it is the function of education so to correlate these changes that they shall constitute an uninterrupted growth.

From this point of view it is evident that the true object of teaching arithmetic as an art is to give that degree of definiteness to the child's conceptions which will best enable him to live *in the present*. Child and man alike, each according to his capacity, are to "think clear, feel deep, bear fruit well." And if we have grasped the thought that the life of each of us should be such as to make it a distinct contribution to the wealth of the universe, we shall be able to see that the more completely this is so the more certainly will every phase of life have intrinsic value. To give to every stage of it that degree of completeness which

depends on exact, vivid conceptions is, we repeat, the function of arithmetic as an art.

Two Methods of Teaching Arithmetic as an Art. — Two very different methods are followed in the teaching of arithmetic: one seeks to develop in the mind of the child certain conceptions in order to have material for problems; the other takes the conceptions he has already formed and employs arithmetic to give them greater definiteness. No one will deny that the former has been the method almost universally pursued. The child has been taught certain facts about stocks, bonds, taxes, commissions, insurance, interest, discount, and the like, not because information about these things at that time is valuable in itself, but because those facts furnish materials for a certain sort of problems. Now the method that makes what is taught depend upon arithmetic has nothing whatever in common with the method that makes arithmetic depend upon the immediate needs of a child as a human being. The one subordinates growth to arithmetic; the other employs arithmetic as a means of growth. The one is the logical result of the theory that the object of education is merely to enable the future man to do certain things; the other, of the theory that its function is to transform the inner life so as to make it a thing of beauty and of intrinsic worth.

How Arithmetic may Give Definiteness (1) to the Concepts of Elementary Science. — Professor Jackman has shown in the able article already cited how arithmetic may be employed to make the concepts of elementary science more clear. I quote the series of problems given to illustrate his point:

"I. GERMINATION: *Absorption of Water by Seeds.* — 1. How many grams of water will ten grams of seeds absorb? 2. Ten grams of seeds absorb what part of their weight or bulk of water? 3. What is the ratio of the weight (or bulk) of dry seeds to the weight (or bulk) of water they will absorb? 4. Dry seeds will absorb what per cent of their weight of water? 5. Precisely similar problems in comparing results gained from study of different kinds of seeds.

"II. STUDY OF SOIL: *Absorption of Water.* — 1. Twenty grams of soil will absorb how many grams of water? 2. Twenty grams of soil will absorb what part of its weight of water? 3. What is the ratio of twenty grams of dry soil to the water it will absorb? 4. Dry soil will absorb what per cent of its weight of water? 5. Precisely the same questions relating to subsoil, sand, etc., and comparisons between them.

"III. MECHANICAL CONSTITUENTS OF SOIL. — 1. Fifty grams of soil contain how much sand? 2. What part of fifty grams of soil is sand? 3. What is the ratio of sand in fifty grams of soil? 4. In fifty grams of soil what per cent is sand? 5. Precisely similar questions in regard to subsoil, loam, etc., and comparisons of results.

"IV. RELATION OF ANIMALS AND PLANTS AS SHOWN BY A STUDY OF LEAVES. — 1. In fifty leaves, how many have in some way been used by insects? 2. In fifty leaves, what part has been injured by insects? 3. In fifty leaves, what is the ratio of injured leaves to those uninjured? 4. In fifty leaves, what per cent has been injured by insects? 5. Precisely similar questions growing out of a study and comparison of different trees.

"V. METEOROLOGY FOR A MONTH: *Study of Rainy Days.* — 1. How many days have been rainy? 2. What part of the entire month has been rainy? 3. What is the ratio of dry days to wet ones during the month? 4. The number of wet days during the month is what per cent of the entire number? 5. Precisely similar problems arising from a study of different months and the meteorological conditions of temperature, air-pressure, etc.

"VI. ANIMAL LIFE: *Protective Coloration.* — 1. In twenty-five instances how many times did the same butterfly alight in situations where its color was protective? 2. What part of the whole number of times in twenty-five instances did the same butterfly seek protective situations? 3. In twenty-five instances the number of times when the same butterfly sought protective situations bears what ratio to the number of times when the situation was non-protective? 4. In what per cent of twenty-five cases did the same butterfly seek protective situations? 5. Precisely similar questions relating to other insects, and comparisons growing therefrom."

(2) **To the Concepts of Geography.** — Arithmetic may also be employed to give definiteness and vividness to the ideas that are gained from the study of geography. Into how many States of the size of Rhode Island could Texas be divided? What is the difference between the area of the German empire and that of the United States? What approximate number of people could live in the Mississippi Valley if it were as densely populated as Belgium is? Questions of this kind could not but prove helpful.

(3) **Ideas Acquired Out of School.** — Arithmetic may also be made to render more definite and vivid the ideas that the child has acquired out of school. To illustrate: If a man earns ten dollars a week and has to pay a dollar and a half a week for rent, how much can he spend during the year for food, clothes, and other necessaries? If the bread for his family costs five cents a day, what per cent of his income does he pay for it? If a carpenter earns two dollars and a half a day and spends sixty cents a week for car-fare, how many days in the year must he work for the money he pays for riding? Questions of this sort can of course be varied and multiplied indefinitely, and the answering of them gives vividness and definiteness to ideas the child already possesses.

Incidental and Accidental Teaching of Form Subjects. — This change of front does not, however, mean that less care is to be taken about the thorough teaching of arithmetical operations. "The same principle," to quote Professor Jackman again, "precisely holds in this case that is already recognized to some extent and obeyed in teaching other subjects. Formerly spelling, reading, etc., were

taught as ends; now *thought* is the end and they are incidental. The fatal mistake that has been made is in teaching the *thought*, and making the spelling, etc., accidental. There is a mighty difference between the incidental teaching of form subjects and the accidental teaching of them. So now, in this number work, the teacher must clearly work for the intrinsic thought" — definiteness of ideas — "and make the teaching of the arithmetical operations incidental but by no means accidental. These operations must be just as thoroughly taught as ever before; they will be more thoroughly taught and in far less time, too, when teachers really grasp the subject-matter in hand."[1]

Arithmetic as a Science should (1) Make Clear the Difference Between First- and Second-hand Knowledge. — The study of arithmetic as a science ought to help to make clear the difference between first- and second-hand knowledge. We say "help to make clear." For even in the grammar school the pupil should be led to see the difference between these in all of the subjects he studies; to see, for example, that while he is obliged to accept the facts of history or geography on the authority of book or teacher, some one had to get a first-hand knowledge of them. The difference between arithmetic as a science and all the other elementary school subjects, in this particular, is that in teaching the former not a single step can be taken without putting this distinction in the foreground. The object of the study of arithmetic as a science is to enable the pupil to *see* for himself the absolute truth of every statement he is called upon to believe. If he accepts any statement as

[1] Educational Review, Vol. V. pp. 50, 51.

true merely because some one says it is, the study of the science of arithmetic is so far a sheer waste of time.

(2) **Different Kinds of First-hand Knowledge.** — It should also illustrate the difference between two kinds of first-hand knowledge. In his study of nature the pupil has had constant experience of one kind of first-hand knowledge. He has seen for himself that certain leaves are injured by insects, that a certain number of days in a month are rainy, etc., and has based certain conclusions on his observations. But in this case he sees with the bodily eye; in that of arithmetic, with his mind's eye. The reasoning based on the former is inductive and the conclusions, as the pupil discovers, are often erroneous. The reasoning based on the latter is deductive and the conclusions are absolutely certain. Now it is not possible to teach arithmetic as a science without making this distinction clear. Those who imagine that induction has any place in the teaching of scientific arithmetic deceive themselves. We do not learn why things are as they are by concluding that since a given method has led to a correct result in a number of cases it will do so in all cases. Unless the pupil sees that in his arithmetical reasoning he is starting from absolutely certain premises and proceeding by absolutely certain steps to absolutely certain conclusions, he is not learning arithmetic as a science. But if he sees this, he has learned a fact, gained a point of view, of immense importance.

Arithmetic as a Science the Product of Deductive Reasoning. — It is implied in what has been said that the study of arithmetic as a science is a constant exercise of deductive reasoning. As Sir Joshua Fitch has it, "It is a

discipline in closeness and continuity of thought. . . . The proper office of arithmetic is to serve as training in elementary logic. . . . It is by arithmetic more than by any other subject in a school course that the art of thinking — consecutively, closely, logically — can be effectually taught." [1]

Too Much Time Given to Arithmetic. — It is because of the great importance that is attached to this kind of training that our schools lay such stress on the study of arithmetic. But we have already stated reasons for believing that its value has been greatly overrated. Few opinions are more universally accepted by thinkers of every school than that the notion which Sir Joshua Fitch evidently entertained that the reasoning power gained from the study of arithmetic is equally available for every subject — that, for example, the expert reasoner in arithmetic will be an expert reasoner in politics — is false. *If* it is false, the enormous time given to the study can no longer be justified.

The Grammar School the University of the Masses. — That it can be done is, to say the least, doubtful. The grammar school, let it be reiterated, is the university of the masses. The masses will either get a taste for history, literature, and the study of nature there, or they will not get it at all. They will get there the elevation and humanization that result from acquaintance with some of the best thoughts of the race, or they will not get it at all. They will build for themselves a world of law and order and beauty and goodness there, or they will not do it at all.

[1] Fitch, Lectures on Teaching, pp. 320, 321.

They will learn there that the best life is not a life of impulse and appetite and passion, but a life controlled by reason, or they will not learn it at all.

To jeopardize all this by devoting so much time to the study of arithmetic as a science is, we repeat, a doubtful procedure. The question is not whether the study of the science of arithmetic is valuable, but whether the results to which it leads are of more value than those of the subjects it displaces. The school life of the elementary pupil is very short, and it is the bounden duty of those who have charge of his interests to see that it is taken up not merely with what is good, but with what is best. And one of the most important questions American school superintendents have to consider is whether it is not incumbent upon them, as rapidly as public opinion will permit, to ignore arithmetic as a science in order that the time it occupies may be given to more liberalizing and more genuinely educative subjects.

QUESTIONS ON THE TEXT.

1. State the difference between arithmetic as a science and as an art.
2. What is the educational value of arithmetic as an art?
3. Show that definite knowledge is more useful than indefinite knowledge.
4. What does the ordinary theory regard as the educational value of arithmetic?
5. How can we make preparation to live?
6. Contrast two methods of teaching arithmetic as an art.
7. Show how arithmetic may give definiteness to the concepts of elementary science and to ideas acquired out of school.
8. What is meant by form subjects?
9. What is the difference between the incidental and the accidental teaching of form subjects?

10. State at length the educational value of arithmetic as a science.
11. Why is its value often overrated?
12. What fallacy underlies the reasoning of Sir Joshua Fitch?
13. Is too much time given to arithmetic, and why?

SUGGESTIVE QUESTIONS.

1. Are all our concepts of a quantitative character?

2. Can arithmetic give definiteness to all our concepts without exception?

3. Can you make a quantitative statement of the value of arithmetic either as a science or as an art?

4. Can you make a quantitative statement of the educational value of any subject whatever?

5. Will psychology and pedagogy ever become exact sciences?

CHAPTER XXVI.

THE EDUCATIONAL VALUE OF NATURE STUDY.

Nature Study (1) Increases our Interest in Nature.— The educational value of nature study is threefold: first, it increases our interest in nature; secondly, it develops a realization of law and cultivates a tendency to open-mindedness; thirdly, it makes those who have a special aptitude for it aware of the fact, and develops such an interest in the subject as tends to stimulate them to specialization in one or another of its phases.

As to the first point, it is of course evident that a scientific interest and an æsthetic interest in nature study are widely different things. The æsthetic interest is the result of the appeal Nature makes to our sense of beauty; the scientific, the result of the appeal she makes to our desire to know. If, in the case of the average man, we had to choose between them, it is at least doubtful whether it would not be wise to sacrifice the scientific to the æsthetic interest. The life of the average man is probably more enriched by the capacity to derive pleasure from listening to the knell of the parting day, from watching the lowing herd as it winds slowly over the meadow, than by a scientific interest in nature. But the two interests are in no wise antagonistic. And if the teacher of the nature subjects be herself a lover of nature, if she looks upon the changes that pass over the face of nature as spring blooms into summer, and summer fades into autumn, and autumn

gives way to winter, with something of the same fondness with which the mother watches the changes in her child as she traverses the road to womanhood, there is no danger that the æsthetic interest of her pupils will suffer through a development of their scientific interest. Not only will the bugs and grasshoppers and butterflies, the trees and leaves, the soil and minerals, claim her attention, but the broad valleys, the gently sloping hills, the sycamores bending over running streams and, as it were, gravely bowing to the trees on the other side; and her enthusiastic love of nature will be as contagious as her intense interest in science.

(2) **Develops a Realization of Law and Cultivates Open-mindedness.** — The study of nature is also valuable because it forces us to realize that there is such a thing as law, and makes us feel that in order to learn what the laws of nature are we must go to nature with the open-mindedness of little children. Every good, as we know, has its price. And part of the price we pay for the benefits of the study of literature is the tendency to blur the contrast between thought and fact, between opinion and reality, between what is and what seems to be. No one can help reading himself, so to speak, into an author. If he cannot do it, the author is unintelligible. Many able and cultivated men find Wordsworth's poem on Immortality meaningless because they have never had the experiences which the poem tries to describe. It is, of course, impossible to draw the line between experiences which really furnish the key to an author's meaning and those which merely seem to do so. And the author is never there to laugh at us for our blundering. Shakspere rests quietly in his grave while

one critic says he means this, another that, a third something different, each confident that he is right.

Now this tendency to undue confidence in one's opinions, the inevitable result of undue specialization in literaature, is sternly repressed by the intelligent study of nature. Nature, unlike most authors whom the boy studies at school, is not dead. She stands face to face with him. If he forms an errroneous opinion of her meanings, that opinion will be discredited unless, indeed, like the people of the Middle Ages and some modern Rip Van Winkles, he is content to study nature from a book. There results, therefore, from the right sort of nature study a docility, an open-mindedness, a willingness to hold one's opinions in suspense, a sense of the difficulty of learning what is true, and of the great liability to error, which is an exceedingly valuable trait of mind. Few intellectual obstacles hinder the living of a rational life as greatly as does excessive confidence in one's own opinions. To live a truly rational life it is not only necessary to feel as well as know that we must be guided by the truth, but that the truth is difficult of access, and to be approached only by those who seek it with humility.

This lesson may be enforced not only by the pupil's own work, but by the biographical studies of scientific men which should accompany his nature study. For example, take Kepler, who formed seventeen different hypotheses and made seventeen sets of laborious observations and difficult computations before he discovered the shape of the path of the planets; or Newton, who set aside his hypothesis for fifteen years until reasoning from more accurate data convinced him that he had indeed discovered the law which governs the motions of the material universe.

(3) **Incites to Specialization Along the Lines of Natural Bent.** — A third benefit to be derived from nature study is that those who have a special aptitude for it are incited to specialization in some department of natural science. That this is highly desirable is evident from three points of view. Ignore the pupil altogether, consider the matter simply from the point of view of society, and it is clear that society needs to have its work done by those who have a natural bent for it. All legitimate work is work which satisfies a need of society, and the more its needs are satisfied by those who have a special aptitude for it, the less the waste of energy, the greater the productivity, the less each member of society has to pay to have his wants supplied.

Ignore society in turn, and consider the matter from the point of view of the individual, and from that of the individual simply as desirous of promoting his material well-being. Evidently the best way for a man to earn money is to do the work he is best fitted to do. The briefless lawyers, the doctors who have no patients, the preachers without charges, are in the majority of cases men who are in the wrong occupation. They are trying to fill a rôle for which they have no capacity. They are working with a fraction of themselves, and that not the best. The work for which nature designed us is the work in which we can put the most of ourselves and in which, therefore, we can achieve the largest results.

Once more. Ignore the material interests of the pupil, assume that he has no livelihood to earn, and it is still true that the wisest course to pursue in promoting his interests is to have him do the work he is best fitted to do. His life of thought and feeling, his life as a human being, will

be better worth the living through doing the work in which he can put the most of himself. Aristotle said that the object of education is to prepare us for the right use of leisure. The modern, democratic interpretation of that suggestive remark is that the object of education is to prepare us to do the work that best promotes our interests as human beings, for such work *is*, to all intents and purposes, leisure rightly employed. From every point of view, therefore, it is evident that the more the school does to make its pupils conscious of their special aptitudes, the more it promotes all the interests of the individual and consequently those of society.

QUESTIONS ON THE TEXT.

1. What two different sorts of interest may one have in the study of nature?

2. Show that these are not antagonistic.

3. What is meant by "realization of law"?

4. What evil must we guard against in the teaching of literature?

5. What benefits may the pupil derive from the study of the lives of men of science?

6. State the three reasons for specialization.

7. What did Aristotle say is the object of education, and in what sense is it true?

SUGGESTIVE QUESTIONS.

1. What quality in the teacher will be most effective in arousing a scientific or an æsthetic interest in nature, and why?

2. Can you imagine a state of society in which every one would be working for his livelihood, and in which nevertheless Aristotle's ideal would be realized?

3. What is it that makes leisure really desirable?

CHAPTER XXVII.

SCHOOL MANAGEMENT.

THE details of school management would require a volume. This chapter will be restricted to the statement of two general principles, in the hope that they may be of some service in determining the "lay of the land."

The Object of Discipline. — The primarily important purpose of that part of school management which has to do with government is the development of character. It is of course true that the rules of the school grow out of its needs. Pupils are forbidden to whisper, change their seats during school hours, make unnecessary noise, etc., because these acts interfere with the work of the school. But the boy who breaks the rules is guilty of a more serious charge: interference with the development of his own character.

The Function of Education. — Our mental life begins with a mass of self-seeking anarchistic impulses. It is the function of education to suppress the anarchist within us, to develop those sides of our nature which make us regard the feelings and rights of others. We say "suppress the anarchist within us." Every form of wrong-doing is a form of selfishness, and selfishness is only a seeking of the private, lower, individual self at the expense of the rational, ethical, social self. Now anarchy is the apotheosis of the private self. Its basal principle is that neither in the

school nor in life must any violence be done to it. Regarding it as the only true self, repudiating the social self as having only conventional reality, it finds, like Rousseau, authority pernicious in education, and government pernicious in life.

The Principle of Anarchy. — Between the principle of anarchy — that the true self is the private self — and the opposite principle — that the true self is the social self — there is no common ground. A man may hold that the social self exists merely for the sake of the private self; that the best way to promote the interests of his private self is to profess, and perhaps to have, a certain amount of regard for the interests of society; that society had its origin in the desire of men to promote the interests of their private selves, and that it has no other justification. In that case he, like the anarchist, believes that his private self is his true self, and the only essential difference between them is as to the means to be employed to attain their common end.

On the other hand, a man may hold that although the social self is a true self, the private self is also, since, in so far as the enjoyments of the individual have no anti-social tendency, he has a right to them whether they positively tend to promote the well-being of society or not. Undoubtedly. But a private self that asks leave to assert its claims of the social self may fairly be regarded as a part of the latter.

The Problem of the School. — The problem, therefore, before the school from this point of view is the subordination of the private to the social self, the substitution of a

life governed by reason for a life governed by impulse. The first step towards the solution of this problem is the strenuous assertion of what from the point of view of the child is purely arbitrary authority. The mother cannot explain to her babe the reason for her requirements. The child has no reason, is a mere creature of impulses and sensations, and when the light of reason begins to dawn it is for long much too dim to enable him to see the reason for what is demanded of him at home and at school. But the problem which both teacher and parent are endeavoring to solve compels *them* to see that their requirements are not arbitrarily made, that as rational beings they have no choice in the matter. Precisely as an intelligent man is coerced by the evidence to believe in the conclusions of geometry, so parent and teacher alike should be compelled by their regard for the child to impose upon him such tasks, subject him to such restraints, as they do. Spirit, said Plato, is the natural ally of reason, and a child will never live a rational life unless he comes to love it. But how is a love for it to be developed? Not by telling him how beautiful such a life is, and that he ought to live it, but by keeping him face to face with a life that is actually controlled by reason.

The Child may Learn to Love a Rational Life (1) Because He Wishes to Be Like His Teacher. — Such a life, lived by those who have authority over him, tends to bring about this result in two ways. In the first place, if his parents and teachers are compelled by their reason to require of him what they do, as fast as his own reason develops he will become aware of the fact. This will make him feel that all their requirements spring from the same source,

and will strengthen his impulse towards obedience — and all the more because the conscientious parent or teacher will be certain to be the object of enthusiastic affection. But loving a person who is felt to be guided by reason is a long stride towards loving a rational life: whom the child loves he wishes to resemble, and when he begins to be aware that his mother is governed by reason, not by caprice, he begins to form a new ideal. When this step is taken there is a change in the persons who are playing important parts in the drama of the child's life. Before this the child has been governed by motives growing out of his private self. The mother and teacher have been able only to appeal to his lower nature; there has been nothing else to appeal to. Now the higher nature begins to assert itself; the rational self becomes the ally of the teacher.

(2) **Because his Teacher Loves a Rational Life.** — Not only so: the teacher who is guided by reason in his dealings with his pupils yields to its dictates because he loves a rational life. But we have seen already, in our study of imitation, that the only effective way to kindle emotion is by emotion. Now the teacher who lives a rational life cannot fail to present to the child's imitative nature a copy which he will have a disposition to imitate.

The Influence of Imitation on Roman Education. — The importance of this influence on the life of the child it would be difficult to overestimate. The history of education teaches no more important lesson than the fact that the most powerful force in the education of a people has not been found in the schools. Few students of Roman

history would hesitate to say that the period when Rome was at her best was when she had no schools, and that the period when her sun was on the point of setting was when her education was thoroughly organized and when her schools were liberally supported. Why is this? It is because the beliefs and ideals of the young are determined by the beliefs and ideals of those with whom they come in contact. In the day of Rome's greatness the typica Roman believed that the thing to do was to live for Rome and, if need be, die for her. This universal belief communicated itself, through the imitative side of human nature, to the rising generation. In the day of Rome's degeneracy the typical Roman lord felt that the thing to do was to live for himself, and that the true way to live for himself was to look after his income, decorate his name with empty titles, write Ciceronian Latin on any subject, no matter how frivolous, and make correct speeches on any occasion. And the same imitative propensity imposed this belief on successive generations, and made the Romans an easy prey to the barbarians of the North.

The Teacher and the Source of the Ideals of the Pupil. — The conclusion of the whole matter, then, is that as the teacher reaches the intellect of his pupils through his own intellect, so he reaches their emotions through his own emotions. Now it is our emotional nature — what we love — that gives us our ideals. Only, therefore, as a teacher really so loves a rational life as to make his love for it the determining principle of his own life will he be able to develop a love for the same kind of life in his pupils.

From this it is evident that the *teacher* is the great

educative factor in the school. We have discussed at great length the educational values of the various school subjects: and now it appears that what in the school has greatest educational value is a subject not on the programme — the teacher; also, that what in the teacher touches most directly and powerfully the deepest springs of the child's life is not his knowledge or his reasoning power, but his effective ideals — those ideals that determine the course of his life. If the regulations of the school and his own life in it spring from his desire to live a truly rational life, then indeed is he exerting upon his pupils an influence of incalculable value. Some of his demands will be certain to be unwise, some of his opinions will be erroneous. For purity of motive is no guarantee of immunity from error. But if his motives are pure, his ideal untainted by selfishness, mere errors of intellect will not weaken the influence exerted by his ideal.

There emerge, then, from our study of school government two conclusions: its aim is the development of the pupil's higher self and the subordination of the lower self to it; the chief means to this end, so far as the school is concerned, is such a subordination of the lower to the higher self in the life of the teacher.

QUESTIONS ON THE TEXT.

1. What is the object of discipline?
2. "Anarchy is the apotheosis of the private self." Explain.
3. What is the underlying principle of anarchy?
4. What is the difference between the private and the social self?
5. "Spirit is the natural ally of reason." Explain.
6. What do you understand by a rational life?
7. State clearly the two ways in which a child may come to love a rational life.

8. Show how imitation was a factor in Roman education.

9. Show that the teacher is the great educative factor in the school.

10. What two conclusions emerge from our study of school government?

SUGGESTIVE QUESTIONS.

1. What is the creed of the anarchists?

2. In what sense is it true that our mental life begins with anarchistic impulses?

3. State and define the two kinds of imitation discussed in earlier chapters.

4. Which of the two has the more important bearing on the conclusions of this chapter, and why?

CHAPTER XXVIII.

THE SMALL HIGH SCHOOL.

HAVING completed our survey of elementary education, this book might fitly end. But the small high school — the high school whose faculty consists of a principal and one or two assistants — is so closely connected with the elementary school that it may almost be considered as forming an integral part of it. It may not, therefore, be deemed inappropriate to make a few general remarks in relation thereto.

The General Principle upon which the Proper Work of the Small High School Depends. — The general principle which should determine all its work will hardly be called in question: inasmuch as it is the finishing school of the vast majority of its students, its course of study should be such as to give to those who are to go no farther the utmost possible benefit. To require the many to study Latin, for example, because it will be of service to the few who go to college, to deprive the many of the opportunity of studying political economy because the few can study it at better advantage in college, is to sacrifice the interests of the many to those of the few. But this is imperatively forbidden by our general principle, which requires us to do in the high school all those things that will promote the interests of the many, and to leave undone nothing that will give them a better education.

The Large High School not a Model for the Small High School. — While this general principle determines absolutely and without qualification the work of the small high school, it does not so determine the work of the large high school. The high school in the large cities and towns may have a faculty sufficient for the needs of those who are going to college, as well as for those who are not. But our general principle forbids the school to lay less emphasis upon the course arranged for the many than upon that designed for the few. If, for example, it takes less pains to get thoroughly trained teachers for the former course than for the latter, it is false to the best interests of the community that supports it.

It follows from this that in arranging its course of study the small high school cannot take the large high school as a model. The latter, by means of its larger resources, can make provision for the students who are going to college as well as for those who are not; the former can only make provision for those whose education is not to extend beyond the high school. That which will promote the interests of the many, therefore, and that alone, must determine the work of the school.

The Report of the Committee of Ten on the Identity of the Needs of Those Who Are and Those Who Are Not Going to College. — I am aware, of course, that in postulating a difference between the needs of the two classes of students, I am putting myself in a position of antagonism to very formidable authority. The body of experts known as the Committee of Ten unanimously decided that the needs of the two classes of students are identical. But in spite of any authority we must go whither the argument leads us.

The Small High School Should Teach (1) Political Economy. — What is the argument? That every American citizen ought to be acquainted with at least the elements of political economy. Since the days of Reconstruction we have not had a presidential campaign in which the issue has not been either wholly or partly economic. Shall we have a high or a low protective tariff? Shall we have the free and unlimited coinage of silver at the ratio of sixteen to one or shall we have the gold standard? Shall legislation aim to control or destroy trusts? These are some of the questions upon which Americans have been expressing opinions at the polls for the last twenty-five years. Evidently no one has a right to opinions upon such questions who has not an acquaintance with at least the elements of political economy. But political economy is a difficult subject, much too difficult for the elementary school — so difficult that it is wise to postpone the study of it until the college period if the education of the student is to continue beyond the high school. But if he is not going to college, surely the high school ought to impart the rudiments of the science. The high school ought to do what it can to enable him to distinguish between the demagogic utterances of professional politicians and the deliberate judgments of trained statesmen.

(2) **American History.** — The same argument may be made in reference to American history. The American citizen ought to know more about it than he can learn in the elementary or high school, more than his mind will enable him to grasp in either of those stages of his development. The well-being of the country at important

crises of its history may easily be conceived to depend on whether public opinion is guided by a fundamental knowledge of American history. Now because of the difficulty of the subject, the intending college student may perhaps postpone the further study of it until he enters college. But shall the student whose education closes with the high school have no opportunity there to employ his maturer powers in enlarging his grasp of the subject?

But (3) Not a Foreign Language. — Again, there is a universal consensus of opinion to the effect that a college student should devote a part of his time to the study of foreign languages. And we have given reasons for believing that the study of modern languages may be begun to advantage quite early in the elementary school. There can, therefore, be no doubt that the prevalent practice of requiring the high-school student who is going to college to give some time to the study of foreign languages is wise.

But how about the student who is not going to college? Is it worth his while to expend his time and energy in equipping himself with expensive tools that he will never use? "O, but the literature to which the foreign language will give him access!" The literature? Were it not for the ability and character of the men who make this argument one would not think it serious. Has the English language no literature? Have we not a Shakspere, a Milton, a Wordsworth, a Burns, a Lowell, a Hawthorne, an Emerson? Does the boy who learns with great labor to read a page of Vergil in an hour really amuse himself with Latin literature? Does the German or French student instruct himself by reading Goethe or Molière? If

the men who make this argument would leave their studies once in a while, if they would spend a little time in the world, there would be some hope of their learning that not one per cent of the high-school students who do not go to college ever read one line of a foreign language after they lay down their text-books. "But the discipline!" It must be admitted that the student of a foreign language does get some discipline from his work. The question is whether he gets enough to pay him for what it costs, whether he gets enough to compensate him for the inevitable ignorance of important subjects which it deprives him of the opportunity of studying, whether it is a satisfactory substitute for the discipline which he might get from the study of subjects which have a vital bearing on life.

We are dealing here with concepts which do not admit of quantitative statement. We cannot say that the benefits to be derived from the study of foreign languages consist of 69 parts of a given unit, while those of the studies which it displaces consist of 1191. Whatever opinion any student of the subject may form of it, the nature of the argument will not permit us to say to him, "Your conclusion is demonstrably incorrect." But the conception which the author of this book has of the vital relation between the study of purely English subjects and rational living leaves him, at any rate, in no doubt as to the true conclusion. For all these reasons, therefore, we hold that the needs of the two classes of students are different.

The Course of Study of the Small High School to be Determined in Part by the Capacity of its Teachers and by

its Equipment. — What, then, should be the character of the course of study of the small high school? This question cannot be answered simply by considering the needs of the student. We must take account, as well, of the capacities of his teachers, and of the equipment of the school. It is impossible, for example, to teach physics and chemistry properly without a laboratory. If, therefore, the community is unable to provide but one laboratory, but one of these subjects should be taught. It is impossible, also, for one man to teach well a half-dozen widely different subjects. The small high school is bound, therefore, to confine itself to such a range of subjects as its small faculty may reasonably be expected to teach effectively.

English and American History should be Substituted for General History. — The application of this principle excludes general history. The study of that subject in any high school which has not an ample library and which does not admit of a high degree of specialization on the part of its teachers is sure to degenerate into a mere memorizing of dates and disconnected events. The time which the small high school gives to the study of history should be devoted to the history of England and that of the United States. These two subjects are so closely related that they may almost be said to form a single whole. And if time enough is given to the study of them — at least a year should be allotted to each — the ambitious teacher can make his capable students acquainted with the principles that underlie the development of the English and American peoples. The teacher of history should also give instruction in political economy, since each of these subjects may be made to throw light on the other.

Summary of the Course of Study. — Some mathematics should be taught in the small high school. But for reasons already stated a number of times — that the reasoning power developed by the study of mathematics is chiefly of use in the further study of that subject — the aim of the small high school should be to diminish rather than increase the amount of time usually given to it. The school should occupy itself chiefly with such sciences as its appliances make it possible to teach in the most effective way: English and American history, political economy, and literature. The capable student who spends three or four years on these subjects can study them in such a way as to make them really educative. History will enlarge his knowledge of human nature, will give him an inspiring acquaintance with the great men of the English-speaking peoples, and a vivid appreciation of the struggles which the race has undergone in order to secure the blessings of a free, constitutional government. Political economy will make him acquainted with some of the laws that govern men in their economic relations. His study of literature will introduce him to those ideals of life which are embodied in the literatures of England and America, will teach him that there are moral laws upon the observance of which human welfare depends, will develop in him a taste for good reading which will be a permanent possession and a continual solace. His study of science will make him realize that behind the shifting, changing things of sense there are abiding realities, and that the material welfare of the race depends upon taking account of them. In a word, the intelligent, appreciative study of such subjects is calculated to touch the mind of the student on every side. It enlarges his knowledge of principles,

develops his reasoning power, purifies and elevates his ideals. By helping the student to realize what the really good and great things of life are, and what methods he must employ to reach them, the small high school may teach directly the noblest of all arts — the art of living.

QUESTIONS ON THE TEXT.

1. What is meant by the small high school?
2. Upon what principle does its work depend?
3. Why may not the large high school be taken as a model for the small one?
4. Why should the small high school teach political economy?
5. Why should it teach American history?
6. Why should it not teach a foreign language?
7. State and answer the arguments that are urged to show that students who are not going to college should study a foreign language.
8. What have the capacity of teachers and the equipment of the school to do with determining the course of study of the small high school?
9. Why should not the small high school teach general history?
10. Summarize the course of study of the small high school, and enumerate the benefits to be derived from it.

SUGGESTIVE QUESTIONS.

1. Have you an intimate acquaintance with any small high school, and, if so, does that school in your opinion illustrate what the text says of the necessary character of the study of general history therein?
2. Are you acquainted with a *single* high-school graduate who, without having gone to college, instructs and amuses himself by reading the literature of a foreign language?
3. Do you believe that any one can form an intelligent opinion as to how he ought to vote if he has no knowledge of political economy?
4. Do you accept the conclusions of this chapter? If not, state the reasons why you do not.
5. If you do accept them, what obstacle prevents the reorganization of the small high schools of your community along the proposed lines?

For Your Library

The Worth of Words (Bell)	$1.25
How to Study Literature (Heydrick)	.75
A Brief Outline of the Books I Have Read	.25
How Nature Study Should Be Taught (Bigelow)	1.00
Nature Study Lessons (Crawford)	.75
Lessons on Manners—Morals (Dewey) *each*	.75
Character (Varnum)	1.50
The Man Who Pleases and the Woman Who Charms	.75
Who's Who in Mythology	.75
Who's Who in History	.75
Seeley's The Foundations of Education	1.00
Seeley's A New School Management	1.25
Gordy's A Broader Elementary Education	1.25
The 20th Century Educational Problems	1.00
The Science of Study (Moore)	1.00
Cook's Psychology (*A Simplified Exposition*)	1.25
Stout's The Groundwork of Psychology	1.25
Stout's Manual of Psychology	1.50
Mackenzie's Manual of Ethics	1.50
How to Become Quick at Figures	1.00
A Dictionary of Synonyms and Antonyms	.50
Common Errors in Writing and Speaking	.50
A, B, C of Electricity	.50
Fifty Profitable Occupations	1.00

HINDS, NOBLE & ELDREDGE

31-33-35 West 15th Street, New York City

The Science of Study. By James G. Moore. **$1.00.** *New.*

School Management. By Dr. Levi Seeley. **$1.25.** *New.*

The Foundations of Education. By Dr. Levi Seeley. author of "History of Education." In this book the author, an able teacher and superintendent of long experience, recounts from his experience for the benefit of teachers, those very many things, the avoiding which or the doing which, as the case may be, makes for failure or success accordingly. **$1.00.** *Recent.*

Gordy's A Broader Elementary Education. By the author of New Psychology, **$1.25.** *Questions on each chapter.*

Gordy's New Psychology. Familiar talks to teachers and parents on how to observe the child-mind. *Questions on each Lesson.* **$1.25.** *37th thousand!*

Methods of Teaching Gymnastics. *Anderson.* **$1.25.**

Best Methods of Teaching in Country Schools. **$1.25.**

200 Lessons Outlined in Arithmetic, Geography, Grammar, United States History, Physiology. *A splendid help for busy, time-pressed teachers.* **$1.25.**

Mistakes of Teachers corrected by common sense (the famous *Preston Papers*). Solves difficulties not explained in textbooks, which daily perplex the conscientious teacher. *New Enlarged Edition—fourth large printing.* A veritable hit. **$1.00.**



Page's Theory and Practice of Teaching. With Questions and Answers. Paper, **50c.** Cloth, **$1.** *The teachers' standby.*

Roark's Outline of Pedagogy. A Working Manual. Aptly and briefly described as an indispensable tool for "teachers in the trenches." Interleaved for notes. **75 cents.**

Stout's Manual of Psychology. Introduced in its first year into more than fourscore of colleges and universities in this country and in Canada. **$1.50.**

Stout's Groundwork of Psychology. **$1.25.** *New.*

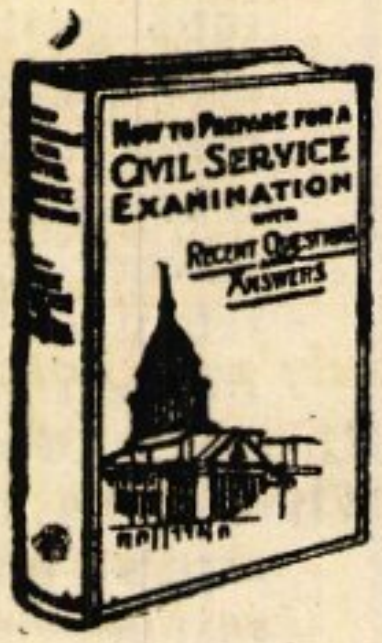
The Perceptionalist. Hamilton's Mental Science. By special typographical arrangement adapted to either a longer or shorter course. **$2.00.**

Mackenzie's Manual of Ethics. The most successful text-book on ethics ever published. Adopted and used in over two hundred Colleges, Universities and Normal Schools. *New, Fourth Edition.* **$1.50.**

Continental Copy Books. Numbers 1 to 7. **75 cents** *dozen.*

How to Become Quick at Figures. Enlarged Edition. **$1.00.**

How to Prepare for a Civil Service Examination, with recent *Examination Questions and the Answers.* 560 pages. **$2.00.** Abridged Edition, without *Questions and Answers.* **50 cents.**



Craig's Common School Questions *with Answers.* Enlarged Edition. **$1.50.**

Henry's High School Questions. *with Answers.* **$1.50.**

Sherrill's New Normal Questions. *with Answers.* **$1.50.**

Quizzism and Its Key. (Southwick.) **$1.00.**

1001 Questions and Answers Series. *Eleven Volumes,* until recently published by THE B. B. CO., *each* **50 cts.**

Theory and Practice Teaching. *Revised.*
United States History. *Revised.*
General History. *Revised.*
Geography. *Revised.*
English Grammar. *Revised.*
Reading and Orthography. *Revised.*
Physiology and Hygiene. *Revised.*
Botany. *New.*
Natural Philosophy. *New.*
Arithmetic. *Revised.*
Text Examples in Arith., with Answers. *Revised.*

Moritz's 1000 Questions. For Entrance Examinations. N. Y. High Schools, Normal College, College of City of N. Y., St. Francis Xavier College, West Point, Annapolis, and Civil Service. Paper. **30 cents.**

Answers to same. Paper. **50 cents.**

Recent Entrance Examination Questions. For the New York Normal College, the College of the City of New York, St. Francis Xavier College, Columbia College, the High Schools, Regents' Examinations, West Point, Annapolis, the Civil Service. Paper. **30 cts.**

Answers to Same. Paper. **50 cents.**

20th Century Educational Problems. By President Millar of Hendrix College. *A timely discussion.* **$1.00.**

How to Study Literature. A novel, a poem, a history, a biography, a drama, an oration, a sermon, or any other literary production, if read or studied as this book tells one how to read and study, becomes a subject which one can discuss or write about in a thoroughly intelligent and comprehensive way. Enables you to *talk about* a book as if you had really *sized it up* completely. Just the thing for literary societies, reading circles, the casual reader, as well as for teacher and pupil; also for any one who desires to retain a symmetrical impression of the books he reads. *Five editions in first five months.* 75 cents. *New.*

Rhetoric. *A new textbook.* By M. L. Radford. $1.00.

Who's Who in Mythology? 1000 *mythological* characters briefly described. Identifies and locates *instanter* every god and goddess, hero and myth that are likely to be broached either in conversation, sermon, song, drama, painting or statuary. 75 cents.

Who's Who in History? 1000 *classical* characters and allusions briefly explained. Locates the places, identifies the persons, describes the things, which are constantly alluded to in literature, on the rostrum and platform, in sermons, in paintings, in sculpture and in conversation. 75 cents.

What Shall I Do? 50 profitable occupations. $1.00.

Going to College. Says *The Evangelist:* "Glows with the enthusiasm of a high ideal. We wish it could be in the library of every high school, seminary, and academy in the land." *Inspiring!* 50 cents.

The Scholar's A B C of Electricity. Can you explain the simple phenomena of electricity? Do you hate to appear ignorant of the very simplest facts regarding the telephone, the telegraph, the electric light, the dynamo, the trolley? This book states the facts in clear words devoid of technicalities, and in entertaining style. No need to study or commit to memory; just to read it is to understand. 50 cents.

Lessons on Practical Subjects. Of public interest. 50 cents.

Lessons on Manners. Mrs. Dewey. 75 cents.

Lessons on Morals. Mrs. Dewey. 75 cents.

The Virtues and their Reasons. Every-day ethics for school and home. Guide for parent and teacher. $1.00.

Character Building. Inspiring suggestions. $1.00.

Bookkeeping Blanks at *30 cents per set.* Five blank books to the set. Adapted for use with any text-book, —Elem., Practical, or Com. School. *Used everywhere.*

Bookkeeping and Science of Accounts. *Robertson.* $1.20

The Worth of Words. By Ralcy Husted Bell. (*Library Edition*, $1.25.) School Edition, 75 cents.

How to Use the Voice in Reading and Speaking. By Ed. Amherst Ott, head of the School of Oratory, Drake University. Suitable for class work. **$1.25.**

How to Gesture. By Professor Ott. *Revised edit.* **$1.00.**

Ten Weeks' Course in Elocution. With numerous selections for illustration and practice. **$1.25.**

Fenno's Science and Art of Elocution. Standard. **$1.25.**

New Parliamentary Manual. By Edmond Palmer, A.B. Designed to be used both as a manual at meetings and as a textbook in schools and colleges. The special feature of this book is the new and original table enabling one to decide at a glance any parliamentary question. **75 cents.** *Wholly new.*

How to Organize and Conduct a Meeting. 75 cents.

Likes and Opposites. Synonyms and Opposites. To have at one's command a variety of equivalent words and their opposites is to possess an incalculable advantage both in writing and speaking. **50 cents.**

Letter Writing. Rules for correct correspondence. **75 cts.**

Punctuation Mastered in Twelve Lessons. Paper. **25 cents.**



Punctuation. Hinds & Noble's new Manual. Paper, **25 cents.**

New Speller. Hinds & Noble's new graded list of 5,000 words which one *must* know how to spell. *Useful.* **25c.**

Bad English. Humiliating "breaks" corrected. Paper. **30 cents.**

Common Errors in Writing and Speaking. **50 cents.** Invaluable *vade mecum.*

Composition Writing Made Easy. *Very successful.* Five grades, viz.: A, B, C, D, E, 20 **cents** *each.* All five for **75 cents.** *Arranged on separate cards.*

1000 Composition Subjects. Paper. **25 cents.**

Orthography and Orthoepy. By Isaac W. Clinger. Adapted for class use. Boards. **50 cents.**

Complete Class Record-Book. Hinds & Noble's new register, with several new and very useful features. *Twenty weeks.* Arranged by John J. Quinn. **50 cents.**

Smith's New Class Register. Long the Standard. **50 cts.**

Manual Training Class Register. By J. J. Quinn. **75c.**

Smith's New Astronomy. Illus. Quarto. Boards, **90 cts.**

Coon's Civil Government. For N. Y. State. **75 cents.**

Constitution of U. S. in Eng., Ger., Fr. Pa. 25c. Clo. 50c.

Dictionaries: The Classic Series. Half morocco. Especially planned for students and teachers in colleges and high schools. Up to the times in point of contents, authoritative while modern as regards scholarship, instantly accessible in respect to arrangement, of best quality as to typography and paper, and in a binding at once elegant and durable. 8x5½ in.

French-English and English-French Dictionary, 1122 pages. **$2.00.**

German-English and English-German Dictionary, 1112 pages. **$2.00.**

Latin-English and English-Latin Dictionary, 941 pages. **$2.00.**

Greek-English and English-Greek Dictionary, 1056 pages. **$2.00.**

English-Greek Dictionary. Price $1.00.

Dictionaries: The Handy Series. "Scholarship modern and accurate; and really beautiful print." *Pocket Edition.*

Spanish-English and Eng.-Span., 474 pages. $1.00.

Italian-English and Eng.-Ital., 428 pages. $1.00.

New Testament Lexicon. *Entirely new and up-to-date. With a fine presentation of the Synonyms of the Greek Testament.* $1.00.

Liddell & Scott's Abridged Greek Lexicon. With new Appendix of Proper and Geographical names. **$1.20.**

White's Latin-English Dictionary. $1.20.

White's English-Latin Dictionary. $1.20.

White's Latin-English and Eng.-Lat. Dictionary. $2.25.

Casserly's Latin Prosody. New Edition. **60 cents.**

Brooks' Historia Sacra, with First Latin Lessons. Revised, *with Vocabulary*, Price **50 cts.** This justly popular volume besides the Epitome Historiæ Sacræ, the Notes, and the Vocabulary, contains 100 pages of elementary Latin Lessons, enabling the teacher to carry the pupil quickly and in easy steps over the ground preparatory to the Epitome Historiæ Sacræ.

Brooks' First Lessons in Greek, *with Lexicon.* Revised Edition. Covering sufficient ground to enable the student to read the New Testament in the Greek. **50c.**

Brooks' New Virgil's Aeneid, *with Lexicon.* Revised. Notes, Metrical Index, Map. *With Questions.* **$1.50.**

Brooks' New Ovid's Metamorphoses, *with Lexicon.* Expurgated for mixed classes. With *Questions.* **$1.50.**

Handy Literal Translations. Cloth, *pocket*. **50 cts. per vol.**

"To one who is reading the Classics, a literal translation is a convenient and legitimate help: every well informed person will read the Classics either in the original or in a translation."

Eighty-nine volumes, viz.: (*Interlinears* other page).

Cæsar's Gallic War. *The Seven Books.* (For *Book I* translated *and* completely *parsed*, see other page.)
Cæsar's *Civil* War.
Catullus.
Cicero's Brutus.
Cicero's Defense of Roscius.
Cicero De Officiis.
Cicero On Old Age and Friendship.
Cicero On Oratory.
Cicero On The Nature of The Gods.
Cicero's Orations. *Four vs. Catiline, and others.* (For Orations I, II, translated *and parsed*, see other page.)
Cicero's Select Letters.
Cicero's Tusculan Disputations.
Cornelius Nepos, *complete.*
Eutropius.
Horace, *complete.*
Juvenal's Satires, *complete.*
Livy, Books I and II.
Livy, Books XXI and XXII.
Lucretius, *in preparation.*
Martial's Epigrams (*paper*).
Ovid's Metamorphoses, *complete in two volumes.*
Phædrus' Fables.
Plautus' Captivi, and Mostellaria.
Plautus' Pseudolus, and Miles Gloriosus.
Plautus' Trinummus, and Menæchmi.
Pliny's Select Letters, *complete in two volumes.*
Quintilian, Books X and XII.
Roman Life in Latin Prose and Verse.
Sallust's Catiline, and the Jugurthine War.
Seneca On Benefits.
Tacitus' Annals, *the First Six Books.*
Tacitus' Germany and Agricola.
Tacitus On Oratory.
Terence: Andria, Adelphi and Phormio.
Terence: Heautontimorumenos.
Virgil's Æneid, *the First Six Books.* (For *Book I* translated *and* completely *scanned* and *parsed*, see other page.)
Virgil's Eclogues and Georgics.
Viri Romæ.
Æschines Against Ctesiphon.
Æschylus' Prometheus Bound; Seven vs. Thebes.
Æschylus' Agamemnon.
Aristophanes' Clouds.
Aristophanes' Birds, and Frogs.
Demosthenes On the Crown.
Demosthenes' Olynthiacs and Philippics.
Euripides' Alcestis, and Electra.
Euripides' Bacchantes, and Hercules Furens
Euripides' Hecuba and Andromache.
Euripides' Iphigenia In Aulis, In Taurís
Euripides' Medea.
Herodotus, Books VI and VII.
Herodotus, Book VIII.

Homer's Iliad, *the First Six Books.*
Homer's Odyssey, *the First Twelve Books.*
Isocrates' Panegyric, *in preparation.*
Lucian's Select Dialogues, *two volumes.*
Lysias' Orations. *The only Translation extant.*
Plato's Apology, Crito, and Phædo.
Plato's Gorgias.
Plato's Laches (*paper*).
Plato's Protagoras, and Euthyphron.
Plato's Republic.
Sophocles' Œdipus Tyrannus, Electra, and Antigone.
Sophocles' Œdipus Coloneus.
Thucydides, *complete in two volumes.*
Xenophon's Anabasis, *the First Four Books.* (*Book I*, translated *and* completely parsed, *in prep.* See other page.)
Xenophon's Cyropædia, *complete in two volumes.*
Xenophon's Hellenica, and Symposium (The Banquet).
Xenophon's Memorabilia, *complete.*

Freytag's Die Journalisten (*paper*).
Goethe's Egmont.
Goethe's Faust.
Goethe's Hermann and Dorothea.
Goethe's Iphigenia in Tauris.
Lessing's Minna von Barnhelm.
Lessing's Nathan The Wise.
Lessing's Emilia Galotti.
Schiller's Ballads.
Schiller's Der Neffe als Onkel.
Schiller's Maid of Orleans.
Schiller's Maria Stuart.
Schiller's Wallenstein's Death.
Schiller's Wallenstein's Camp.
Schiller's William Tell.
Corneille's The Cid.
Feuillet's Romance of a Poor Young Man.
Racine's Athalie.

Completely Parsed Caesar, Virgil, Cicero, etc., *other page.*

Beginners' Caesar. H. D. Cannon. **50 cents.** *New.*

Shortest Road to Caesar. Successful elem'y method. **75c.**

Caesar's Idioms. Complete, with Eng. equivalents. Pap. **25c.**

Cicero's Idioms. As found in "Cicero's Orations." Pap. **25c.**

Beginners' Latin Book. Hoch & Bert's. Many improvements over other books for beginners, one being the diagram to illustrate conditional sentences. **$1.00.**

Beginners' Greek Book. I. F. Frisbee. Complete in itself. Applies the principles of correct teaching to the preparation (in one year) for reading Xenophon's Anabasis. *Fully tested in many schools.* **$1.25.**

German Texts. With *footnotes* and **Vocabulary:** W. Tell, Jungfrau v. Orleans, Maria Stuart, Neffe als Onkel, Minna v. Barnhelm, Nathan der Weise, Emilia Galotti, Herm. und Dorothea. *Eight vols.* **50 cts.** *each.*

Ideophonic Texts. Wilhelm Tell, Act I. **$1.00.**

Interlinear Translations. Classic Series. Cloth. 20 volumes. $1.50 per volume.

Cæsar's Gallic War. *Five Books.*

Same, Book I, Completely Parsed. *See below.*

Cicero's Orations. *Enlarged Edition.*

Same, Oration 1, Completely Parsed. *See below.*

Same, Oration II, Completely Parsed. *See below.*

Cicero On Old Age and Friendship.

Cornelius Nepos.

Horace, *complete.*

Livy. Books XXI and XXII.

Ovid's Metamorphoses, *complete.*

Sallust's Catiline, and Jugurthine War.

Virgil's Æneid. *First Six Books, Revised.*

Virgil's Æneid. *Complete, the Twelve Books.*

Æneid, Book I, Completely Parsed, Scanned. *See below.*

Virgil's Eclogues, Georgics *and Last 6 Books Æneid.*

Xenophon's Anabasis.

Xenophon's Memorabilia.

Homer's Iliad, *First Six Books, Revised.*

Demosthenes On The Crown.

New Testament, *Without Notes;* complete ed. below.

Completely Parsed Caesar. Book 1. Each page bears *interlinear* translation, *literal* translation, parsing, grammatical references. The *long vowels* are indicated throughout, both in the Latin text part, and in the parsing. *All at a glance without turning a leaf.* An ideal aid, compact, complete, unique. $1.50.

Completely Scanned-Parsed Virgil's Aeneid, Bk. 1. Identical in plan, scope, and arrangement with the *Parsed Cæsar*, while being *scanned* as well as *parsed.* $1.50.

Completely Parsed Cicero, I. The First Oration against Catiline. Same plan and scope as *Parsed Cæsar.* $1.50.

Completely Parsed Cicero, II. The Second Oration against Catiline. Same plan as above. $1.50. *In preparation.*

Completely Parsed Xenophon's Anab., I. $1.50. *In prep.*

New Testament with Notes, and Lexicon. *Interlinear Greek-Eng., with King James Version in the margins.* New edition with finely discriminating presentation of the Synonyms of the Greek Testament. *Cloth*, $4; *half leather*, $5; *Divinity Circuit*, $6.

Old Testament, Vol. 1. Genesis and Exodus. *Interlinear Hebrew-Eng., with Notes; King James Version and Revised Version in margins; and with Hebrew alphabet and Tables of the Hebrew verb.* Cloth, $4: half leather, $5; Divinity Circuit, $6.00.

Hinds & Noble's Hebrew Grammar, $1.00.

The Best American Orations of To-day. $1.25. *New.*

How to Attract and Hold an Audience. Every clergyman, every lawyer, every teacher, every man or woman occupying an official position, every citizen and every youth who is likely ever to have occasion in committee, or in public, to enlist the interest, to attract and hold the attention of one or more hearers, and *convince* them—every person who ever has to, or is likely to have to "speak" to one or more listeners will find in our new book a clear, concise, *complete* handbook which will enable him to *succeed! 4th edition.* $1.00.

Thorough, concise, methodical, replete with common sense, complete—these words describe fitly this new book; and in his logical method, in the crystal-like lucidity of his style, in his forceful, incisive, penetrating mastery of his subject, the author has at one bound placed himself on a plane with the very ablest teacher-authors of his day. Fourth edition *within its first year!*

Commencement Parts. "Efforts" for all occasions. Orations, addresses, valedictories, salutatories, class poems, class mottoes, after-dinner speeches, flag days, national holidays, class-day exercises. *Models* for every possible occasion in high-school and college career, every one of the "efforts" being what some fellow has *stood on his feet* and actually delivered on a similar occasion—not what the compiler *would* say if *he* should happen to be called on for an ivy song or a response to a toast, or what not; but what the fellow himself, when his turn came, *did say!* Invaluable, indispensable to those preparing any kind of "effort." Unique. $1.50.



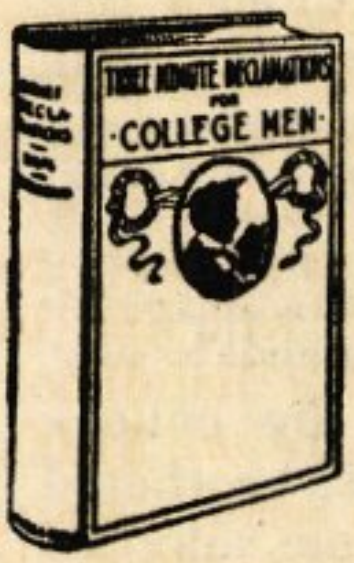
Readings from the Popular Novels. $1.00. *New.*

New Dialogues and Plays. Life-like episodes from popular authors like Stevenson, Crawford, Mark Twain, Dickens, Scott, in the form of simple plays, with every detail explained as to dress, make-up, utensils, furniture, etc. For schoolroom or parlor. $1.50.

A Southern Speaker. Selections from the orations, addresses, and writings of the best known Southern orators, Southern statesmen and authors. $1.00.

Reading. A Well-Planned Course. $1.00. By Caroline B. Le Row, compiler of "Pieces for Every Occasion." There has long been wanted a book of *new selections* for classes, with lessons on the art of reading.

College Men's 3-Minute Declamations. Up-to-date selections from live men like Chauncey Depew, Hewitt, Gladstone, Cleveland, Presidents Eliot (Harvard), and Carter (Williams), and others. New material with vitality in it for prize speaking. *Very popular. Ninth edition.* **$1.00.**



College Maids' 3-Minute Readings. Up-to-date recitations from living men and women. On the plan of the popular College Men's 3-minute Declamations, and on the same high plane. *7th edition.* **$1.00.**

Pieces for Prize Speaking Contests. *Volume I.* Over one hundred pieces that have *actually taken prizes* in prize speaking contests. *5th edit. Successful.* **$1.25.**

Pieces for Prize Speaking Contests. *Vol. II.* 3d ed. **$1.25.**

Pieces for Every Occasion. Including "special days." Something new, **$1.25.**



Handy Pieces to Speak. *Single pieces and dialogues.* Primary, 20 cts.; Intermediate, 20 cts.; Advanced, 20 cts. *All three for 50 cts.* On separate cards. 108 selections in all.

Acme Declamation Book. *Single pieces and dialogues.* For boys and girls of all ages; all occasions. Paper, 30 cts.; cloth, 50 cts. *Many editions sold.*

Pros and Cons. Complete debates of the affirmative and negative of the stirring questions of the day. *A decided hit.* This is another book invaluable not only to high-school and college students, but also to every other person who aspires to converse engagingly on the topics of the day. Our foreign policy, the currency, the tariff, immigration, high license, woman suffrage, penny postage, transportation, trusts, department stores, municipal ownership of franchises, government control of telegraph. ***Both sides*** of these and *many other questions* completely debated. Directions for *organizing* and *conducting* debating society, with *by-laws and parliamentary rules.* **No other book like it.** *Enlarged ed.* **$1.50.**



Songs of All the Colleges. *New ed. contains the Boola! A welcome gift in any home!* Everyone likes a college song, and this book is an ideal gift to place on the piano for one's friends to enjoy, even though one sings not himself. *Words and music throughout.* $1.50.

New edition with 104 songs added for 67 other colleges. Over seventy college presidents have purchased this volume to have at their homes, for the students on social occasions. *Fourteen editions* have gone into many *thousands* of *homes*. If you have a piano *but do not play*, the PIANOLA and other "piano-players" *will play many of these songs* for you and your friends to sing.

Compiled by college men, endorsed by college presidents, 'rah-'rah'd by college students, brothered by college alumni, sistered by college alumnæ, adopted and programed by college glee clubs everywhere; by local clubs, choral societies, and singing classes. Contains all the dear old familiar songs, as well as the popular new songs typical of *alma mater* in colleges east, west, south, north. Many old favorite *tunes* with new catchy, up-to-date *words* — serious, sentimental, humorous; also the *'rah, 'rah* kind. Yale men know, and the *New Haven Union* says: "The question of what in the world to give a friend is solved by the publication of SONGS OF ALL THE COLLEGES, which is suitable alike for the collegian of the past, for the student of the present, and for the boy (or girl) with hopes, also for the music-loving sister and a fellow's best girl." Another college paper: "*They ring true!*" Says the Principal of a famous private school: "*It incites to college.*" Durable cloth.



Songs of the Western Colleges. Durable cloth binding, $1.25.

Songs of the Eastern Colleges. Novel, durable cloth, $1.25.

These two books present an ideally complete portrayal of the musical and social side, the joyous side, of the student life in our Western and Eastern colleges respectively. Plenty of the old favorites of *all* colleges, while crowded with *the* new songs.

To own *all three* above books is to possess the most complete, the most adequate illustration ever attempted of this phase of the genius, the spirit of Young America.

New Songs for College Glee Clubs. Paper. 50 cents.

Twenty humorous hits, besides others, sentimental and serious. Not a selection but has been sung by some glee club locally to the delight of an "encoring audience."

Glee Club leaders will appreciate a collection every piece in which, by the severe test of both rehearsal and concert, is *right* —the musical notation, the harmony of the voice parts, the syllabification, the rhythm, the rhyme, the instrumentation, and last, but not least with audiences, the *catchonativeness*.

Of Two Hundred Books On Pedagogy

There is none we would sooner put into the hands of a young teacher

---

To many young teachers, "pedagogy" was and is a term to conjure by; its acquisition represents hours of hard, dry reading and study; life's pleasures say "don't," duty says "do"; and between the conflict of desires, the course is frequently decided by the first book which is attempted. It must be confessed that much that is found under pedagogy were better never read by the young teacher, but SEELEY'S FOUNDATIONS OF EDUCATION is not so accounted. The book is for young teachers, and its conception and execution are admirable. Philosophy, experience, illustration are blended in an exceedingly interesting manner. No teacher, young or old, but will have a higher conception of his work after reading the book. It is an inspiration, it is practical, it comes from a man who *knows* what he wants to say and how to say it. The young teacher who begins a course of reading with this book, must read others, because of interest awakened and stimulated by Doctor Seeley. Of two hundred books on pedagogy on our shelves, there is none we would sooner put into the hands of a young teacher.—*Education* (*Boston*), *April, 1902.*

The Foundations of Education

BY LEVI SEELEY, PH. D.

Author of "History of Education"

Professor of Pedagogy in the New Jersey State Normal School

CLOTH—Price $1.00 Postpaid—TWELVEMO.

HINDS, NOBLE & ELDREDGE, Publishers of

Gordy's New Psychology, $1.25
Stout's Manual of Psychology, $1.50

31-33-35 WEST 15TH STREET NEW YORK CITY

The Most Popular College Songs

The Most Popular College Songs	$ .50
50 New College Songs	.50
Songs of ALL the Colleges	1.50
Songs of the WESTERN Colleges	1.25
Songs of the EASTERN Colleges	1.25
SCHOOL Songs with COLLEGE Flavor	.50
Songs of the Flag and Nation	.50
100 New Kindergarten Songs	1.00
New Songs for College Glee Clubs	.50
New Songs for Male Quartets	.50
Songs of the University of Pennsylvania	1.50
Songs of the University of Michigan	1.25
Songs of Washington and Jefferson College	1.25
Songs of Haverford College	1.25
New Songs and Anthems for Church Quartets, (*Eleven Numbers*)	*each* .10 to .30

HINDS, NOBLE & ELDREDGE

31-33-35 West 15th Street. New York City