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ELEMENTARY P E D A G O G Y

BY

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PREFACE

THE subject of pedagogy is very generally regarded by young teachers with a certain amount of dread. They think of it as dry, difficult, uninteresting, and hard to comprehend. Were it not that examining boards and superintendents require that candidates for certificates shall possess a knowledge of pedagogy and pass an examination in that subject, it is to be feared that many teachers would never study it. And yet, it is one of the most valuable subjects, and one of the most profitable that can engage the attention of the instructor. It not only gives a broad view of the work of education, but it may also be a most potent aid in solving the problems of the school-room. Hence it is necessary and invaluable to every teacher.

Nor need the subject be dry or distasteful even to the young and untrained beginner. Indeed, it is one of the most interesting subjects that demand the attention of those to whom is committed the education of the young. Taste for any kind of literature is a growth. It has seemed to me that works on general pedagogy have presupposed a development too advanced in educational thought on the part of the beginner, and therefore have discouraged him at the outset. The attempt is made in this book to provide material for the beginner in the study of pedagogy. Let this not be forgotten.

The method employed is largely inductive. Through

numerous concrete illustrations the student is led up to the general truth. At the close of each chapter one or more principles are stated which summarize the teachings of the chapter in as compact a form as possible. The sum total of these principles constitutes an educational philosophy — not a complete or exhaustive philosophy, by any means, but one that is believed to introduce the most important educational thought of the day. The final word in educational theory has not been spoken, and never will be spoken, for new conditions arouse new interests and bring forth new problems. Questions that attracted attention a quarter of a century ago have been settled, — some of them at least — and new ones are constantly arising. Therefore it is not claimed that this book is exhaustive, even upon the questions it discusses. Educational philosophy should be a guide to the teacher as to the course of study, method of instruction, discipline, educational means and ends, elements that enter into the problem of education, etc. If pedagogy can furnish this guide to the teacher, surely it is a most important study.

The following plan of study is recommended:

1. Take the outline of a chapter as a scheme or plan and consider each topic in order.
2. Read the discussion under each topic in the text, and investigate the subject as thoroughly as may be in the works of reference given at the beginning of the chapter and in the foot-notes. This opens a field for unlimited study and therefore suggests material not only for beginners, but also for the most advanced students of pedagogy.
3. Commit to memory the principles stated at the end of the chapter. This fixes the truth and lays it away for

future use when needed. For justification of this suggestion, see page 93.

4. Reverse the process by way of review, employing the deductive method; that is, starting with the principle, see if the student has understood and can apply it.

It is very important that breadth of vision be gained by reading as many as possible of the works cited as well as other pedagogical literature.

It may be repeated that this book is designed for beginners in the study of pedagogy, — for students in normal and training schools; for teachers' classes and reading circles; for the teacher in the country school, isolated from colaborers and sympathetic advisers and obliged to pursue her way alone; indeed, for the young teacher everywhere; and for the earnest student of education in whatever field. To all such, may this book prove a blessing.

Due credit should be given to the influence of Rosenkranz's "Philosophy of Education," in shaping the plan of the book. It is doubtful if any work has yet appeared that marks so definite an educational philosophy as this treatise, which has for nearly half a century claimed the attention of educational thinkers. Therefore the author gratefully acknowledges its influence upon him in his teaching and in the preparation of this volume. I have also quoted freely from other authors that have been a help and inspiration to me. It seems to me just and honest, if some one has originated a thought or discovered a truth that I wish to use in support of a position, to give that person credit for his contribution. Hence there is no apology for the numerous quotations.

In addition to the help from these sources, which has

numerous concrete illustrations the student is led up to the general truth. At the close of each chapter one or more principles are stated which summarize the teachings of the chapter in as compact a form as possible. The sum total of these principles constitutes an educational philosophy — not a complete or exhaustive philosophy, by any means, but one that is believed to introduce the most important educational thought of the day. The final word in educational theory has not been spoken, and never will be spoken, for new conditions arouse new interests and bring forth new problems. Questions that attracted attention a quarter of a century ago have been settled, — some of them at least — and new ones are constantly arising. Therefore it is not claimed that this book is exhaustive, even upon the questions it discusses. Educational philosophy should be a guide to the teacher as to the course of study, method of instruction, discipline, educational means and ends, elements that enter into the problem of education, etc. If pedagogy can furnish this guide to the teacher, surely it is a most important study.

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In addition to the help from these sources, which has

been duly recognized, I desire especially to acknowledge the valuable assistance and advice of Dr. James M. Green, Principal of the New Jersey Normal School; of my colleagues, Dr. H. B. Boise, and Dr. E. F. Carr, and of the Rev. Henry Colin Minton, D.D.

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ELEMENTARY PEDAGOGY

CHAPTER I

INTRODUCTION

General References.¹ — *Rosenkranz*, Philosophy of Education; *Prince*, Courses and Methods; *Spencer*, Education; *Payne*, Contributions to the Science of Education; *Parker*, Talks on Pedagogics; *Boone*, Science of Education; *Horne*, Philosophy of Education; *McMurry*, General Method; *White*, Elements of Pedagogy; *Ogden*, Science of Education; *Butler*, The Meaning of Education; *Educational Review*.

EVERY teacher should be grounded in educational theory. It is said that "Experience is a good schoolmaster," but experience gained in the schoolroom is expensive both to the child and to the teacher, unless it be preceded on the part of the latter by a study of educational philosophy. Such philosophical study should prevent many mistakes and enable the teacher to give his pupils the best that the world has yet learned. Nothing less than this is their due, and the teacher must be prepared to offer nothing less. Hence the necessity of a knowledge of pedagogy.

But what does educational theory embrace? What are the subjects that a scheme of general pedagogy must in-

¹ The references here given are those that are employed throughout the whole study of the subject. Special references will be given at the head of each chapter touching the topics therein treated, but these are for general and constant use.

clude? The answer is as follows, and this is the order in which the subjects should be taken:

A Knowledge of Man, which enables the teacher to care for the physical well-being of his pupils, on the one hand, and also makes him acquainted with the intellectual activities and the laws that govern those activities, that is, with *psychology*, on the other hand. It includes a knowledge of man's moral and religious nature.

History of Education, which describes the educational movements of the past; sets forth the lives and teachings of great thinkers who have written educational works or who have been great teachers; outlines the systems and theories of education that have been promulgated; traces the advance of civilization through educational means; gives warning as to the errors of the past; and suggests new fields for future improvement and investigation. The history of education is semi-academic in character and, therefore, it furnishes a natural link between the purely academic and the professional training of the teacher.

Method, which treats of the natural, orderly, and systematic manner of presenting the material to the mind and of the relative values of subject-matter; or, as Kant puts it, "Method is procedure according to principles." A knowledge of method is essential to the theoretical preparation of the teacher.

School Management, which considers school discipline, good order, proper habits, correct morals, relation of the school to the community, as well as other matters con-

nected with the internal affairs of the school, such as, promotion, grading, and classification, the daily schedule, school incentives, relation of teachers to their pupils and to those in authority over them, school hygiene, etc.

A Knowledge of Subject-matter, not only from the culture standpoint, but also concerning its value for the purpose of intellectual discipline. This must, of course, include a far broader range of material than the specific subjects that one is called upon to teach. The teacher must possess a reserve of knowledge upon which he can draw at all times to the increased advantage of his pupils.

Philosophy of Education, in which the climax of professional training is reached. It states the aim, determines the nature, and defines the limits of education. In a sense, the philosophy of education summarizes the teachings and gathers up the lessons taught by the foregoing subjects. It gives a broad view of the whole field of education and brings every act of teaching to the test of sound philosophy as a basis.

Psychology and Pedagogy. — There is a close relationship between psychology and pedagogy. It may be well to consider this relationship and point out the field that each should seek to cover. Joseph Payne says, "Psychology is the basis of all the practical sciences which have to do with the moral faculties of man; but the other sciences which are derived from psychology treat of but certain energies of the human soul — logic, of thought, æsthetics, of the sentiment of the beautiful, ethics, of the

soul. Pedagogy alone embraces all the faculties of the soul and should put under contribution the whole of psychology." Professor James emphatically cautions teachers as to the limitations of psychology. He says,¹ "You make a great mistake, if you think that psychology, being the science of the mind's laws, is something from which you can deduce definite programmes and schemes and methods of instruction for immediate schoolroom use. . . . Everywhere the teaching must *agree* with the psychology, but need not be the only kind of teaching, that would so agree with psychological laws." He further adds, "To know psychology, therefore, is absolutely no guaranty that we shall be good teachers. To advance to that result, we must have an additional endowment altogether, a happy tact and ingenuity to tell us what definite things to say and do when the pupil is before us. That ingenuity in meeting and pursuing the pupil, that tact for the concrete situations, though they are the alpha and omega of the teacher's art, are things to which psychology cannot help us in the least. But if the use of psychological principles thus be negative rather than positive, it does not follow that it may not be a great use, all the same. It certainly narrows the path for experiments and trials. We know in advance, if we are psychologists, that certain methods will be wrong, so our psychology saves us from mistakes. It makes us, moreover, more clear as to what we are about. We gain confidence in respect to any method which we are using as soon as we believe that it has theory as well as practice at its back. Most of all, it fructifies our independence, and it reanimates our in-

¹ "Talks to Teachers," p. 7.

terest, to see our subject at two different angles — to get a stereoscopic view, so to speak, of the youthful organism who is an enemy, and, while handling him with all our concrete tact and divination, to be able, at the same time, to represent to ourselves the curious inner elements of his mental machine. Such a complete knowledge as this of the pupil, at once intuitive and analytic, is surely the knowledge at which every teacher ought to aim.

“Fortunately for you teachers, the elements of the mental machine can be clearly apprehended, and their workings easily grasped. And, as the most general elements and workings are just those parts of psychology which the teacher finds most directly useful, it follows that the amount of this science which is necessary to all teachers need not be very great.”

Accepting in general this view, we may think of the field of psychology as dealing with the laws and activities of the mind; as including a study of instinct, imitation, sense-perception, memory, imagination, reasoning, generalizing; and, in a teacher's course, the consideration of psychological phenomena — the study of children. Pedagogy treats of the application of the principles discovered by psychological research. It is based on ethics as well as on psychology, ethics pointing out the end of education, and psychology, the way, the means of reaching the end. Pedagogy, according to Rosenkranz, treats of the aim, the nature, and the form of education. It discusses the relation of teachers to pupils; it considers the various factors of education, such as, the home, the school, the store, society, and the church; it treats of methods of instruction, of the school program, of the course of study, of physical,

intellectual, and moral growth; of securing and holding the attention; of interest; of the formation of habits, of self-activity, of that discipline which aims at self-control. In a word, it views the whole development of the individual, not only during school life, but after leaving school, and seeks to compass that development in a natural, systematic, logical, and economical manner.

If some topics, such as habit, attention, self-activity, memory, imagination, reason, etc., receive treatment in both psychology and pedagogy, the former considers the mental laws involved, while the latter considers their practical application to educational problems. The consideration of the same subjects from a double standpoint, namely, that of psychology and that of pedagogy, thus, instead of being a waste may prove to be the very best economy. To quote again from Professor James, "It reanimates our interest — to see our subject at two different angles." The study of psychology, which precedes that of pedagogy, prepares the student to comprehend the field undertaken by pedagogy, and to apply the principles discovered to living and practical educational problems.

While the field of pedagogy embraces history of education, school management, methods, psychology, and ethics, just as geometry embraces arithmetic and algebra, a knowledge of these subjects is presupposed, and therefore they are not considered here. The question before us is of educational philosophy; of the problems of educational thought rather than of school practice; of theories that are to be established; of principles that shall guide in constructing courses of study, in the employment of methods, in formulating schedules, and in school government; and

of that all-round and complete development of the child which shall prepare him for good citizenship, and which shall enable him to make the most of the capacity that God has given him.

Summary

Pedagogy is the science of teaching. It states the aim, determines the nature, and marks the limits of education. It presupposes psychology, is founded upon ethics, and embraces in its scope history of education, school management, and method. It discusses educational problems from a philosophical standpoint and shows their application.

CHAPTER II

THE AIM OF EDUCATION

References. — *Rosenkranz*, Philosophy of Education; *Prince*, Courses and Methods; *McMurry*, General Method; *Spencer*, Education; *Payne*, Contributions to the Science of Education; *Parker*, Talks on Pedagogics; *De Motte*, Character Building; *Payne*, Education of Teachers; *Roark*, Method in Education; *Coler*, Character Building; *Horne*, Philosophy of Education; *Shearer*, Morals and Manners; *Smith*, Systematic Methodology; *White*, School Management; Elements of Pedagogy; *Laurie*, Primary Instruction; *Barnett*, Common Sense in Education and Teaching; *Briggs*, School, College, and Character.

THE question, "What is the aim of education?" has engaged the attention of thinkers for many centuries. The answer to it has been colored by national characteristics, by the needs of a people, by the spirit that has dominated the age, and by the state of civilization attained. Indeed, the answer to this question may have had a great deal to do in forming the character of individuals and of nations, and in making prominent certain influences which have affected the world in different ages. In China, for example, the aim of education for thousands of years has been to maintain the established order of society, and to teach respect for traditions and ancestral customs. In India, it was to preserve the ancient castes, and prepare for absorption into Nirvana. In Persia and Sparta, it was to prepare for war, to give physical strength, and foster moral rectitude. To the early Jews, it meant training to respect law, and reverence Jehovah. Athens would have a beau-

tiful soul in a beautiful body, while the ideal in Rome was "To make a man fit to perform justly, skilfully, and magnanimously all the offices, both public and private, of peace and war."

The aim of education according to Socrates was "To dispel error and discover truth," while Plato defined it to be, "To give the body and soul all the beauty and all the perfection of which they are capable," a definition which was quite Athenian. Quintilian, on the other hand, voiced the spirit of the Rome of his period by teaching that the purpose of education was to make orators. Seneca anticipated Herbert Spencer when he declared that education is "Not for school, but for life." Charlemagne, with the wise statesmanship which comprehended the existing conditions in which only the favored few received any education at all, declared the aim of education to be "To make intelligent citizens." Very naturally the monastic schools sought to make education further the interests of the Church, while, on the other hand, the Burgher schools would train for the practical needs of life.

Modern educators have also considered the problem from the standpoint of modern conditions, and as civilization has advanced, their answer to the question becomes broader and more comprehensive. Comenius, the Moravian preacher, declares the aim to be, "To attain eternal happiness in and with God, through Education." Francke, the Pietist, who founded the great orphan asylum at Halle, says it is "To prepare for a life of usefulness and piety," while Locke, the great English philosopher, who had been an invalid all his life, borrows from Aristotle an idea which he sums up in the words, "A sound mind in a sound

body." Pestalozzi, with perhaps a larger vision than any of his predecessors, says it is the "Natural, progressive, and systematic development of all the powers of man." Froebel adds to this idea when he defines it to be, "To direct the natural activities to useful ends."

Spencer's Definition. — Perhaps Spencer's definition of education has received the most general acceptance; it has at least provoked the widest discussion. He says, "To prepare us for complete living is the function which education has to discharge; and the only rational mode of judging of any educational course is, to judge in what degree it discharges such function." The difficulty with this definition is that it needs defining, for one may well ask, "What is complete living?" To the Indian in the far West it would mean plenty of game, freedom from restraint, with absence of what men call work; to the devotee of fashion, the whirl of society, the admiration of others, the gratification of the desire for personal adornment; to the actor, the excitement, applause, and environment of the play-house; to the enthusiast in any vocation or enterprise, the fulfillment of his ambitious purposes and success in whatever undertaken. To the Chinaman it would mean one thing, to the Hindu another, and to the Frenchman another. In one age it would require one interpretation and in a different age another. It is true that education is adaptation to the age or the people involved, as we have already seen. But Waitz says, "There must be a universal pedagogy for Greeks and Romans, as well as for pagans, Jews, and Christians; for ancient and modern peoples; for those of original as well as those of derived culture." It

will be obvious, then, that "complete living" as a definition of education does not suffice, inasmuch as it needs interpretation as to its meaning, and as that meaning varies according to ideals and circumstances.

The most of the definitions quoted regard education as an *aim*. Many educators, especially German, consider it from the standpoint of its Latin root-word, *educere*, to lead forth; they interpret it to mean to bring up the child. To them education is a *process* rather than an *aim*. Thus Rosenkranz defines it as follows: "Education is the influencing of man by man, and it has for its end to lead him to actualize himself through his own efforts. The attainment of perfect manhood as the actualization of the freedom essential to mind constitutes the nature of education in general."¹ Waitz also says, "In education two individuals stand opposite each other, one ripe and in a measure at least master of himself, and the other possessing possibilities, but still largely undeveloped, but capable of responding to external influences."²

The methods of instruction practiced in the German schools are the natural outgrowth of this conception. The teacher instructs, the pupils learn; the teacher leads, the pupils follow; the teacher is the fountain of knowledge, the pupils draw from him; the teacher is the wise master, the pupils possess the possibilities of learning. There is a great difference between the two which the process of education seeks to cancel. Education is to be attained by means of instruction (*Erziehende-Unterricht*) through the influence of the teacher upon the pupil.

¹ "Philosophy of Education," p. 1.

² "Pädagogik," p. 39.

Education as an Aim. — The purpose here is to study education as an aim rather than as a process, although the student should consider the subject from both standpoints. What is the aim of education for any people or of any age? We answer, *Education is the harmonious development of all the powers of man, and has for its purpose the formation of good character.* Teachers for all time have sought to train their pupils to be good men, but only recently has the principle been stated as a formal doctrine. With a clear and definite principle fixed in the mind, a purpose is more likely to be carried out than if there be merely a vague idea of an end to be reached without a formulated statement concerning that end. One should not only possess a notion of the end to be sought, but also be able to express that notion in a clear manner. Hence the statement of the end of education as character building marks an advance in pedagogical practice and theory.

While the preceding definition is definite in statement and clear in meaning, a discussion of it may serve to throw light upon the problem of education itself.

Harmonious Development. — Some one has said, "Education considers the physical, intellectual, and moral nature of the child. Any system of education which cultivates only one of these, not recognizing the others, is a failure. Train only the physical faculties of your child, and you make an animal of him; cultivate his moral nature exclusively, and you develop a fanatic; direct all your attention to his intellectual faculties, and you may produce a prodigy, but you will ruin him for usefulness in life. True education consists in so stimulating the development of the phy-

sical, moral, and intellectual nature of the child as that he may be fitted to occupy the best position in life that his natural powers permit, that he may be useful to his fellow-men and of value to the community, that he may be as important a factor as possible in making the world better.' No one would say that the pugilist or the athlete meets the ideal of education because of his muscle or his physical skill. It must not be denied, however, that physical development has its place in school work, probably a far greater place than it now occupies, that is, physical training of the right sort. When it fulfills its true function in education greatest stress will not be laid upon, and enthusiasm awakened concerning foot-ball, base-ball, track athletics, or some special interest that attracts only a small proportion of the student body. There is no objection to these in themselves, and they should be encouraged and maintained. But they meet only a fraction of the whole number and, therefore, do not satisfy the demand for general physical culture as an educational means. Indeed, the few highly trained athletes become the center of attraction of the whole school, not for educational purposes, but as the representatives of the institution, who are to win glory for her in a field far from educational. A half a score of men, trained to the highest limit, reach perfection as athletes and represent their school, while the hundreds look on and get no suitable training. At least, the athletic sports as now practiced do not foster general physical culture in the whole student body. The ideal will be reached when physical culture is not only a general requirement, but a universal joy to all youth of both sexes who are being educated. This kind of development is educational, and

it is an end to be most zealously sought for in all our schools.

As to the need of intellectual development, there is unanimity of opinion. Indeed, the principal criticism that might be offered concerning educational practice is that it has ignored the other sides of man's nature and given its entire attention to the intellectual. Train the mind, awaken the mental activities, stimulate and direct the intellectual powers, has been the key-note of educational philosophy, and the chief theme of educational practice, for ages. There is no disposition to minimize the importance or value of intellectual training. It will continue to require the greater part of the time of the school and the thought of educators. From the standpoint of the attention it demands, it will always be the most important feature of education. The principal discussions which follow in this book have a bearing upon intellectual development. But it must not monopolize the whole thought of educators nor be the sole theme considered. Nor must man be considered as a being that can be divided into physical, intellectual, moral, etc. It is the whole man that is to be educated.

Moral training must receive due attention. Indeed, to omit the ethical side of education is to add to the power to do evil, for the better and acuter the intellectual training the more dangerous the individual becomes, provided there is no moral foundation. To omit moral training is to make education dangerous. It is not the purpose at this time to discuss the character of moral training needed, but merely to call attention to the fact that it is needed to produce well-rounded and complete education such as our

definition demands. It must not be forgotten that we are considering the sufficiency of the definition for our purpose rather than a treatment of its various phases, which is the task of the whole book.

It may be urged that the teaching of religion is impossible in the American public school, and therefore it is needless to add this to the definition. In reply we would say in the first place, that it is not admitted that religion cannot be taught in the public school; but rather, indeed, it will be maintained that religion in its best and truest sense is taught in these schools, and must be taught so long as the great majority of the teachers believe in God and practice righteousness, and so long as history, literature, and science abound in illustrations and lessons founded upon a belief in Divine Providence. (See Chap. XVIII.) In the second place, it should be remarked that the school is not the sole factor responsible for the education of the child, and that education is the sum of all influences wherever obtained — the home, the school, the church, society, and the State. Therefore, a definition of the aim of education must take into account all the influences involved, and surely religion is a most important factor in every man's education.

All of these powers — the *physical, intellectual, moral,* and *spiritual* — are to be harmoniously developed for a purpose, and that purpose is good character. This is the end that the teacher should have in view from the first. The teaching of arithmetic, geography, history, language, science, has a much broader meaning than the mere mastery of these subjects for practical purposes as a means of bread-winning, however necessary this may be. Their practical value is not despised, and this end must certainly be in

view; but there must be a higher aim ever present, namely, that of employing this teaching and these subjects as a means of forming character as an ultimate and highest aim.

What is Character?— But what is character? may be asked. Character has been defined as a “completely formed will.” What a person wills constantly and persistently gives him character. A good character is where the volitions are in the right direction. Rev. J. Richards Boyle says concerning character:¹ “Never before was manhood so necessary to the world as it is to-day. For never before had it such immense responsibility and such tremendous power. The supreme question of the century is the question of personal character. The nation that can grow a worthy manhood and womanhood can live. It is immortal. The nation whose personal life deteriorates is already smitten with death. Character is the only conserving and conquering power.

“Now, what power can guarantee the life and progress of the twentieth century civilization? What can control and overthrow its reactionary and disintegrating forces, and perpetuate and perfect its beneficent growth? What is to decide the conflict on the final battlefield of earthly life? Are mere numbers or material wealth to do this? Can government, can armies, can navies, as such, do it? Civilizations have expired notwithstanding all these agencies. In the last analysis there is only one human power that can assure the endurance of present conditions and carry them safely forward to their consummations. And

¹ Address before the students of Grant University.

that power is true manhood and womanhood. The individual life is evermore the determining factor in associated life. As the man is, so must the nation and the world ever be. And the problem of the race is not the production of wealth, nor the marshaling of armies, nor the enactment of laws, but the development of human character. I have said that one of the most significant facts of modern life is the rise of the personal man. I now declare that the most essential and important necessity of the world's stability and prosperity is his growth and equipment."

The men who have been conspicuously a blessing to this country — Washington, Lincoln, Grant, McKinley — have been men not distinguished by wealth, by the endowments of nature, or by the favor of men, but by their strong personality. George H. Martin says, "The early life of Washington is singularly transparent as to the creation and influence of the ideal. We see how one quality after another was added until the character became complete. Manly strength, athletic power and skill, appear first; then, courtesy and refined manners, temperance, consideration for others; then, careful and exact business habits; then, military qualities; then, devotion to public service. Steadily but rapidly, the transforming work went on, until the Man was complete; the ideal was realized. Henceforth, the character, the man, appears under all the forms of occupation and office. Legislator, commander, president, the man is in them all, though he is none of them. Cincinnatus at the plow is Cincinnatus still. Washington at sixty, moving in the clamor and confusion of the Genet episode, is the same careful, prudent, patient, dignified, self-respecting, self-controlled, patriotic, masterful man

that he had begun to be at twenty-one, when he went on his mission to the French forts on the Ohio."

One other quotation from the pen of the Rev. J. G. K. McClure concerning character must suffice. He says, "The best thing in the world is a good man. The greatest thing in this world is a great good man. The most blessed thing in this world is a blessed good man. The first thing that a human being should recognize about himself is that his character is his distinguishing feature. It is not the amount of money, the amount of power, the amount of brains that a man has that is his distinguishing feature, but his character. Whatever his fellow-men may temporarily say or do to the contrary, this is a fact, that what separates him from others and gives him his individuality is his goodness or lack of goodness, according to its degree. Money, power, brains, have their place, and they do exert an influence in temporarily deciding a man's position and recognition. But the standard of the ages, by which any one and every one is tried, is character; and in God's sight, which is the final and determining sight, men are what they are in their wishes and purposes. It is not, then, too much to say that the supreme ambition of a person's life should be to secure a worthy character."

Character is not considered as embracing the ethical side only; but it involves the physical, intellectual, moral, and spiritual attributes; it means such development of *hand*, *head*, and *heart* as will prepare a man to serve his fellow-men, to bring out the best that is in him, and to fulfill the will of the Creator. To attain this surely is the aim of education.

Other Views. — Thus far the discussion has held closely to the aim of education, stress being laid upon the ethical view. Another view considers education more from the cultural standpoint and seeks to secure complete development, moral, and religious as well, through the mastery of the branches necessary to an all-round education. It may be profitable briefly to consider what these branches are and to note their utility in connection with the question under discussion. Dr. James M. Green defines education as follows: "Education is the development of the powers of the mind by exercising them in the various common channels of thought necessary to make one masterful in his environment." As to the "common channels of thought," quite a unanimity of opinion among educational thinkers is found. Dr. Green says, "The mental energies of the race have grouped themselves under these common channels, namely, mathematics, science, history, language, æsthetics, ethics, and economics." No harmonious development can be secured that omits any one of these branches.

Dr. De Garmo remarks,¹ "It may be assumed, first of all, that a normal, well-educated man should at least be intelligent concerning the conquests of his race in all the distinct fields of its endeavor. He need not, indeed, be master of Greek, Spanish, calculus, ontology, physical chemistry, geology, civil engineering, law, medicine, theology; but he should at least know that these studies exist, comprehend something of their respective functions, and be familiar with some of their elements. In other words, the normally constituted mind should dwell, for a time at

¹ "Interest and Education," p. 61.

least, upon each distinctive department of important human knowledge." He then classifies these departments into three groups, namely, (1) *the human sciences*, embracing languages, ancient and modern, literature, art, and history; (2) *the natural sciences*, such as physics, chemistry, and astronomy with their basis of pure mathematics, the biological sciences, and the earth sciences — physical geography and geology; and (3) *the economic sciences*, which include economics proper, technology, and commercial knowledge.

President Eliot marks out the four great divisions of knowledge as, languages, history, mathematics, and natural science, and urges that these "should all be adequately represented" in the course of study at all times.

Dr. Harris names five coördinate groups as follows: language, arithmetic, geography, history, and other branches, and he insists that, "From the primary school on through the academic course of the college, there should be five coördinate groups of studies represented at each part of the course."

President Butler¹ thinks that there should be a center or core around which the students' work should be formed, and this core should have three constituent elements, namely, "(1) the study of language; (2) the study of deductive reasoning, in mathematics and formal logic; (3) the study of inductive method, in experimental science, and, in part, in history. If it is provided that the course pursued by every student must contain a subject selected from each of these three classes, we may safely trust to the student's tastes, needs, and ambitions, together with the

¹ *Educational Review*, Vol. XVI, p. 23.

advice of his parents and teachers, both to select the specified subjects, and to add to them others that lie outside those classes. He cannot very well fail to make a satisfactory course. This arrangement suits equally well the student who has a college course in view, or his fellow who looks forward to a scientific school, an agricultural college, a technical institute, a business career, or indeed any other form of occupation."

Thus, through exercising the faculties in these "common channels of thought," which are generally accepted as necessary, and in all of these channels, the individual is led to understand his environment, to utilize it, and to command its forces for his own personal welfare and happiness, and for the good of his fellow-men. Just in so far as this end is attained, the aim of education is realized. These two phases of the general subject are set forth in the summary.

Summary

I. The aim of education is the harmonious development of all the powers of man to the end that good character may be formed.

II. Education is the development of the powers of the mind by exercising them in the various common channels of thought necessary to make one masterful in his environment.

CHAPTER III

THE SCIENCE OF EDUCATION

References. — *Morgan*, Studies in Pedagogy; *Payne*, Lectures on Teaching; *Page*, Theory and Practice; *Roark*, Method in Education; *Coler*, Character Building; *Ogden*, Science of Education; *Landon*, School Management; *McMurry*, Method of the Recitation; *O'Shea*, Education as Adjustment; *Educational Review*, Vol. I; *Tate*, Philosophy of Education.

THE question as to whether or not there is a science of education has been under discussion for many years. Many assert that there exist only scraps of scientific educational knowledge, that there are no mutual purposes and no common grounds that hold teachers together as in law or medicine, so essential in a profession, and that, therefore, it is folly to talk of the profession of teaching, or of a science of education. Others, on the other hand, with equal insistence, affirm that education is entitled to a place among the sciences. They point to the fact that other countries, especially Germany, have long recognized pedagogy as being on a scientific basis, according to it the dignity of a place among university subjects, and sustaining chairs to promulgate its teaching.

Opinions as to the Science of Education. — Superintendent Soldan says, "No matter how limited the strictly scientific domain of education is considered to be, it cannot be denied that there is such a science, and it should be mastered before the practical duties of teaching are assumed."

Supt. James M. Greenwood says, "The hypothesis that one line of work, human development, is not susceptible to any law, that education is not a science, is a matter of chance caprice, is to affirm that there is one great realm of human activity not subject to law. This leads to a strange inconsistency. Is there not a large body of educational literature written upon the nature, the activity, and the development of the human body and soul — a set of principles founded upon human nature in all its phases, determining the nature, the function, and the limits of education, and are not these principles as elementary as are those of any one of the physical or mathematical sciences, and do not these embrace the very deepest problems of philosophy and of life, and have a self-justification in the subject-matter they cover?"

"For forty years, the chief effort of the leading educators of the United States has been to place teaching on the same professional basis that law and medicine now hold in the public mind. It is a profession having its history, its body of doctrines, and its methods as sharply defined as other professions. A handful of opponents, however, claim that molding and developing a human being can lay no claim to scientific or rational treatment. They hold, without good reason, that all teaching is experimental, and in its very nature cannot be reduced to a scientific basis. The two most scientific nations of Christendom, Germany and France, treat it as a science and one that can be learned and practiced. Compayré, the leading pedagogical lecturer of France, says, 'To undertake the direction of education without having analyzed the faculties of human nature, would be to run the risk

of committing the grossest errors; it would be to go astray, to walk at random like a traveler in an unknown country without a map before him. On the other hand, equipped with proper psychological observations, the educator is prepared to determine the theoretical and general laws which govern the development of mind and character. Now, without the key which psychology puts into our hands, the child would remain to us an insoluble enigma.'"¹

Professor O'Shea thinks that inasmuch as certain principles of education have long been believed and have stood the test of time, there is evidence of science. He observes,² "Is it safe to say that articles of belief in education which have been held by generation after generation, and tested by them, and are as fresh to-day as ever — is it safe to say that such principles are scientific? that they express in a truthful way certain relations of the race to the world?"

"And have not such principles really been established in conformity to the requirements of effective method? Every induction in any field and at any time leads at first to a hypothesis, which does not become a law until it is tried under varying circumstances and not found wanting. Newton thus formulated the principle of gravitation first as an hypothesis; men have been working with it ever since, and to-day they believe it is a law, for it has never failed to work in any situation in which it has been tried. So men have been working with certain principles of education for a much longer period than they have worked with the law of gravitation, and they have stood the test."

Professor Roark remarks,³ "The science of education

¹ Annual address to the teachers of Kansas City, Mo., 1904.

² "Education as Adjustment," p. 27.

³ "Method in Education," p. 10.

is justifying itself so admirably in these latter days when educational matters are on everybody's tongue and on the pages of every popular periodical, that those who deny teaching a place among the liberal professions have a heavy burden of proof to carry. The question of method has forced an asking in all the higher institutions of learning, and there is hardly a college or university in this country to-day that does not have its department of pedagogy."

Later in this chapter we shall give a number of such principles that have been long taught and that find universal acceptance.

Science Defined. — Perhaps the discussion will be somewhat clearer if a definition of the term of science be agreed upon. Webster defines science as "Accumulated and established knowledge, which has been systematized and formulated with reference to the discovery of general truths or the operation of general laws; knowledge classified and made available in work, life, or the search for truth; comprehensive, profound, or philosophical knowledge." Sir William Hamilton says, Science is "a complement of cognitions, having, in point of form, the character of logical perfection, and, in point of matter, the character of real truth." In point of form, it will not be claimed that education has reached logical perfection, and, from the very nature of things, it will never be possible for it to reach such perfection as is the case with the science of mathematics, physics, or botany. Like psychology, it deals with mental activities, and therefore complete exactness can never be expected. But in point of matter, education has certainly reached much that bears the character of real truth.

With the limitations given in the definition of science, *i.e.*, "Accumulated and established knowledge, which has been systematized and formulated with reference to the discovery of general truths or the operation of general laws," the question arises, Have a sufficient number of principles been established such as to warrant the claims of a science? That many principles are universally accepted all will agree. Whether or not sufficient progress has been made to meet the claims of a science, or whether these are mere isolated truths, upon which all agree, is the rock upon which educators split. A comparison of opinions upon this point may throw some light upon the question. Tate says,¹ "Practical teachers, as well as the public generally, had, until recently, regarded education more as an art than as a science, consisting merely of a few arbitrary and empirical rules which may be modified or altered to suit the tastes and attainments of the teacher, or to answer the opinions and circumstances of the managers of schools. This unfortunate prejudice has, no doubt, had its origin, to a great extent, in the fact that the greater part of the teachers were unfit for their office. . . . The science of education must be based upon the nature of the being to be educated; that is to say, upon the laws which govern the development of the intellectual and moral faculties. These laws may be determined as well by observation as by psychological analysis. Every faculty of our nature has its proper period and peculiar mode of development." Further he adds, "The art of education, without a due regard to its science, degenerates into empiricism; and the science, without the practice of the art, becomes little

¹ "Philosophy of Education," pp. 14, 19.

better than a code of barren abstractions without the vital principle of development. The philosophy of education should go in hand with the practice of it: every step of advance taken by the one should be followed by corresponding progress of the other; philosophy should suggest plans and theories, art should test and try them; philosophy should build up a structure of general principles and rules, art should supply the facts — the materials — by which, and upon which, this structure should be reared.”

To quote a brief paragraph from a thorough discussion of this point by a recognized authority,¹ “The science of pedagogics . . . is still incomplete in its matter, all its first principles not having been formulated; and it is imperfect in form, its admitted principles not having been arranged, and deductions from them not having been made with the required completeness and order. Whoever takes an established psychological law and draws from it legitimate deductions that can be employed for guidance in educational work, has made a contribution to the science of pedagogics; and works like Bain’s ‘Education as a Science,’ and Rosenkranz’s ‘Pedagogics as a System,’ that discuss in a comprehensive way the doctrines of education, are actual treatises on the science of pedagogics. . . . A science of pedagogics exists as an actual fact, but it is still incomplete in matter and imperfect in form. The need of the hour is a systematic rearrangement of the old material, and the addition of omitted principles and their deductions.”²

¹ Payne’s “Contributions to the Science of Education,” p. 3.

² Many other authors discuss this question. I call especial attention to McMurry’s “Method of the Recitation,” p. 1, for a full treatment of this topic.

We believe that there is a science of education for reasons which follow.

1. *Because of educational principles established.* It may be profitable to call attention to some of the educational principles that are universally accepted, as well as to those that are still debatable. No one can furnish a complete list of established pedagogical truths any more than any one can tabulate the mental activities as presented in psychology. As in psychology, so in pedagogy, there is abundant debatable ground. In both, some of the disputed points will ultimately be established and thus add new principles to perfect their respective science, while others will be rejected as lacking the element of a scientific basis. One can easily recall numerous discussions within the last generation in which pedagogical themes have been treated, some to secure a permanent place in educational doctrine, while others have entirely dropped out of consideration. We may mention such questions as the duty of the state to provide education for all children, and the right to tax the people therefor; her right to extend free education beyond the elementary school; compulsory school attendance; the introduction of the kindergarten, manual training, drawing, music, etc. These questions are settled for all time in the educational policy of this country. More strictly scientific and pedagogical questions, such as, the training of the senses by means of object teaching, the doctrine of interest, of apperception, or correlation, have each received its share of attention, and to each has been accorded its permanent place in educational theory.

It seems as if the past quarter of a century has been

the most productive in the discussion and settlement of educational questions, as well as in suggesting new problems to be solved, of any period in the world's history. And yet the history of education shows that individuals and peoples have met and settled many educational questions. The following may be mentioned in illustration, quoting from Karl Schmidt: "In Greece at last the idea of human individuality as the principal end, and not as a means to an end, was grasped. Conformable to this truth, all human, social, and political conditions were shaped and education given its form. This idea of the emancipation of the individual became established in Greece with a brilliancy which attracts attention to that land until the present time."

Plato taught that the aim of education is to bring all the powers of man into harmonious coöperation, a principle upon which the Herbartians have laid great stress during the latter half of the nineteenth century.

Aristotle believed that pedagogy should be based upon a knowledge of the individual, and in his method he proceeded "from the concrete to the abstract," teachings that have universal acceptance in modern education.

Cicero held that the amusements and the environments of the child should be such as elevate and refine, as well as properly to develop his powers. These are the same truths that Pestalozzi worked out in his object teaching, and Froebel in the kindergarten.

Seneca commanded respect for the office and person of the teacher in these words: "Such a man, who consecrates his whole being to our good, and who awakens our dormant faculties, is deserving all the esteem that we

give a benevolent physician or our most loved and dearest kindred."

Quintilian, among many other pedagogical precepts, held that children should begin early with a foreign tongue, as their own language will come to them naturally in their intercourse with those about them.

The Great Teacher by precept and practice taught that all education is for the individual. Of Him, Karl Schmidt says, "Christ, the perfect teacher, gave by his example and by his own teaching the eternal principles of pedagogy."

Charlemagne taught the principle of universal education, that every child has a right to an education, a principle that is accepted by most civilized countries of the world. He also taught compulsory school attendance. He believed, too, that girls as well as boys should be educated.

Erasmus held that during the first six years little should be done with the education of the child save to develop a strong body; also that religious training should not be neglected.

The Jesuits made their schools interesting, and learning pleasant. They urged that the teacher must be specially trained for the duties of his office.

Rabelais placed the study of the sciences in the front rank, thereby starting a movement that has revolutionized courses of study and educational methods, and anticipated Herbert Spencer.

Bacon furthered this work by his discovery of the inductive method, and made application of it in science through experiment, investigation, and verification.

Ratke followed the order of nature, thereby anticipating Rousseau and modern nature study. Comenius follows

the same thought when he says, "If we would teach and learn, surely we must follow the order of Nature." "Let everything be presented through the senses." "Proceed from the easy to the difficult, from the general to the special, from the known to the unknown." "Learn to do by doing." "Learn language by use rather than by precept."

Fénelon also anticipated Froebel by teaching that all instruction must be made pleasant and interesting, and that the instinct of play should be utilized in teaching. "Present the thing before its name, the idea before the word." "Morality should be taught early by means of fables, stories, and concrete examples."

Francke believed that teachers should be trained, and carried out this thought in connection with his orphan asylum.

Pestalozzi taught the harmonious development of all the human powers. "Instruction, especially for young children, should be based upon observation." "The mother is the natural educator of the child in its early years." Dr. Harris says of Pestalozzi, "He is the first teacher to announce convincingly the doctrine that all people should be educated, that, in fact, education is the one good gift to give to all whether rich or poor."

Rein says, "Froebel gave the world the kindergarten, while Herbart elevated education to the dignity of a science."¹

It will not be claimed that all the pedagogical theories and principles above enunciated are universally accepted and established. But many of them are so established,

¹ For the statement of many more educational maxims, I refer the reader to the summaries following each chapter in my "History of Education."

and many more might be added. It would seem, therefore, that in the field of education enough that is fundamental is fixed to warrant the claim that there is a science of education.

2. *Because of scientific works on education.*—A second argument is found in the numerous scientific and philosophical works on this subject with which educational literature abounds. The output in this field during recent years has been remarkable, and this output increases year by year. Discussions of educational philosophy have claimed the attention of the profoundest thinkers and the wisest men of the world, not only among teachers, but also from every class of men.

These discussions have found their way into educational books and periodicals, and also into popular magazines and papers, showing that interest has been awakened outside the field of the professional teacher. Every year more than three hundred books and articles on education that are worthy of serious consideration, appear in the English language alone,¹ while in other languages a like activity is manifest. Surely, such a wonderful activity could not be expected if there were no science of education.

Mr. Greenwood says, "With a pedagogical literature that represents hundreds of volumes in English, more than two thousand in French, and more voluminous still in German, there is hardly a valid excuse why any one who assumes to teach in a public or private school should be ignorant of the existence of this great treasure-house of educational knowledge."

¹ See the annual June number of the *Educational Review*.

3. *Because of organizations for the study of education.* — Teachers' organizations, which meet periodically to consider educational questions, from the National Educational Association down to the smallest teachers' club, furnish an evidence that there is a science of education. It is true that other societies, like labor organizations, meet to discuss their rights and formulate plans for united action; but there is this vital difference, — the former, like medical, law, and theological associations, meet to discuss the great questions which affect the welfare and progress of the race, while the latter busy themselves with their own interests and ends. In teachers' meetings are presented the experiences and conclusions of men devoted to the elevation of mankind and to the furtherance of altruistic principles. Such meetings contribute to the sum of pedagogical knowledge and confirm the truth that education is a science.

4. *Because chairs for the study of education are maintained.* — A most convincing and practical reason for the belief that there is a science of education, lies in the fact that pedagogical chairs have been established in colleges and universities, and that normal schools, training classes, etc., are maintained at great expense. Legislators and philanthropists are not likely to devote large sums of money to maintain a science that has no existence.

5. *Because educators have long recognized it as a science.* — German thinkers and the German educational authorities have recognized pedagogy as a science for more than half a century. In some of the universities, pedagogy is accepted as a branch which may be offered for a degree, coördinate with philosophy, psychology, science, or math-

ematics. The same is practically true in France. Provision for training in the science and art of teaching is being increasingly made in this country, while great numbers of young men and women are availing themselves of the opportunities thus afforded. Teachers, like lawyers, doctors, and ministers, are banding themselves together for the purpose of protecting their interests, studying the principles underlying their profession, and advancing the cause to which they have devoted their lives.

There seems to be good reason, therefore, to accept education as a science, and teaching as a profession.

Summary

There is a science of education because educational principles have been formulated and classified, an educational literature created, associations formed to further and protect the interests of teachers and to foster a scientific spirit, pedagogical chairs established and maintained, and because it has received recognition in this and other countries. It is not a complete or exact science, and never can be, for it deals with the activities of the human mind.

CHAPTER IV

WHO CAN BE EDUCATED?

References. — *Butler*, Meaning of Education; *McMurry*, Method of the Recitation; *Ward*, Psychic Factors of Civilization; *Rosenkranz*, Philosophy of Education; *De Garmo*, Interest and Education.

IF we accept the definition of education given by Rosenkranz, namely, "Education is the influencing of man by man, and it has for its end to lead him to actualize himself through his own efforts," we have the answer to the question, "Who can be educated?" in the definition itself. The term "education," however, is often applied in a wider sense, as an educated horse, an educated dog, an educated lion. It may be well to study the meaning of the words employed, and seek to arrive at an understanding of them. We speak of *training* and *educating* as though they were interchangeable terms. Such use of these words is unwarrantable. By training there is direction by some external agent, the being or thing trained is passive. Thus we speak of training a horse, a dog, a regiment, a vine. It is not that the object trained is necessarily destitute of intelligence; but it is led by the intelligence and volition of another to do things that it would not do of its own volition. The trained horse or the trick dog learns to perform feats that have been thought out by a superior intelligence and taught to him. He would never have learned these tricks of his own volition. Observe the most highly "educated" horse, study his tricks, and it will at once appear that he

performs only as he has been taught to perform, only as he has been trained. An external force, a man, has conceived the interesting feat and patiently trained him to perform it. Had it not been for the man, the horse would never have performed the trick.

Weal so employ the term "training" in connection with self-active beings, with man. Thus, the athlete who is to enter a contest, the pugilist who is to do battle, the football player — all these are placed in the hands of the trainer whose commands they must obey. They are in training, and while they are intelligent and must employ their intelligence, and possess the power of self-direction, during the time they are at work they must submit to the direction of an outside force, the trainer. We also have the training school, the training class, the training of soldiers, the training of children. In every case there is an outside intelligence, superior in knowledge and capable of directing. The student in the training school is set to perform certain tasks, such as, managing children, teaching a class, and the manifold duties of the teacher. He does this work under the eye and the direction of the critic teacher. He is being trained. Wherever the idea of training is correctly employed, there is an external force operating.

But education is from within. If there is no self-activity, there is no learning. We criticise the grammatical accuracy of the expression, "I shall learn you this fact;" there is also a sense in which the expression, "I shall teach you this fact," is incorrect. We can teach no one who will not be taught, as, from the very nature of the term education, activity from within is implied and required. *Educere*, the

Latin word from which we derive the word *Education*, means the act of *leading forth*. It begins within and proceeds outward. A teacher may be employed, it is true, to arouse, direct, and lead, but, unless the activity of the child is stimulated, the work of the teacher is in vain, there is no educating. The horse can be trained under the lash to perform certain acts quite perfunctorily as a matter of habit, with little exercise of intelligence. So also man may be trained, as we have seen, to perform acts without it being necessary to give any thought to them. But the process of education requires conscious exercise of the intelligence. If this is not brought about, all effort on the part of the teacher is fruitless.

Let us proceed to the further consideration of the question, Who can be educated? Do animals possess the same mental qualities as man, differing only in degree? If not, at what point is the dividing line? Beginning with the lowest form of intelligence and proceeding to the highest form, we will try to discover if any difference exists, and, if so, where it may be found.

1. *Instinct*. — Comparing man with lower creatures we find that both possess instinct. The homing instinct, that of self-preservation, of care for offspring, of herding with those of their kind, are stronger in many animals than in man. Indeed, instinct often serves the animal in the accomplishment of ends that man reaches through higher intellectual power. On the whole, it will be found that instinct is stronger in the lower than in the higher creation; hence this cannot be the dividing line between the two, else the animal must be accorded the higher place.

2. *Sense-perception.* — Proceeding to the next higher form of intellectual activity, that of sense-perception, we find that animals possess keener senses than man. The hound follows the trail of the fox by means of a keen scent, and is not thrown off the track of his particular prey even though other animals may cross it; the dog traces his master through the streets of a city, where thousands of other men have passed to and fro, with unerring certainty; the hawk poises a thousand feet above the earth and detects a snake or a mouse moving through the grass, and shoots down from the sky like an arrow upon his victim; the horse travels with perfect security in the darkest night when his master is totally unable to see a thing; the cat has no trouble to find its way in the deepest gloom; the watch-dog detects the slightest suspicious sound. Examples are abundant to show that each animal is endowed with such acuteness of sense as is necessary for its self-preservation, or for securing the end for which its life was designed, and this acuteness often far surpasses that of man in the same direction. Hence, if sense-perception were the dividing line, man would be placed below the brute creation.

3. *Imagination.* — Next in the order marking intellectual advance is imagination. It is difficult to discover that animals possess imagination in any high form, as they cannot convey their thoughts through speech; but it is easy to discover that they possess memory, which is a form of imagination. Remarkable instances of memory on the part of animals are easily authenticated, having been witnessed by thoughtful observers. An elephant refuses to cross a bridge where perhaps, years before, it had been injured; a horse remembers a road over which it had passed

or a house at which it had stopped; a dog remembers a trick when called upon to perform it by the one who taught it to him even though years have intervened since it was last performed. Examples can be multiplied showing that some animals possess excellent memories. In this form of imagination, that of memory, it is certain that in many cases the animal equals if not surpasses man. Memory cannot be the dividing line.

4. *Reason.* — When we come to reason, we may well hesitate to ask the question, Do animals reason? Many psychologists confidently affirm that they do not, while others assert that they do. Before we can intelligently discuss this question, it will be necessary to define what we mean by reason. Ward says that reason is the “faculty by which the mind reaches conclusions.”¹ We understand reason to be the power of reaching conclusions from certain premises or propositions, expressed or understood, the ability to proceed from cause to effect. That animals possess this power in a limited sense, abundant and reliable instances on record would seem to prove. Ward² relates many incidents in which animals show the power to proceed from cause to effect. The following is a most striking example: “In the summer of 1875, while making botanical collections in Rabbit Valley on Fremont River, Utah, the camp was several times invaded by coyotes during the absence of myself and my assistant, and these animals would howl around us nights, sometimes approaching quite closely. I finally set my fowling piece, both barrels loaded with buckshot, in a gulch among the sagebrush a hundred

¹ “Psychic Factors of Civilization,” p. 28.

² *Ibid.*, p. 152.

yards from the tent, attaching a piece of fresh meat to a string twenty yards long, which at the opposite end passed round the stem of a bush and was tied to both triggers. The least jerk on the string would fire off the gun, which was carefully aimed in the direction of, and a little over, the meat. The next morning tracks were seen all about the place, but meat, string, and gun were untouched. The second morning I found the meat gone and the string bitten off. The meat had been dragged six inches toward the gun, as shown by the mark it made in the loose alkaline soil, and the string was slack. The gun had not been discharged. I renewed the meat and reset the gun, and the third night I heard the report of the gun in the night. It was moonlight and I went to the spot as quickly as possible, but as no dead wolves were to be found I left matters till morning, when I found that the operation of the previous night had been repeated, but that by some accident the string had been pulled and the gun discharged, probably without injury to the animal, as the string now lay out of range. I continued for several nights to repeat the experiment with somewhat varying results, but did not succeed in killing any wolves. The tracks showed that on the first night they had traversed the length of the string and around the gun, evidently exploring the situation thoroughly and acting upon the knowledge they possessed."

"Has the lower animal the power of reasoning?" asks the Rev. Charles J. Adams. He answers his question as follows: "I claim that I have discovered four phases of reason. These are, that of appreciation, that of adaptation, that of imitation, and that of origination." The following incidents are related to prove his claim: "A

young lady, with some friends, was in an orchard. In a field adjoining, two of her brothers were at work. In an adjoining pasture were two young horses. To the bars which connected the field in which the young men were working with the pasture, one of these horses came running and whinneying. One of the young men, who did not think that intelligence stopped short off at man, walked toward him. Then the horse started off, looking back over his shoulder as if he expected the young man to follow. The horse was not disappointed, and the young man found the horse's mate on his back in a ditch unable to get up.

"Here is a clear case of appreciative reason. The horse could not save his companion, knew that a man could do so, and did the sensible thing by going off to get a man.

"The appreciation of the output of any faculty by another is evidence that the one appreciating has the same faculty. The musician appreciates those who have the musical faculty. To go no further for illustration, did not the fact that the horse knew that a man could act rationally, prove that the horse is endowed with reason?"

Mr. Adams also tells a story of a monkey that had a grudge against a coachman, and took the following means to vent his spite: he found his way through an open window into the man's room over the stable, saturated his bed with kerosene, which he obtained by unscrewing the top of the lamp, struck a match and set fire to the bed. "But admit," says Mr. Adams, "that the monkey was only imitatively rational in striking the match, was there not something of origination in his unscrewing the top from the lamp and pouring its contents on the bed?" These instances seem

to prove that animals possess the power of appreciation, adaptation, imitation, and origination.

A personal experience with a dog shows the power of appreciative reason, that of recognizing powers in man to assist where his power had reached its limitation. It was upon a farm in New York state where woodchucks abound. The dog was a great hunter, and there was scarcely a day during the summer season that he failed to run a woodchuck into a stone fence, when he would call for help by loud barking. He came in one day, wet, dirty, and tired. I said to him in ordinary tone of voice, "Sport, have you found another woodchuck?" The dog showed every demonstration of joy, springing up to me, running off in the direction of his game, returning, then starting off again, plainly begging me to go with him. I got my hat and followed him. As soon as he was sure that I was coming, he left me to follow a necessarily circuitous route while he took a short cut, arriving some time before I did. He stood on top of the stone wall and by his barking directed me to his quarry. Now here is a case of appreciative reasoning. Not being able to secure his game without assistance, he called upon one that he knew could render aid.

It would seem, then, that reasoning is not the dividing line, though no one would assert that the power of reasoning on the part of animals equals that of man. The animal always reasons in connection with the concrete, and, at best, his reasoning is elementary.

5. *The Power of Abstraction.* — The highest form of intelligence is the power of abstraction, the ability to form generalizations. Do animals possess this power? Let us

first define what we mean by abstraction. It is the withdrawal from the concrete, the notion obtained which exists independent of any particular object. Thus beauty, shape, color, weight, attraction, virtue, honesty, righteousness, etc., are abstract ideas. Though they are applied to objects, they represent notions independent of them.¹ Principles, axioms, rules, laws, although they may be evolved by means of many examples, state a general or abstract truth. It is not conceivable that an animal can comprehend an abstract truth. Whatever be its power of intelligence, it is always associated with something concrete.

Here, then, we have a clear distinction which marks the difference between man and the brute creation. Man alone has reached the power of abstract thinking, and because of this he alone can be educated. Indeed, the goal of instruction is to reach the abstract, as McMurry shows.²

Quoting from Bulwer-Lytton on this point,³ "The more I look through nature the more I find that on all varieties of organized life is carefully bestowed the *capacity* to receive the impressions, be they called perceptions or ideas, which are adapted to the uses each creature is intended to derive from them. I find, then, that man alone is endowed with the capacity to receive the ideas of God, of soul, of worship, of a hereafter. I see no trace of such a capacity in the inferior races; nor, however their intelligence may be refined by culture, is such capacity ever apparent in them."

Further he adds:

"'Man alone,' says Müller, 'can conceive abstract notions; and it is in abstract notions, such as time, space, matter,

¹ See McMurry's "Method of the Recitation," for a discussion of individual and general notions.

² *Ibid.*, p. 51.

³ "A Strange Story," p. 345.

spirit, light, form, quantity, essence, that man grounds, not only all his philosophy, all science, but all that practically improves one generation for the benefit of the next. And why? Because all these abstract notions unconsciously lead the mind away from the material into the immaterial, from the present into the future."

The child begins to learn to count with objects, but the lesson is not learned until he can add, subtract, multiply, etc., without any objects at hand, until he possesses the abstract notion. It may seem that as man and the animal run parallel in their manifestations of intelligence as we have traced, the difference between them is but slight. But the power of abstraction, which man possesses and which the animal totally lacks, marks a mighty chasm which can never be bridged. The intellectual distance between the lowest type of man and the highest type of animal has not been lessened during the ages and never can be lessened, for man's progress is due to his power of abstract reasoning, a power which no animal possesses in any degree whatever. Man has progressed of his own impulse and volition. Horses can run a mile in two minutes, not because they have set this goal for themselves, but because man set that goal, and through breeding, training, and improved facilities he has brought the horse to the desired speed. Dogs have reached wonderful perfection and beauty, and have learned to perform remarkable tricks, not of their own volition but because another and higher intelligence has taken them in hand and by long-continued and painstaking efforts has secured the end sought. The dog is more intelligent in some respects and less intelligent in others than he was in his wild state a thousand years ago

before he was domesticated by man. Not an animal is one whit better or more intelligent than were his ancestors thousands of years ago because he planned to better his species or reach higher aims. Every particle of improvement in him is due to the fact of his contact with man, who, with the power of abstract reasoning, saw possibilities in him and patiently proceeded to realize those possibilities. It is inconceivable that it should be otherwise. The animal can be trained, but man alone can be educated.

I have traced this parallel thus carefully for another reason, which will be apparent; that is, to emphasize the thought that as abstraction is characteristic of human intelligence alone, it therefore marks a definite aim in the education of man. The teacher, while proceeding from the concrete, must not stop until the abstract has been reached. Knowledge must be pursued until it is fully incorporated in the mind of the child as general notions.

If the preceding reasoning is correct, the theory which makes man descendant of lower animals must of necessity fall to the ground, for the distance between man and the creature representing the highest evolutionary development from an intellectual standpoint is as great as it ever was, and that distance is immeasurable and infinite. Evolution from a physical standpoint may be capable of proof; but from an intellectual standpoint — that which distinguishes man — the ages have marked no progress in the lower animals.

Louis Agassiz, in his "Essay on Classification," says, "All the facts proclaim aloud the one God whom man may know, adore, and love, and natural history must in good time become the analysis of the thoughts of the

Creator of the universe." A writer who knew Agassiz well, comments upon him as follows: "Every living thing represented not so much animated matter, but a thought of the Creator, and the group to which it belonged, this thought working itself out through the centuries. For he believed in an evolution. But the evolution of Darwin did not exist for him. He did not believe in an evolution by transmutation. His was an evolution, not by organic forces within, but according to a great intelligent plan without. Not by a change of one species into another, but by the substitution of one for another, according to this great plan. His devout reverence for the things of nature made itself manifest in his work. He said, 'I never make preparations for penetrating into some small province hitherto undiscovered, without breathing a prayer to the Being who hides his secrets from me.' For him the laboratory was a sanctuary, the study of the things of nature, intercourse with the Creator."

Dr. Alfred Russel Wallace, who discovered the theory of evolution independently of and simultaneously with Darwin, differed from the latter as to the origin of man from an intellectual and moral standpoint. He says, "The belief and teaching of Darwin was that man's whole nature—physical, mental, intellectual and moral—was developed from the lower animals by means of the same laws of variation and survival; and, as a consequence of this belief, that there was no difference in *kind* between man's nature and animal nature, but only one of degree. My view, on the other hand, was, and is, that there is a difference in kind, intellectually and morally, between man and other animals; and that while his body was undoubtedly developed by con-

tinuous modification of some ancestral animal form, some different agency, analogous to that which first produced organic life and then originated consciousness, came into play in order to develop the higher intellectual and spiritual nature of man."

We are now ready to answer the question, Who can be educated? Man alone can be educated, for he alone is self-active, self-conscious, self-directing, responsible for his acts; he alone possesses the power of generalization, the power of abstraction. The answer suggests very important problems inherent in the nature of education. In the light of this answer the aphorism, "From the concrete to the abstract," which is the law of educational procedure, takes a broad meaning. It is certain that with the child we must begin with the concrete, but too often our work ceases before the abstract conception is reached. In so far as this is true, the educational end has not been attained. A good illustration of this is found in the practice of children to continue to count with their fingers. The trouble is, they have not yet reached the abstract conception. No child will use objects in counting if he can get along without them. The child avails himself of "short-cuts" as truly as the adult. What the teacher should do is not to forbid the child to employ objects, but to give him, through drill and many repetitions, such a thorough knowledge of the numbers he employs that he no longer thinks of objects, or needs them, but knows the number in the abstract. Not until this end is reached can the instruction in any field be called completed. When to employ the concrete and when to employ the abstract is a question that will receive attention in later pages.

Summary

Man alone is self-active, self-directive, and self-conscious, possessing the ability to actualize himself through his own efforts. He has the power of abstraction, and this places him far above animal creations. It marks a gulf that is inconceivable for them to pass. Because of this power possessed alone by man, he alone can be educated.

CHAPTER V

ELECTIVE STUDIES

References. — *Eliot*, Educational Reforms; *Payne*, Education of Teachers; *Bain*, Education as a Science; *De Garmo*, Interest and Education; *Fouillée*, Education from a National Standpoint; Report of the Committee of Fifteen; *Shaw*, A new Course of Study.

The Election of Studies. — The question of the course of study and the choice of subjects to be pursued has met with wide discussion in recent years, presenting all points of view from extreme individualism, which would allow the child upon entering school to choose what he likes best and pursue that, to the rigid curriculum of the old-fashioned college. In most institutions of higher learning there is an increasing tendency to enlarge the list of elective studies, until in many universities practically all of the work is thrown open to the free election of the student. The course of study has undergone many modifications to meet new demands, to support and further new discoveries, and to keep pace with the progress of civilization. College faculties, superintendents and teachers everywhere are earnestly seeking to offer the best that mature learning and experience can suggest for the advancement of those whose lives they are shaping. It would be folly to discard the results of such long-continued and conscientious study. One of the most suggestive evidences of educational progress is found in the enriched, systematized, well-balanced, carefully worked out courses of study. They are not wanting in fundamental elements, they furnish a working basis of study, they suggest a point from which to start, and,

therefore, must be a far safer guide to the young person than his own inclination, or even his own judgment.

Election in the Elementary School. — Having established the character, value, and necessity of the course of study, we may proceed to ask how far it should control in shaping the work of the student, how much choice should he have in the subjects he takes? Beginning with the elementary school, no elective should be possible for two general reasons — (1) it is the period in which an all-round development is to be gained, the period for obtaining a general culture; (2) it is the time when character is being formed. Discussing these points separately the child is incapable of selecting the subjects that will furnish him complete development. We have seen that the effort to outline in courses of study the material that will produce such culture has cost the best thought and study of educators for many generations, and yet without wholly satisfactory results. It cannot be expected that an immature child will be able to select the proper material for his culture. Again, he is apt to be influenced in his choice by superficial causes, such as the popularity of a teacher, the subjects that are easy for him, likes or dislikes, etc. Münsterberg has shown that it does not follow that a child's seeming aptitudes are always permanent, that they foreshadow what his life work will be. Hence, his course must be chosen for him and he must be held to it whether or not he likes it until a foundation of general culture has been established. It by no means follows that one should not be required to do things he does not like to do. Tasks

¹ See Chap. XVI for treatment of the Course of Study.

must be performed in school however distasteful they may be, and this is one of the best means of training for duty, and preparing to meet life's difficulties.

The Period of Character-Forming. — In the next place, and perhaps of even more importance than the incapacity of the child to select his course, it is not to be forgotten that this is the formative period, the time when character is being formed and established. If this is the chief end of education, great weight must be attached to the effect of any policy on character-forming. The grade teacher, who has charge of the class for the full day for an entire year or longer, must certainly come into much closer touch with children than the specialist, who meets them for a single period a day and then has no further responsibility. The former thinks of the whole child, his needs, his aptitudes, his weaknesses, his discipline, the formation of his habits, his growth into a perfect well-balanced manhood. The latter very naturally devotes himself to his subject and the problem of furthering the class in that work. From the very nature of things, the motive of the specialist is the advancement of his pupils in his special work, regardless of the other work that the child may be pursuing. He is responsible for that work alone, and his success as a teacher is measured by the progress of the pupils therein. Hence, it often occurs that the enthusiast in some specialty may overwork his class to the detriment of other studies and at the expense of general development.

The grade teacher, on the other hand, carries the work along evenly, lightening tasks in one subject when some other subject demands more attention, spurring up pupils

that are dull, while checking any that are prematurely bright, having patience with those that are slow to comprehend, and thereby securing well-balanced work. Surely no teacher of a single subject, meeting a class but once a day, can obtain so thorough acquaintance with the capacities or the characteristics of a class as the grade teacher. It will readily be admitted that the specialist knows his subject better and may be able to present it better than the grade teacher who must teach several subjects. But for young children this is not so important as the well-ordered, coördinated, and harmonious presentation of all the work. In the work, as well as in the discipline, the teacher is to form right habits. With older children, when the habits are established, the emphasis may be laid upon the character of the work.

The main thing with young children is the strong personality of the teacher, and this evinces itself far better in the teacher who has the class the whole day in all of its subjects, and who disciplines the children, not merely to maintain order during the period of instruction, but to establish those habits and to secure that general power of self-control which form good character. The grade teacher is able to understand the child in all his needs. This far overbalances any peculiar power that the specialist may possess in the presentation of subject-matter. Nor is it too much to expect of the grade teacher in elementary work that he shall be master of all the subjects he is called upon to teach.

It is of highest importance that the teacher of young children should come into closest touch with them, not only in their studies, but also in their play, and also in all

matters that enlist their interests. This can be done only when the teacher is their constant companion, guide, and friend. Thus can the evil influences growing out of the outside environment of many children be counteracted and overcome. The specialist, who meets a different class each period of the day, teaching perhaps a total of two or three hundred children, can know but little about the individual. He will do well if he learns the name of each, to say nothing of individual characteristics. His discipline necessarily has for its purpose the maintenance of order during the lesson, and if that is attained no further responsibility in this respect is laid upon him. But discipline must have a much higher ultimate aim than this. It must inculcate the power of self-control; it must teach self-respect as well as respect for the rights of others; it must lead to good habits; it must form character. The teacher who is the companion of the pupils during the whole day will be able to encourage when a word of encouragement is needed, reprove when reproof is necessary, assist when the critical moment for assistance has come, spur up the lazy, and restrain the overzealous, and by word and deed and by kindly interest further every honest effort and check every evil tendency. He will also carry his study of the individual child to his home, when peculiar circumstances require, and he will seek to know and counteract the influences that hinder or debase. These things are impossible to the specialist because of the numbers involved and because his interest is in his subject rather than in the individual child.

To summarize, the grade teacher's interest lies in the child, his growth, his general advancement, and his perfect development in all directions, while the specialist's interest

lies in the accomplishment of certain ends in the mastery of subject-matter.

Instead of dividing the lessons of the day among a number of teachers, there is a tendency in some schools to continue a teacher with a class for three to four years, the teacher moving up with the class. Such practice is excellent for both pupils and teachers, — for pupils, because definite and permanent impressions may thereby be made by a strong, intelligent, and zealous teacher ; for teachers, because broader views of education and of life are attained than is possible when the same grade of work is pursued year after year. The tendency of teaching is to narrow one's life, because the teacher is constantly appealing to persons inferior in knowledge and experience, and that effect is intensified when one continues in the same grade year after year. To carry a class through three years thus takes the teacher into new fields, but does not take him far away from the particular work wherein lie his aptitude and his strength. After completing the three or four years with a class the teacher starts at the beginning with a new class. The impression that an efficient teacher might make upon a class in three years would be lasting, affecting in all probability their whole lives. The wonderful impression that Thomas Arnold, Mary Lyon, or Mark Hopkins made upon students did not come from the recitation alone, but from the personal contact of strong lives for a period of years. And this is the chief reason for the eminent success of many private schools — the personal, daily, continued intercourse of teachers and pupils. But what if the teacher is incompetent or unsuited to inspire the highest intellectual and moral endeavor?

For such there is no law. No system of pedagogy can provide a place for them or contemplate their presence in the school. They have no place there.

In the High School. — The reasons for non-election of studies and against the employment of specialists in the elementary school have less weight in the high school. The pupils are well established in character, they are experienced enough to have some voice in the choice of their work. The subjects, too, are so much broader that it could hardly be expected that a teacher should become expert in the several themes involved in a daily program. Chief attention may now be given to the presenting of subject-matter, whereas, it has been urged that in the earlier course the child must be the central thought. The high school student is mature enough to be largely self-directive, he is more capable of judging what he needs. Hence the thought of the teacher may be devoted to the presentation of his material. It is of utmost importance that the high school teacher should possess greater knowledge and breadth in his particular field than would be possible if he were required to teach many subjects. The literature of each field grows wider and the demands are more exacting, the more advanced the subject becomes. For this reason it is well recognized that in the college and the university the teachers must be specialists.

Whether or not the pupils in the high school should be allowed to choose their subjects, even though they are taught by specialists, is another question. The New Jersey Council of Education, after extended discussion, expressed itself as follows upon this point: "Resolved, That in the

opinion of the Council the miscellaneous election of studies in the high school is not desirable, but that the best results are to be obtained by a judicious study of the aptitudes of pupils, and such selection of courses as seem to be in accordance with such aptitudes. This should also involve consultations with parents and former teachers." Every well-organized high school will have at least two general purposes, namely, to prepare students for college, and those who cannot go to college for life. To limit its work to the first purpose is to give over an institution supported by public taxation to the service of the comparative few of its supporters and constituents. The high school must fit for college in order to gain a standing among institutions of learning, as well as for the direct purpose of meeting the needs of even a minority, but it must also be a "people's college" for those whose schooling can extend no further and who must be equipped for life. It may be difficult to outline just what the material should be to meet this second demand. There are some things in the specific requirements of college entrance that are not needed in the preparation for the future. The college course is organized with the idea of preparing for broad culture and possibly for a professional career. The college, therefore, must require certain specific preparation to enable the student to enter upon and successfully carry out the work thus planned. It is definitely understood that the college is another step in the completion of the young man's education. But the high school must have some courses that are complete, that do not contemplate later courses.

Every well-equipped high school will have at least four courses — a *classical course*, a *scientific course*, an *English*

course, and a *commercial course*. These courses should be so arranged as to require practically the same work for the first two years, the principal differentiations taking place during the last two years, especially in small schools where there is limited teaching force and where economy must be practiced. This would necessitate all courses embracing at least Latin, one or more modern languages, higher mathematics, some science, literature, and history — the essential subjects both for college preparation and for life. None of these should be omitted from the education of any person, even though he devotes himself to business. The child should be allowed to choose his course upon entering the high school, his parents and former teachers being called into consultation. But the final decision need not be made until the end of the second year, provided the courses are planned as above outlined. He is far more competent to make this final decision at the end of the second high school year than he was when he left the grammar school, a mere child. He is less likely to be influenced by such matters as the reputation of instructors, the decision of other children, or the imagined easiest course. He is initiated into the life of the high school, begins to understand his own needs and capabilities, hears more about going to college, is clearer as to the occupation he may follow, and is better prepared to decide. For these reasons no mistake should be made in the work outlined for him during the first two years, that will exclude him from the choice of a course best suited to his needs.

It would seem clear that the high school student should be allowed no choice other than as to the course he will pursue, at least for the first two years. If, then, he is fully

decided as to his future purpose he may settle upon his course, and that, in the main, should be followed as prescribed. We have already seen that the course of study is the result of centuries of consideration and experiment by wise men. This cannot be ignored and must count for more than the whim and inexperience of a child. Only in exceptional cases should election be allowed in the high school. These exceptions would involve those that are preparing for some later special course or those to whom the high school is the end of their schooling.

In the Higher Institutions. — In the college and university the usual plan is to allow but little choice in the freshman year, a larger choice in each of the succeeding years, until the senior year when the work is nearly all elective. The question of electives in college is still in the experimental stage, the authorities themselves not being agreed as to what is wisest. Conservative opinion favors, inasmuch as the young man entering college is introduced to a new environment, that his work be marked out for the first year until "he finds himself." After that he may have a voice in shaping his subjects of study with reference to his proposed life work. In purely university work the young man has sufficient maturity and knowledge to enable him to know exactly what he wants and to choose wisely. Therefore, the work may all be elective.

When the foundation of general culture has been laid, the specialist will never become narrow. He will view civilization with a large vision, and while he concentrates his time and his efforts in furthering the special work to which he has devoted himself, he will also find time and

inclination to be interested in many other fields of activity and thought. He will be the better specialist because of the larger view that broad culture engenders, and at the same time, he will take his place among men, entering into their thoughts and lives, and thus find a place of eminent usefulness and service.

Summary

I. The course of study in the elementary school should embrace each of the fields of human knowledge properly harmonized and correlated until general culture has been secured. It should take into account the physical and intellectual growth of the child. It should seek to meet the aim for the school for which it is intended.

II. The election of studies should be allowed only in advanced courses after general culture has been attained. Specialization should be practiced only in the higher schools, after the child's character is established. The influence of the grade teacher is the most potent force in the formation of the character of young children.

CHAPTER VI

THE GAINING OF KNOWLEDGE

References. — *Rooper*, A Pot of Green Feathers; *Lange*, Apperception; *McMurry*, General Method; *Bain*, Education as a Science; *Johonnot*, Theory and Practice; *Rosmini*, Method in Education.

THE little child is born into the world an utter stranger. He possesses nothing but the capacity to be educated, the possibility of knowing. Without this he cannot be educated. He has five avenues through which he becomes acquainted with the outer world — seeing, hearing, touching, tasting, and smelling. He does not know how to use a single one of these possessions, he must learn to see, hear, feel, taste, and smell. The whole process of education consists in making the strange, the unknown, familiar and known. All that is possible in human knowledge lies between the condition of a new born babe and a Solomon or an Aristotle. The child masters, step by step, the great mysteries of the world until what was at first inexplicable becomes a matter of familiar knowledge.

The Senses as Means of Gaining Knowledge. — Through the eye he learns to measure distance, to determine shape, to distinguish color and form, to recognize symbols, to appreciate the external beauties of the world. Through special training he may be able to note great distances, as the sailor at sea or the herdsman on the prairie, on the one hand, or the minutest details, as the jeweler or the microscopist, or the trapper in the forest, on the other hand.

Through the ear he learns first to distinguish his mother's voice, and later through patient training he may become able to detect the finest differences in notes of music, and to appreciate the most delicate and exquisite melodies. If he devotes himself to it, his ear may become so acute as to be able to distinguish and interpret sounds in the wilderness or in the night-time that to the untrained ear would be meaningless, or even unheard. The words of an unknown tongue at first sound like a strange jargon; but soon the ear becomes accustomed to them, the sounds are separated into words, and intelligent comprehension follows.

By means of the taste he becomes acquainted with the nutriments that sustain the body and afford pleasure, as well as with those that are dangerous and unwholesome. Very much of the pleasure of life depends upon the taste. That the taste is capable of training is manifest. Every person has experiences in learning to like certain foods and liquids. A person who had been obliged to take quinine for malaria came to like it as a child likes candy. Few people are fond of olives when they first taste them, and the use of tobacco has to be cultivated. Some peoples, long habituated to certain kinds of food, eat them with relish, whereas the stranger visiting them temporarily, regards such food with disrelish, if not disgust. Keeness of taste may be developed, as in case of the tea-merchant, the wine-tester, or the butter-buyer.

The smell, though not of so great importance as the other senses in unfolding a knowledge of the world about us, is nevertheless a means of obtaining knowledge that can be obtained in no other way. The scent of musk, the

odor of cooked foods, the delicious perfume of flowers, can never be known except through the smell. Professor Cook says:¹ "Smell has importance even as related to cookery, what we call tasting things being for the most part smelling them. For example, if a blind man were to hold his nose he could not, from the taste alone, tell whether he were eating beef, mutton, or pork. A man blindfolded and his nose held cannot tell, by tasting them, a slice of onion from a slice of apple as one after the other is laid on his tongue. At the table it is not the flavors of the things that delight us, but the smell, for, as we have said, we taste nothing but sour and salt, bitter and sweet.

"Not only the food itself, but the accompaniments of the feast, were made to minister to smell by the ancients. Athenaeus relates that, at the banquet he has described, the dishes had been made by baking perfumed clay with aromatic woods as fuel. Other cases of the ornamental uses of odors were found in the Roman theaters, the air of which was perfumed. Incense in houses of worship was another instance."

Smell plays a far more important part in the enjoyments of life than we ordinarily think. It is therefore a valuable means of knowledge. Professor Cook further says, "It is a mistake to suppose that men even are not assisted by smell. A certain blind man, we are told, could by smell alone tell if cats were in the house, notwithstanding the fact that several doors intervened between him and them. A blind man, named Mitchell, knew by smell, whether, for example, one was a rogue, a miser, or what not. But why do we speak of this when there is a Jæger?

¹ "Psychology," p. 10.

This eminent man, a designer of woollen clothes, claims to have proved that every nation, kindred, tribe, family, and individual may be known by the smell, and thinks that even the secret of heredity can be gotten at by it."

Through the sense of touch a vast field of knowledge is obtained that can be reached in no other way. Pain, heat, gravity, and resistance are comprehended by touch. Helen Keller is a noted example of the wide range of knowledge that can be gained through this means alone. Not only has this remarkable woman acquired a store of knowledge equal to most women of her age, but by indomitable perseverance, added to an unusual capacity, she completed a thorough college course at the age of twenty-four, although totally deprived of sight and hearing. She was obliged to depend solely upon the sense of touch as a means of gaining the knowledge necessary to entitle her to a degree, and in spite of the terrible handicap, she bravely surmounted all obstacles and completed her course with credit. This case illustrates that a large amount of knowledge can be obtained in spite of great obstacles. It shows how much can be gained through the sense of touch alone.

Many things that can be learned only by means of the eye and ear will forever remain incomprehensible to her. The beauties of color and harmonies of music are wholly outside of the possibility of her comprehension. Helen Keller's case illustrates that where one or more senses are lacking, the remaining ones become the more keen. The blind become acute in hearing and touch, and the mute very observing with the eye. Deprived of seeing, the blind learn to take care of themselves through the greater acuteness of the other senses. When they come to a street-

crossing they feel the movement of the air from the cross-street even though no wind be blowing. A blind man tells me that he knows when he is passing a tree or a post by the subtle current of air that he perceives. A deaf senator was able to comprehend the work of his legislative body and fully hold his own with his colleagues in point of usefulness, because of his watchfulness and because he kept his eyes open.

The idea of resistance can be obtained only through the touch. Is an object soft or hard, heavy or light, touch alone can give information of that fact. The most vivid description of the pain of a burn can never give the faintest idea of it. An instant's touch of the heated surface conveys the knowledge at once and emphatically.

The object of the foregoing discussion is to show that through the senses the estrangement is removed, the knowledge gained. The more knowledge possessed, the easier the acquirement of further knowledge becomes. And so the child, starting with nothing, gradually and rapidly gains a store of knowledge and adds to it as long as life and intelligence last. There is no limit to his possibilities except in his own capacity. The whole world is before him, and it is his privilege to go forth and overcome it. The gaining of such mastery is education, and it is the duty of the teacher to bring to the child the right material, at the right time, in the right way.

Choice of Material. — Great care must be exercised in the gaining of knowledge as to choice of material. New ideas are gained with difficulty when they are utterly strange, and with comparative ease when the mind is already in

possession of related ideas. A few illustrations will illuminate the point. A troop of American Indians connected with a show, wandered through the streets of Paris with stoic indifference to the artistically decorated shop windows, the works of art, the fine buildings, the monuments — the wonders of that beautiful city. These works of civilization and æsthetic taste are far beyond their comprehension, so far that they fail to make an impression. A brilliantly colored blanket appeals to them more than the noblest Duchesse lace, a rude household implement more than a Glacé vase, a string of gaudy beads more than a resplendent jewel. Where a civilized person would view with delight the marvels of taste and beauty, the savage passes on utterly oblivious. The works of art, the exquisite beauty of architecture, the wonderful fountains, the marvelous exhibitions of the highest art of man that make the French capital so attractive, are entirely beyond the Indian's comprehension. He must pass through some centuries of civilization before he is able to grasp the meaning of these things and appreciate them.

A few years ago at considerable expense, the United States government brought several hundred teachers from Cuba to one of our great universities, provided lecturers and gave them instructions in the art of teaching. Those most intimately acquainted with the enterprise, express the belief, that so far as the definite purpose was concerned, these young people were but little benefited. They were not ready for so much that was new and strange, however elementary the pedagogical material presented; it was beyond them. Doubtless the enterprise was well worth the expense, for these earnest young persons

necessarily picked up a great deal of valuable information as to the customs of the land; but from a professional standpoint, they learned very little of the science and art of teaching. Even in this respect, they learned far less than would have been possible had they been well prepared to receive the new ideas.

Goethe described his own life and characteristics in these words:

“Vom Vater hab'ich die Statur,
Des Lebens ernstes Führen
Vom Mütterchen die froh Natur,
Die Lust zu Fabuliren.”

To one unfamiliar with the German language, at first sight there is nothing in this stanza that conveys intelligence. But upon a closer examination of the lines, light gradually begins to break in. For example, take the first line, the words “Vater,” “hab’,” and “Statur,” will not be difficult to translate because of their similarity with the English words, “father,” “have,” and “stature.” It will now be easy to translate the line as follows: “From my father I have my stature,” or freer, “I am like my father in stature,” or “I inherit my stature from my father.” The second line is more difficult because it lacks words that furnish a hint to the English student, the only word being “*ernstes*,” earnest. But the clue is given in the first line, which speaks of qualities inherited from the father, and it would not therefore be difficult to conclude that the second line continues to speak of these qualities, and alludes to the earnest or serious side of the poet’s character, also inherited from the paternal side. We have, then, “Life’s earnest strivings,”

or, "The tendency to take life seriously," — a tendency that was not very prominent in Goethe's character.

In the third line again we have "Mütterchen" and "Natur," which are easily comprehended as "Mother," and "Nature." It is hardly expected that the casual reader will understand the sweet endearment compassed in the diminutive form of "Mutter," rendered "Mütterchen," which touches the German heart with so much tenderness and love, and which, of course, every child understands. The word "mother" will have to suffice in English. Now a knowledge of Goethe's character will aid in understanding that from his mother he must get the other side of his character, that of vivacity, of joyousness, of good fellowship, which predominated. The word "froh" thus becomes intelligible, not through the medium of language, but through a knowledge of Goethe's real character. We have, then, "From my mother (dearest), my joyous nature."

The fourth line furnishes no word that helps us, unless it be "Fabuliren" from its likeness to our word "fable." Our process of inductive reasoning, together with a knowledge of Goethe's poetic genius, once more comes to our assistance. In the first two lines he tells us what his father bequeathed to him; is it not likely that in the last two he tells us of his inheritance from his mother? We know that he possessed great poetic genius, and a remarkable power of phantasy. It ought not to be difficult to infer that the last line means, "The love of phantasy," or "The power of poetic expression." The whole verse freely translated would express about the following thoughts:

From father I my stature bear,
My strength for serious striving ;
From mother dear the nature fair,
The fiction gift deriving.

Now success in interpreting this stanza without a knowledge of German, depends upon previous knowledge of English, upon acquaintance with the life of Goethe, and upon the power of inductive reasoning. If either of these be lacking, the meaning will remain obscure. This serves to make clear the point under discussion, namely, that new ideas will be acquired easily or with difficulty, just in proportion to the newness or strangeness of the material presented. It will thus readily appear that he who knows several languages easily acquires a new one because of the similarity of words in different languages, and because of the fund of ideas already gained. It is said that Dr. Schliemann, the great archæologist and discoverer of ancient Troy, who knew some fifty languages and dialects, could master a new language in three or four weeks. His knowledge of many languages made each new one less strange and, therefore, more easy of acquirement.

If I were to see a typewriter for the first time, doubtless it would seem to be a curious instrument. But having seen a piano, its keys would hint to me that it was something to be played upon; knowing the alphabet, the presence of letters on the keys would suggest that by pressure upon them they are reproduced; and knowing that men communicate their thoughts by writing, it would not be difficult for me to conclude that this instrument is intended for writing. To a barbarian who had never seen a piano, did not know any alphabet, and was unfamiliar with the prac-

tice among men of writing to each other, it would be a profound mystery. To the one man it easily reveals its purpose; to the other its purpose is inexplicable.

Old Material to be Utilized. — In learning new truths we utilize the knowledge we now possess as an introduction to the new, we call up whatever we have that has any relation to new lessons we would learn. If we possess nothing that has such a bearing, the acquirement of the new knowledge will be correspondingly difficult. The bewilderment will be like that of the Indians in the city of Paris, or of a person first hearing the sounds of a strange tongue. The sounds will be mere jargon, without conveying any meaning. But after a time when we know some words, gradually the meaningless character disappears as new words are learned, light breaks in and we understand. The most important pedagogical principle that the teacher can apply is, *utilize all the related old material that the pupil possesses as an introduction to the new.*

It is like a stranger appearing at our door and asking hospitality. If he brings a letter of introduction from some friend, or if he is able to establish his identity through some acquaintance, we bid him welcome. The cordiality with which he is received will depend entirely upon the sympathy of interests that he can establish. So it is with new ideas that present themselves. They will be allowed to enter and find lodgment when relationship to those already in possession is discovered.

This process will be recognized as what the Herbartian school of pedagogy calls *apperception*. Lange says,¹ "Man

¹ "Apperception," translated by the Herbart Club, p. 1.

enters life a stranger; he knows nothing of the world that receives him; it is to him a new, unknown country, which he must explore; which he must conquer. How is this to be done? Nature assails his senses with a thousand allurements; she sends the rays of light that she may open his eyes to the innumerable things of the outer world, she knocks upon the door of the human spirit with excitations of tone, and touch, and temperature, and all the other stimulations of the sensitive nerves, desiring admission. The soul answers these stimuli with sensations, with ideas; it masters the outer world by perceiving it."

Again he says,¹ "In order that a sensation may arise, there is, as a rule, a fusion or union of its content with similar ideas and feelings. With the assistance of the latter, the sensation is held in consciousness, elevated into greater clearness, properly related to the remaining fields of thought, and so is truly assimilated. We call this second act in distinction from that of simple perception or the reception of a sensation, *apperception*, or mental assimilation. This is a psychical process which has a validity beyond mere subjective perception, and is of great significance for all knowledge, yes, even for our whole spiritual life."

In support of the subject under discussion, we quote again from Lange;² "What is entirely new and can find no point of connection is either not understood or only superficially apprehended. On the other hand, the best instruction is given when the words of the teacher stir the inmost thoughts of the child, so that he is not passive, but wholly active. And so it remains true, as we have already

¹ "Apperception," p. 5.

² "*Ibid.*," p. 105.

seen, that the most eminent characteristic of learning is not to be denominated passivity, but activity, that all learning is apperceiving.

“Accordingly it cannot be the duty of the teacher simply to transmit to the pupil the material of knowledge, or to communicate to him ideas, feelings, and sentiments, but to awaken, stimulate, and give life to mental activities. He has to reach down with regulative hand into those quiet private thoughts and feelings of the child in which lie his ego and his whole future, that they may rise above the threshold of consciousness and communicate understanding, clearness, warmth, and life to instruction. In a word, he has to make provision that in every case the process of apperception is accomplished with as much thoroughness as certainty and judgment. Then not only will the matter taught be mechanically acquired, but it will be transformed at once into mental power; it will contribute steadily, by awakening thought and interest, to lift and ennoble the mental life.”

McMurry remarks,¹ “Apperception may be roughly defined at first as the process of acquiring new ideas by the aid of old ones already in mind. It makes the acquisition of new knowledge easier and quicker. Not that there is any easy road to learning, but there is a natural process which greatly accelerates the progress of acquisition, just as it is better to follow a highway over a rough country than to betake one’s self to the stumps and brush. . . . One may perceive a new object without understanding it, but to apperceive it is to interpret its meaning by the aid of similar familiar notions.”

¹ “General Method,” p. 257.

The Work of the Teacher in the Process of Gaining Knowledge. — It now remains for us to consider the part that the teacher must take in the cultivation of the perceptive and the apperceptive powers. In a word, what is the pedagogical application of the lessons this subject teaches? Perceptions are gained **through** the senses, and not only must the objects be brought within the range of the respective senses, but the child must be taught to observe accurately. Many have “Eyes that see not,” “Ears that hear not,” and it is the duty of the teacher to inculcate in his pupils the habit of correctly using the senses. Pestalozzi’s great service to the world lay in this direction. He made instruction not mere formal drudgery, but a living and interesting process. He transformed the school from a dreary prison house to which the children had to be driven, into a place of delight, and he did this by bringing his pupils into contact with things, by studying their real needs, their interests, and their natural development, and by making the school bright and interesting. Every teacher, especially of young children, must follow his example, giving chief attention to the training of the perceptive faculties.

Rosmini gives some very valuable suggestions as to training the perceptions.¹ “The child should be provided in abundance with objects to look at, touch, examine, and experiment upon—in a word, to perceive, and perceive more and more accurately. The objects chosen should be those which most attract his attention, which will also be those which satisfy his wants, his desires, and give him pleasure; for it is only by these that his attention is aroused.

“It will be found useful also to present him simple

¹ “Method in Education,” p. 82.

objects in the following order — for example, the seven colors of the rays of light, one after the other; also white and black; and, still better, the harmonic scale of colors, the succession of which will delight him. Let him hear, in the same way, the seven primary notes, first in succession, then by degrees in their harmonic intervals and chords; then give him solids to play with, to the proportions of which, in form and measurement, his eye and hand may become accustomed, at the same time that they impress themselves on his imagination. Later on, but not till much later, the child may be familiarized with more colors, more sounds, more forms harmoniously combined, but always by degrees, and never passing on to a new play till he shows weariness of the old. It must be evident that, besides other advantages, the reception of so many well-ordered images into his mind will both provide fitting material for his future reflection, and facilitate the intellectual operations he will soon be called upon to undertake, not to mention that his mind itself perceives a precious moral benefit from insensibly conforming itself to order, and being trained to a feeling of beauty.”

How Much to Give. — The amount of material that the teacher should give his pupils is always a puzzling question requiring wisdom, judgment, a knowledge of children, and pedagogic insight. There must be a sufficient amount to keep the pupils stimulated and active on the one hand, and not enough to discourage or fail to obtain a thorough mastery of the material on the other hand. Upon this point I quote again from Rosmini:¹ “It may be laid down in gen-

¹ “Method in Education,” p. 128.

eral, that the positive portion of intellectual and moral education should be least in the earliest period of infancy, and go on enlarging with each successive period; but what is the law which governs this continued extension? In a word, what are its limits in each period? The answer to these questions must be arrived at by manifold experiments and observations — which are now, thank Heaven! beginning to be made — and it is high time that the art of experiment and observation should be applied to education.”

It was nearly half a century before this fertile suggestion of the great Italian thinker was seriously carried out. The child study movement of recent years is seeking to solve this very problem, and it has already contributed valuable data towards its solution.

The Apperceptive Process.¹ — The pedagogical requirements in respect to apperception are more difficult to meet than those of perception, and they are of even greater importance, for, unless the apperceptive process is fulfilled there can be no complete education. Lange indicates three features to be observed in the treatment of apperception, as follows:

1. With reference to the objects of apperception. (Choice and arrangement of the material of instruction.)
2. With reference to the subject apperceiving. (Investigation, enlargement, and utilization of the child's store of experience.)

¹ In the discussion which follows, I shall be guided somewhat by Lange's treatment of this subject, and even where direct quotations are not made, I desire to acknowledge full credit to that author.

3. Proper union of the factors of apperception in learning. (The process of teaching.)

Taking the topics in order we will study their meaning, and endeavor to discover the practical, pedagogical lessons they teach.

1. *The objects of apperception, or the choice and arrangement of material.* — A great deal of thought has been devoted to the answer of this question, which has been expressed in the course of study, as we have seen elsewhere. (Chapter V.) We have first the “Seven liberal arts” of the Middle Ages, the first crude attempt to arrange the material of instruction; then the elaborate system of Sturm, which Professor Williams pronounces to be the “very earliest scheme that we have, looking to an extended, systematic, well-articulated course of studies for a school of several teachers, in which is assigned to each class such portions of the subject-matter of the course of instruction as is suited to the age and stage of advancement of its pupils;” then the *Ratio Studiorum* of the Jesuits, laying stress upon the humanities and theology; and, finally, the courses which represent most modern ideas.

The Herbartian school answers the question as to material in what is known as the “Culture Epochs Theory.” This theory holds that every child passes through the same periods of development that the race has passed through, and, therefore, the material to be selected for any given period of the child’s development must be drawn largely from the corresponding epoch of racial development. Ziller, a disciple of Herbart, who first promulgated this theory, says, “The mental development of the child corresponds

in general to the chief phases in the development of his people or of mankind. The mind-development of the child, therefore, cannot be better furthered than when he receives his mental nourishment from the general development of culture as it is laid down in literature and history. Every pupil should, accordingly, pass successively through each of the chief epochs of the general mental development of mankind suitable to his stage of advancement."

It should be mentioned that this theory is not exclusively Herbartian. Rosmini,¹ independently of the German school says, "History shows the same epochs in the individual as in the whole human race. The infant begins by believing everything, just as in early forms of civilization men are credulous." Professor J. Mark Baldwin remarks, "The infant is an embryo person, a social unit in the process of forming; and he is, in these early stages, plainly recapitulating the items in the soul history of the race."

Based upon this theory, Ziller planned the centers for the course in the eight years of the German "Volkschule" as follows: 1. The epic folklore stories; 2. Robinson Crusoe; 3. History of the Biblical patriarchs; 4. The judges of Israel; 5. The kings of Israel; 6. The life of Jesus; 7. Apostolic history; 8. The Reformation. He teaches that in these thought wholes of material the pupil traverses, "Corresponding to his own development, the chief periods in the development of mankind." Van Liew thinks that Ziller draws the line too sharply. He says,² "These epochs, the characterization of which must ever

¹ It will be remembered that Rosmini was an Italian writer who probably was not acquainted with Herbart's writings. His book was written in 1839, a long time before Ziller promulgated the "Culture Epochs Theory."

² The First Year Book of the Herbartian Society, p. 89.

remain general in nature, so far as educational needs are concerned, cannot be held to too narrow and definite time limitations; this follows from the very conception of development. They must be given freedom and breadth, allowed to overlap and to lose their boundary lines in one another."

While the "Culture Epochs Theory" may be valuable in suggesting material for the study of history and literature, to apply it in all the subjects of the school course necessitates the bending of the course to meet the theory, rather than utilizing the theory in the formation of a course of study. In literature, the myths, fairy-tales, stories from the Bible, or from Homer, accounts of deeds of chivalry, as well as the various kinds of modern literature, furnish most suggestive and suitable material for children of all ages. In history, too, though perhaps in a less marked degree, the same is true. But in other subjects, such as arithmetic, science, art, etc., the theory offers nothing of value. Moreover, the process of development in the child is more rapid correspondingly than that of the race. The primitive forms of manufacture employed by the race, even less than a century ago, have been supplanted by improved machinery made necessary by harnessing the forces of steam, electricity, and the air. There is no longer any need of employing the crude handiwork formerly in use, and it is, therefore, folly to carry the pupils through all the stages of slow development throughout the earlier centuries. The "Culture Epochs Theory," therefore, does not furnish a solution of the question as to choice of material, though it is suggestive in certain fields. The materials chosen must be suited to the three well-defined epochs in the child's

development, namely, the *intuitive*, the *imaginative*, and the *logical*, and the method of presentation likewise must follow these natural periods of development. To divide the child's life into eight or more periods, corresponding with the eight elementary school years, is an arbitrary and superficial discrimination.¹

2. *The subject apperceiving, or the child and his store of experience.* — Lange says,² "The teacher must see to it that the pupil holds in readiness numerous similar, strong, and well-arranged ideas, for the new material that instruction is to bring to the understanding." From the very nature of things the teacher must be acquainted with the child-mind, its activities, its manner of unfolding, its needs. He must know how to discover what the child really knows, what he brings with him when he enters the class. Citing Lange again, "It is certain that the child brings to school in the numerous, important, and strong ideas, feelings and inclinations acquired in youth, at the same time the best and most vivid helps to apperception in the recitation. But the content and extent of these are nowhere entirely the same, and in many pupils often differ strikingly from one another."

Investigations have been undertaken in recent years for the purpose of discovering the content of the child's mind at any given period. Many of these have been futile and valueless; but some have added materially to the pedagogical knowledge of the subject, and further investigations in this field are destined to do still greater good. When the teacher has found out what the child already knows,

¹ See McMurry's "Method of the Recitation," old ed., p. 90.

² "Apperception," p. 151.

he is ready to build upon whatever foundation exists, strengthening its weak points, adding to and constructing further until a building fitly joined and complete is reared.

The child has picked up a great deal of knowledge before he comes to school. The first duty of the teacher is to find out what experiences the child already possesses, and then proceed slowly and surely to make him familiar with the vast field with which he is eager to become acquainted. The child has thus far been influenced entirely by his environment. He has seen many objects, or possibly pictures of objects in the marvelous picture books for children, and has become somewhat familiar with the objects represented. I knew a boy three years of age, that could call the names of forty or more animals from a picture book that he possessed. The child's knowledge will best be enlarged by showing him familiar things, telling him all about them, and then gradually proceeding to new things. Thus he begins geography by studying the schoolroom, the schoolyard, the brook, the hills, the immediate environment. Nature is studied at first hand by going out into the fields, picking the flowers, watching the birds, observing insects, studying the things themselves.

A group of boys from twelve to fourteen years of age were taken to the village of Möhra in Thuringia, where Luther's parents lived previous to his birth. A monument stands near the house in which they lived, having various inscriptions on each side of the shaft. After examining the monument on all sides, the teacher gathered them to one side, and questioned them as to what was inscribed thereon. So well had these boys been taught to observe, that every one of them could tell the somewhat lengthy

inscriptions on each of the four sides. They had been trained to see and fix in memory what they saw. German and French teachers often take their pupils on excursions, not merely for an outing, but for the purpose of instructing them in matters that could not be learned in the schoolroom. In company with Professor Stoy, about fifty boys, and some teachers and students, I once visited the great battle-field of Jena where Napoleon gained a signal victory over the Prussians and reduced their kingdom to a mere tributary country. By a careful study of the history of that period, the boys had been prepared for the lesson of the day. The respective positions of the French and the Prussians were pointed out, the movements of each army indicated, and the details of that great, decisive battle outlined. Every boy gained an insight into the history of his country, and an understanding of one of its most important events such as never could have been obtained from books. This same idea could be carried out, even if no great battle-field is close at hand, in connection with the ordinary things of life, and the lessons can be made vivid, impressive, and lasting. Material gathered in this way will furnish abundant topics for composition, for the child loves to tell with tongue or pen what he knows.

A like course can be pursued with arithmetic and other subjects of the school course. Through the use of objects the knowledge already possessed can be utilized and made to lead directly to new knowledge.

In the words of Lange,¹ "We are at the end of our answer to the question, What can the teacher do for the subject of apperception? How can he provide for his instruction

¹ "Apperception," p. 199.

sufficient apperceiving ideas in the consciousness of the pupil? We found that it was his duty to gain a definite view into the pupils' range of thought, especially in the extremely important experience that they have acquired previous to all instruction, to brighten and deepen this and to enlarge it through suitable home instruction. We emphasized further that he must, in the most careful manner, join all his instruction to the acquired experience of the pupils in many ways, especially through advancing instruction."

3. *The union of the subject and the object of apperception, or the process of teaching.* — Great stress should be laid upon the process of instruction. This is so important that another chapter will be devoted to it. Rosmini offers some excellent suggestions as to errors in instruction with which this chapter will close.¹ They are as follows:

(a.) "Sometimes the intellectual activity of the child becomes annoying and troublesome, and an attempt is made to repress it by authority, refusing it sufficient food.

(b.) "Sometimes the material *memory* of the child is burdened, while its *intelligence* is left to starve — which is not only a most serious injury to the little, intelligent creature, who craves only to understand, but also cruel and inhuman.

(c.) "Sometimes it is given food not adapted to it; in other words, it is called upon to perform acts of a higher order than it has yet attained to — in which case, to understand anything beyond mere words is an absolute impos-

¹ "Method in Education," p. 112.

sibility. Sometimes the cognitions required of it are not beyond its powers, but the intellectual attention lacks the necessary stimulus to make the effort to attain them.

(d.) “Finally, even when the cognitions required of the childish intelligence are proposed to it in their order, and accompanied by the appropriate stimuli, there is failure, because the teacher passes from one thing to another, without having assured himself that the first thing was duly understood, and that the child is really following the successive steps of the teaching; in other words, he does not give the child time to take in matter, to master it, and to recover from a kind of surprise which every new idea produces in him.”

Summary

I. The child first gains knowledge through the senses. These should be carefully and systematically trained in order that the perceptions may be vivid and accurate.

II. The material chosen should be suited to the stage of development of the child. New knowledge should be based upon the old — proceed from the known to the unknown. The ease with which new ideas are gained will depend upon their newness or strangeness. The success of the apperceptive process depends upon the thorough harmony into which the new is brought with the old. Unless knowledge is apperceived it is lost and useless — it is not gained.

CHAPTER VII

THE PROCESS OF EDUCATION

References. — *McMurry*, The Method of the Recitation; *Morgan*, Studies in Pedagogy; *Prince*, Courses of Studies and Methods of Teaching; *White*, The Art of Teaching; *Fitch*, Lectures on Teaching; *Lange*, Apperception; *De Garmo*, Essentials of Method.

Real Purpose of the School. — The object for which the school is maintained is not the mere keeping of the children out of the street for a given number of hours per day; not the preserving of order and the maintaining of decent control, though these are essential in every school; it is not to relieve the home of the care and training of its young, and to furnish a place of safety for them while parents attend to other duties; not even to fill their minds with a mass of knowledge; it is to form habits through proper discipline, to impart knowledge, to build character, and the principal medium through which this is accomplished is instruction. The teacher is in possession of material which is to be transmitted to his pupils. The method by which this is accomplished should be sound, and the manner of carrying out that method skilful. Hence the necessity of trained teachers, prepared most carefully and thoroughly. As has been shown elsewhere (p. 259), the purpose of instruction is to cancel the difference between the teacher and the pupil. It follows that the better equipped the teacher, both as to material and method, the more hope for the pupil, and the greater his advantages.

In the foregoing chapter we indicated the third step in

the pedagogical requirements with reference to apperception, to be the process of bringing the object of apperception, that is, the subject-matter, to the consciousness of the child. The Herbartians have given many valuable suggestions as to this process in their formal steps of the recitation (Formalstufen). Lange says,¹ "The process of apperception does not by any means properly develop itself in the child; experience teaches rather, that even under the most favorable circumstances when the child is offered the material of instruction for which it already possesses numerous apperceiving ideas, the connection of the old with the new not infrequently fails to be made. This is the case, if the consciousness of the pupil during the instruction is either filled with foreign thoughts and feelings which do not permit the apperception helps to arise; or if the latter lacks the requisite strength and clearness, the necessary order and completeness, and therefore power, to grasp apperceivingly the ideas called forth by instruction. Hence, it does not suffice that the learner possesses apperception aids for the new; they must also be at his disposal with the greatest clearness at the right time and place. They must likewise, in the moment of learning, stand at the threshold of consciousness to present to the new all related elements, and so to grasp the new knowledge as to prepare for it the right mood and correct understanding." In other words, the new material must be withheld until the child has been prepared to receive it. This brings us to the discussion of the first of the formal steps.

1. *Preparation.* — The teacher meets his class with new truth and new material which he is prepared to give to them.

¹ "Apperception," p. 200.

He is thorough master of his subject as well as of the method of presenting it. But he must first be assured that his pupils also are ready. It is not enough that they sit erect, faces to the front, bodies still, and with the air of attention. While these are essential, they are mere externalities or mechanical requirements. The knowledge already possessed, which has a bearing upon the theme to be treated, must be discovered and brought forward.

The child must be encouraged to talk freely about the subject, but must not be allowed to roam over the whole world as some children are inclined to do if free range is given to them. They must be held to the theme before them and not allowed to wander into other fields, no matter how much they may be interested in those fields, or how much they may know about them. They must be taught to think of the matter in hand and of nothing else. A teacher was presenting the subject of percentage to a class of girls, and as a preliminary exercise, he attempted to find out what they already knew about it. He found them very ready to talk, but not to the point. One little miss after frantically waving her hand, gained his attention and asked, "What do you think of the decline of the grain elevators of Minnesota?" "What in the world has the grain elevator to do with percentage?" queried the teacher. "I don't know," she replied, "but papa was talking about it last night and I wondered what you thought of it." Her father was a member of the Chicago grain exchange, and had been discussing the subject of elevators in her presence. The teacher must know exactly what he wants and hold his pupils to a consideration of the subject in hand and no other. "The pupil must first become at home in definite

old groups of thought; he must pass through these old groups with a certain warmth and ease before we offer him the new; he must feel firm ground under his feet for the new mental operations that instruction exacts from him. If the preparatory conversation makes it apparent that the existing apperceiving ideas are too weak and unsatisfactory, it becomes necessary for the preparation to provide what is lacking."¹

From the outset the teacher must not only have a clear idea of what he intends to impart, but he must transmit that idea to the class. The end to be sought should be cleverly set forth and the teacher should repeat the preparatory exercise times enough, and should so order and arrange it that the pupil is able fully to comprehend it. Nothing is gained by haste; it pays to do this work thoroughly, as will appear later, in gaining complete mastery. "If we should pass over the material but once, and in the order in which it would appear by chance, many contradictions would remain unreconciled, and many principal thoughts not seldom be lost in a mass of incidentals. A brief summing up, suitable to the content of the ideas, and a separation of the essential from the unessential is therefore absolutely necessary; and not less so, a sufficient repetition and impressing of that which, as yet, shows itself uncertain and wavering. When this is neglected, we stop half way, and apperception, in spite of the preparation, cannot be accomplished with requisite ease."²

There should be the greatest freedom allowed the pupils in the discussion of the material, the caution already mentioned being observed, that they be not permitted to digress

¹ Lange, p. 202.

² *Ibid.*, p. 203.

to any great extent. They should be encouraged to talk freely, telling their own experiences in their own way. Suggestive questions from the teacher will guide the conversation and serve to bring out what is desired. Lange shows that by this method,¹ "The dullest mind has time to act, and even the retiring disposition is encouraged by the confidential tone of conversation. No one should be omitted in the relation of his experience, and each, according to the measure of his knowledge, will add something to the new thought-structure. Every one rejoices that his own knowledge, which has heretofore been smuggled in as forbidden ware as compared with the word of the teacher, is recognized and respected, and each looks forward to every new lesson with redoubled interest. This condition of mind is the most favorable that the new material can meet; the apperceptive process is introduced in the very best way possible."

Illustration. — It may be mentioned that the preparation of the lesson which the child makes in his seat or at home previous to his appearance in class, is not under consideration. We are considering his preparation needed to receive the instruction that is to follow. That such preparation is essential, a familiar illustration will emphasize. The husbandman understands that if he is to secure a crop he must not scatter his seed aimlessly, no matter how good that seed may be, how skilfully it may be deposited, or how rich the soil. He must first laboriously plow, and harrow, and work up the soil until it is mellow and rich, ready to invite the fruitful seed to its bosom, when, under

¹ Lange, p. 212.

the blessing of heaven, it will in due time yield its increase, "some thirty, some sixty, and some an hundred fold." No better illustration can be given suggesting a parallel in the teacher's work of instruction. Much of his sowing goes to waste because of too little attention being paid to preparing his pupils for the reception of the truth. The pupil must be prepared to receive the seed or much of it will fall upon stony ground and bear no fruit. There can be no better expenditure of time and effort than in getting the soil ready for the reception of the seed of truth, and that preparation is made through calling up the old, related knowledge already possessed by the child.

2. *Presentation.* — With the interest awakened, the correlated matter brought forward, the soil prepared, the next step in instruction is the presentation of the new material. It is needless to reiterate that the teacher should be equipped with a complete mastery of the subject-matter. In addition to this, he should be acquainted with the mental activities of the child, and their development, should possess skilled judgment and discretion as to the amount of material to be given and the method of presenting it to the particular class in hand, be endowed with the faculty of bringing himself to the level of the child's mind, and of entering fully into the child's sympathies. A definite aim has already been demanded in the first step, that of preparation. The method of presentation to be employed will depend upon the stage of development and capacity of the pupils, upon the subject under discussion, and upon the end sought. A consideration of different methods will follow in a later chapter.

Great discretion must be exercised in giving the right

amount of material. Seed sown too thick in a field grows a mass of stalks and yields but little harvest; and the richer the soil, the more rank the growth of stalk, the more choked the crop becomes. The same holds good in the presentation of material to children. There is more danger of giving too much than too little, for the teacher is apt to measure his pupils' capacity by his own. The young teacher needs especially to observe this caution. There is no better test of the wisdom, experience, and good judgment of the teacher, than is shown in this particular direction. Too much food instead of nourishing and strengthening the body serves as a detriment and a burden, and the same is true of the mind.

Upon this point Lange wisely remarks,¹ "It is clear that even well-prepared matter cannot be thoroughly mastered if the ideas are forced too rapidly upon the consciousness of the learner, or if they are too weakly and obscurely presented. The pupil will not become master of the material if he is overwhelmed with too much at once, if the teacher fails to linger upon difficult points with necessary stress, if the material is not presented in proper order and with proper clearness, and if the attention is not held. The more time given to the individual members or parts of the object to be studied in order that it may unfold clearly and intelligently to the consciousness of the children, the more opportunity the pupil has to appropriate the presented notions that are to be apperceived, the better they will be apperceived and the better learned. It follows that the amount of material given must be measured by the capacity of the pupil, in order that neither too much nor too little may be asked of him; such material must be properly

¹ "Apperception," p. 213.

connected in order that he shall not receive it as a mass, but rather that it may be fixed in his mind according to the law of successive clearness, from section to section, from item to item."

It is of utmost importance, as we have seen, that the pupils themselves be allowed to take part in the exercise. This is especially true of young children. Attention cannot long be held by any other method; besides, through expressing their own thoughts and by hearing other children express theirs, they gain insight into the new truths presented. There must be a combination of the act of imparting by the teacher and reciting by the pupils in order to maintain interest and secure the best results. No doubt more ground can be covered by the imparting or lecture method, and, therefore, with advanced students, this may be employed; but with young children the catechetical method should be adopted in order that the apperceiving process may be completely successful. It is not a question of the amount of ground covered, but of the thorough assimilation of the new ideas with the old. This process must of necessity be slow, owing to the limited number of related ideas that the child possesses.

With a clear consciousness on the part of the teacher as to the kind of material to be presented, and as to the capacity of the children, with a definite aim as to the result to be reached, this step in the process of instruction should thus be carried out upon a psychological basis and should bear abundant fruit.

3. *Association.* — When the new ideas are really brought over the threshold of the child's consciousness, are indeed apperceived by him, they must be so associated with and

related to the old ones as to become, as it were, perfectly at home. They are no longer strangers, or guests even, they are a part of the household, they belong to the family. These new ideas should be employed and familiarized until they are no longer new, until their strangeness has disappeared. It is like food taken into the stomach, thoroughly digested, turned into blood, circulated to every part of the body, changed into bone and tissue, becoming a part of the man. It is no longer foreign, it is assimilated, and incorporated with the old until it is as much a part of the body as any material previously absorbed. So must it be with new ideas. They must be so thoroughly associated with those already gained as to have a definite and abiding place among them. This is accomplished through repetition, through illustration, through questioning, through variety in method, and through reflection. It often happens that the presentation of a fact by one method would carry conviction; by another, it would remain strange and unfamiliar. Hence the necessity of approaching a subject from a variety of standpoints and by different methods. New materials that are not thus settled in their relations to those established are of but little value and are soon forgotten. Much teaching goes to waste from a lack of appreciation of this fact. Hence the importance of association as a step in the work of instruction.

4. *Recapitulation.* — It now follows that the pupil should be required to reproduce the lesson as a whole in order to see whether its relations have been comprehended, and to fix the logical sequences. Kern says, "No lesson is completely learned until the pupil is able to restate all of its parts in the form of a logical summary." Recapitu-

lation gathers up the individual parts of the lesson and presents them as a whole. The lesson may indeed have been well taught and its truths vividly presented, but if there is failure to summarize and classify the results as a culmination of the work, the best results will not be attained. The power to analyze, outline, or classify a discourse to which one has listened is a measure of the trained intelligence possessed. The impression of a sermon or lecture is often evanescent because of the lack of this power. The cultivation of this power is therefore of vital consequence in education, and it should begin with young children in connection with the instruction given in each class. It is of great value as a means of retaining the lessons taught.

Lange remarks,¹ "The presentation of the new material closes with a recapitulation and review of the whole by the pupil. He should now show by a systematic reproduction of the lesson presented that he has fully understood the subject. 'The best test that a person has understood a thing is, that he can reproduce it in his own way, with his own words' (Herder). So, then, if the separate parts of the new are more closely united by many repetitions, the entirety will be more strongly impressed upon the mind. To every lesson which offers something new, belongs the mission of making a definite, well-defined series of ideas the inalienable property of the child. But the formation of such fixed ideas would be furthered but little if the repetition and combination of the material learned should proceed in the form of repeated questioning and analyzing of such material, *i.e.*, if the pupil is not required to give the whole matter at once, but is allowed to give it piecemeal.

¹ "Apperception," p. 218.

. . . . Then apperception would, to all outward appearance, never reach perfection. We always require, therefore, a complete, free narration, an independent, connected presentation of what is learned. We allow the pupil to speak freely and without hindrance, without interrupting his course of thought by questions or suggestions. As a rule, we do not interfere even when he mixes in error or forgets important things; but after the conclusion of his presentation, we ask the whole class to rectify errors, supply deficiencies, and correct an incomplete rendering. Further, we must avoid forcing the pupils to comprehend or grasp the whole by means of prepared forms of expression that are not clear to him."

Rules. — This combats the idea of committing a rule to memory *before* it is understood, but it does not forbid the committing of rules as a final act of recapitulation. Indeed, for an individual to possess definite rules that govern his life and conduct is an evidence of the right kind of education. Without rules he is a vagabond, intellectually and physically, as well as morally. From the outset, the mother trains her child to obey rules governing its physical life, — regularity of meals and of sleeping-hours, cleanly habits, obedience to the laws of the home and of the community. The maintenance of health and the happiness of the child depend largely upon its knowledge of such rules and obedience to them. Moral life depends upon the possession of rules or maxims of common acceptance, and the living up to them. Every person established in his ethical life is governed by rules which have been committed to memory, whose significance has been explained, and the importance of obedience to these rules has been impressed

upon him. "As ye would that men should do unto you, do ye even so unto them," "Honesty is the best policy," "Govern your passions or they will govern you," "To err is human, to forgive, divine," "Forgive us our debts, as we forgive our debtors," are ethical principles the possession of which does a great deal to safeguard a person from evil. Just so there are intellectual laws and principles that hold one to correct thinking. A child may be trained in a home of culture and grow up to use correct English. This will not answer as a substitute for the study of grammar. He must not only speak correctly, but later in life he must know the rules for the use of language through which he may "prove all things," may fortify and establish the ground on which he stands. Without this he must ever remain uncertain and insecure in his use of language.

A rule is a sort of recapitulation. The child should first state the truth in his own language as proof that he has comprehended, as the quotation from Lange on a preceding page shows; but after he has furnished proof that he understands, after the corrections and criticisms of the class have been made, then a carefully worded rule or principle should be given him to commit to memory. It is no easy matter to formulate a rule that states the whole truth and nothing but the truth, in language that will stand the test of criticism. It requires the closest thought of a wise person, and surely this may not be expected of a child. Nor will such memorizing be by any means a difficult task for the child who has been prepared for it by a gradual approach, and to whom it is a mere recapitulation in correct language of what he has already learned. A rule is

a standard or norm, and the more norms of truth that the individual has stored away, whether it be regarding the ethical, intellectual, or physical aspect, the better he is educated.

A rule should not be committed to memory at the outset without understanding its meaning. Let the truth be reached by an inductive process, and let its statement be a recapitulation of the material mastered and comprehended. It is a sound educational doctrine to require at this stage, stated rules, principles, summaries, or outlines to be committed to memory as the final act in the process of instruction and as a means of fixing material which has been skilfully presented, brought into intimate relation through association, as the summary of the result. These norms thus stored away will constitute reserves upon which to draw, and supply the mind with certain and tried standards of accepted truth.

5. *Application.* — It now remains to apply the general concepts that have been gained to concrete cases. Lange thinks that “the application of universal concepts to the concrete, seldom comes of itself; it must be taught, shown, and practiced in every branch of study.” The child is apt to think of the school as another world from that in which he lives out of school, and the school itself is often responsible for that feeling because it fails closely to touch life. The school should come into intimate relation with the verities of every-day life, and this final step of instruction, or that which may be said to succeed instruction, application, will clinch the whole process and reduce it to practical value. Schoolwork should be applied to the activities of the home, the vocation, the recreation, the

social relations. The paving of a neighboring street, the construction of a house, the planting or harvesting of a crop, dealings in the shop and at the store, a hundred varied and daily transactions, will suggest abundant examples in arithmetic. What better means of illustrating and applying the various tables of measure than could be found by taking a class to a house under construction? Let the pupils compute the cubic yards excavated from the cellar; the contents of the cellar wall; the amount of lumber in the timbers of the framework, and in the boards for covering; the shingles of the roof; the lathing and plastering; the surface to be painted, — in a word, the whole work of construction and cost of the same, from lifting the first shovelful of earth to the last square of papering. This would doubtless take a long time, but there would be constant application even while the instruction is going on. And, when completed, it would be found that the pupils thoroughly understand what they have studied.

By a similar plan, geography can be taught and applied. Take the pupils to a neighboring creek, or bay, or mountain, and let them study it as a real thing, not as something described in the text-book. History may be treated in a like manner, especially if there are points of historic interest near at hand. Language work may be made intensely practical by having pupils describe with pen or orally the incidents and things concerning which they know something. And so on with all the subjects of the curriculum. In this way, by means of constant and practical application the teacher will illustrate the truth that the school not only prepares for life, but it is *life itself*.

McMurry offers some valuable suggestions on this point:¹ "Children who have learned to apply one lesson thoroughly are ready and eager to grapple with new problems. There is no better test of successful progress in studies than this power to render practical account of our possessions, and there is no better guarantee for future energetic effort.

"One conclusion that springs from this entire discussion is, that *the proper use of knowledge has to be learned*. It does not come by accident or inadvertence, but is the result of definite purpose and rigorous effort. Even if later life with its severer tests were not to follow, the school would need the tonic of this kind of effort to adapt and use knowledge in order to bring schoolwork to proper unity and completeness.

"We may now glance back at the *lesson unit*, in the treatment of which *application is the final step*. In working up to a general truth or concept through particulars, we have followed the inductive movement through the steps of preparation, presentation, comparison, and generalization. A single central thought, which lies at the root of the lesson unity, has dominated the entire movement. In the application we are still operating with this central truth, turning it about, testing it with new data, and detecting the various forms in which it clothes itself. The length of time, that is, the number of recitations required in working out this general truth through all the five steps, depends upon the simplicity or complexity of the central truth itself, and the amount of data required to develop and apply it."

There is no doubt that a strict adherence to the five formal steps as a method of procedure in each recitation

¹ "Method of the Recitation," p. 234.

would have a tendency to make teaching mechanical, to rob the teacher of originality, and to destroy his individuality. Surely such was not the intent of those who formulated this scheme. Indeed, the successful carrying out of this plan with a topic will often involve several recitation periods. It may require a whole period to prepare the pupils for the new truth, another for its presentation, and so on; but it maintains a unity of thought and purpose whether one period or ten periods may be required, and therefore reaches a definite end. It furnishes a logical, systematic, and natural order of instruction.

A knowledge of the formal steps, then, may be of great value to the teacher as a guide and as a natural plan to be followed. It furnishes a definite and scientific scheme as against an absence of plan, a groping in the dark. It is methodical, but not mechanical; it requires system, but it is not so pedantic as to destroy the individuality of the teacher. It never loses sight of the end to be reached in instruction, namely, the apperception of the knowledge-material on the part of the pupil.

Summary

I. Instruction is the process whereby the difference in knowledge between two persons is wholly or in part cancelled. The main purpose of the school is to furnish instruction, the maintenance of order and the supplying of material means being merely for the purpose of making instruction possible and effective. It should be systematic, intelligent, and forceful. It implies the possession of knowledge and skill in imparting it; hence the necessity of trained teachers.

II. There are five steps of instruction to be observed, namely, (1) preparation, (2) presentation, (3) association, (4) recapitulation, and (5) application. In general, these steps suggest the natural and logical order of procedure so as to secure the apperceptive results. The teacher, however, should not be so bound by these formal steps as to forfeit his own individuality.

L. O. C.

CHAPTER VIII

METHODS OF INSTRUCTION

References. — *Roark*, Method in Education; *Rein*, Encyklopädisches Handbuch der Pädagogik, Vol. V; *White*, Elements of Pedagogy; *De Garmo*, Essentials of Method; *McMurry*, General Method; *McMurry*, Method of the Recitation; *McMurry*, Special Methods in Geography, History, English Classics, etc.; *Prince*, Courses and Methods; *Smith*, Systematic Methodology.

Knowledge and Method. — Many urge that the essential thing for the teacher is knowledge of the subjects he is to teach. They say, "If he knows his subject, he can teach it." It will readily be admitted that one cannot teach what one does not know, and therefore the first essential for the teacher is knowledge of the subject-matter. No amount of skilful manipulation, no pleasant manner, no happy gift in presentation, can be a substitute for lack of knowledge, though it may temporarily seem to be. No one can give what he does not possess, and, therefore, before the young teacher can be shown how to teach, he must know the subject-matter that he is to teach. Hence there must be an academic foundation before attention is given to method.

Although knowledge is admittedly first in importance in the equipment of the teacher, method also must be regarded as essential. *Roark* says,¹ "To know well what is to be taught, is, of course, one prerequisite of teaching, but it is only one of them. The other two are a knowledge of

¹ "Method in Education," p. 10.

mind and its laws of growth, and a knowledge of *how* to make subject-matter stimulate and nourish growth. An attempt to teach without this knowledge of mind would be much like an attempt to practice medicine with only a knowledge of the pharmacopœia, and with none of anatomy and physiology. . . . So while it is still true that teachers with good method, without full knowledge, will sometimes accomplish as much as the thorough scholar who lacks method, — and may even accomplish more, — yet the *best* teaching is done where sound and broad scholarship is joined to sympathetic knowledge of mind processes, and to skill in making *mind hungry for the best nutriment.*"

The testimony of Pestalozzi is:¹ "Only have a proper method, and you will be surprised at the amount children learn in a single day." Diesterweg remarks with emphasis, "The typical power of the teacher lies in his method;" again, some one has said, "The teacher himself is the best method." It has been asserted that method only touches the superficial, the external side of the child's life; and Karl Lange very pertinently asks, "Which of these is right?" and he answers, "Neither of them. For the educating influence of the teacher depends not alone upon his method of instruction, but also upon the inner working power of his own ideal. Again, the teacher is not the method, but rather he has method. He is still a teacher even if he has no method, though indeed a poor one. He becomes a good teacher by means of method; it is an important trait of his character, because the definition of a capable teacher's personality includes the idea of method. What follows? This, that the teacher's method and his

¹ Rein: "Encyklopädisches Handbuch der Pädagogik," Vol. V, p. 308.

personality are closely bound together, and that it is a false notion to set these characteristics in opposition to each other. The one cannot be thought of without the other."

According to Rosenkranz three things are presupposed in instruction, namely, the subject to be taught, the consciousness of the pupil, and the activity of the teacher. These interpenetrate each other and "constitute in actuality one whole." The subject must be suited to the age and capacity of the pupil. It must be presented in a logical manner, even though the child has not yet reached the distinctive period of reasoning. No teacher may offer as an excuse, "I did not present this topic in a logical manner because my pupils have not yet reached the logical epoch." Any topic will be better taught and better learned if presented in the order of sequence. Then, too, "The subject has a nature of its own which requires it to be studied in a certain definite order. Whatever modifications are made in the subject to adapt it to the immature mind of the pupil, this essential nature of the subject must not be changed. . . . It is clear enough that all subjects to be taught possess logical relations of dependence of one part on another, of the parts on the whole. There must be, therefore, a certain order of exposition of the subject: the dependent parts must be shown in their dependence, otherwise the subject will not be taught properly. We cannot teach the zones or parallels and meridians unless we have previously taught the spherical form of the earth.

"Much change and adaptation will be made by the teacher in order to make the subject entertaining to his pupil and easy of access, but the logical order of dependence of one topic on another within arithmetic, geometry, nat-

ural history, grammar, etc., cannot be changed; he must take it as it is, for that is the intelligible order and must be followed. The words of the classic author must be translated as they stand, and not from the end backward, if we would find sense in them.”¹

Method a Guide. — The teacher thus has a guide in the method of presenting his material to which he must adapt himself. In many non-essentials and devices, he may employ his originality and exercise personal ingenuity. But he must conform to the natural order of development, and no personal enthusiasm or unique method can be a substitute for that order. Then the child must be *consciously* present. No matter how well articulated and logical the method, no matter how interesting the teacher may be, there can be no instruction unless the child is consciously engaged in the matter. To reach the consciousness of the child, the material must be properly selected. Quoting again from Rosenkranz, “But the subject must be adapted to the consciousness of the pupil, and here the order of procedure and the exposition depend upon the stage which he has reached intellectually, for the special manner of instruction must be conditioned by this. If he is in the stage of sense-perception, we must use the illustrative method; if in the stage of image-conception, that of combination; and if in the stage of thinking, that of demonstration. The first exhibits the object directly, or some representation of it; the second considers it according to the different possibilities which exist in it, and turns it around

¹ Comment of Dr. Harris in Rosenkranz, “Philosophy of Education,” p. 97.

on all sides (and examines its relations to other things); the third demonstrates the necessity of the relations in which it stands either with itself or with others. This is the natural order from the standpoint of the developing intelligence: first, the object is presented to the perception; then combination with other things shows its relations and presents its different phases; and, finally, the thinking activity circumscribes the restlessly moving reflection by the idea of necessity.”¹

No method that ignores the truths above set forth, can secure good results. Hence the necessity of a knowledge of the laws of mental development. In the early years of the child's life there must be a great deal of illustrative material employed. Indeed, illustrative material may never be wholly discarded. Even in the university where original investigation is pursued, some of the most important work is successfully carried out only by the employment of concrete illustration, — as, for example, the clinic and the dissecting-room in the medical college, the laboratory in all science work, and pictures and sculpture in the study of art and history. Illustration is also employed with excellent results by public speakers — preachers, orators, lecturers — in appealing to adult audiences. But with mature persons the use of illustration is incidental, while with young children it is the chief means of instruction.

Care in using Illustrations. — A caution, however, may be necessary at this point. Because objects are essential, many teachers employ them in such variety and number

¹ “Philosophy of Education,” p. 98.

as to dissipate the attention rather than attract and fix it. For example, a teacher was endeavoring to teach a class the number six. She had marbles, beans, splints, blocks, and a variety of other objects. The pupils were interested in the objects, but not in the end sought, the learning of the number six. The lesson was therefore a failure. Another young lady at great pains constructed a beautiful house of pasteboard for an object-lesson, not in architecture, but in number. She had the pupils count the windows, the gables, the doors, but she failed to teach the number she had in mind because the attention of the class was diverted by the object itself. A single class of objects should be employed, sufficient to make the appeal to the senses, and all other objects should be excluded.

Care should be taken in the choice of objects. For example, if oranges were chosen for the purpose of teaching number, the attention of the pupils would be diverted to the taste, smell, color, desire for possession, etc. Instead of concentrating the attention upon the one idea to be taught, it is dissipated. Hence some simple objects, like blocks, should be selected, because they will not divide the attention, and, at the same time, they furnish the necessary concrete illustration. Every particle of attention diverted from the lesson in hand by external conditions is just so much loss in securing the end sought. Again, objects are employed as a means to an end, and when they are no longer needed to secure that end, they should be abandoned. The rule should be, employ concrete illustration whenever necessary to enforce the truth even till adult life, but omit it when it is not needed.

Personality of the Teacher a Factor in Method. — The third essential of method is the personality of the teacher. Rosenkranz thinks that the personality of the teacher creates an individual method. "For," he says, "however clearly the subject may be defined, however exactly the psychological stage of the pupil may be regulated, the teacher cannot do away with his own individuality even in the most objective relations. This individuality must penetrate the whole with its own exposition. . . . The teacher must place himself on the standpoint of the pupil, *i.e.*, he must adapt himself; he must see that the abstract is made clear to him in the concrete, *i.e.*, he must illustrate, he must fill up the gaps which will certainly appear, and which mar the thorough seizing of the subject, *i.e.*, he must supply. In all these relations the pedagogical tact of the teacher may prove itself truly ingenious in varying the method according to the changefulness of the ever-varying needs, in contracting or expanding the extent, in omitting or accumulating examples, in stating or only indicating what is to be supplied. The true teacher is free from any superstitious belief in any one procedure as a sure specific which he follows always in a monotonous bondage. This freedom can only be enjoyed by him who is capable of the highest method. The teacher has arrived at the highest point of ability in teaching when he can make use of all means, from the loftiness of solemn seriousness, through smooth statement, to the play of jest — yes, even to the incentive of irony, and to humor."¹

For our purpose, method is twofold: it embraces (*a*) the order of procedure in selecting and arranging material, and

¹ "Philosophy of Education," p. 104.

(b) the mode of systematic presentation of subject-matter, is instruction in the discovery, confirmation, and elucidation of truth. The order of procedure, the mode of presentation, and the manner of elucidation define the teacher's personality. The best method serves its purpose only through a capable person, who carries it out with zeal and spirit; but a model teacher, on the other hand, without a well-considered method of instruction, is inconceivable. Without genuine personality method is nothing but cold formality. It must be warmed by the enthusiasm and fire of the ardent personality of a living teacher. It is the means whereby the instructor speaks to the heart of the child.

To reach the ideal character of teacher requires time, and that experience which comes only with years of careful study and conscientious work. Principles must be adopted, and these must be put to actual test. The training of the normal school is the very best means of preparing one to be a teacher, especially in the common school. The school must seek to instil into its pupils the true pedagogical spirit; and the more this is done, the better the true personality of the teacher will be brought out, the surer will be the success. Educational theory must be so incorporated into the very flesh and blood of the teacher that he will exemplify that theory unconsciously though in a rational manner in every exercise and at all times. The teacher is free only when he is no longer obliged to measure every act by formulas, but is so imbued with the truth that the method of imparting it is no longer thought of.

Self-Improvement Essential to Method. — The teacher must also continue his own scientific education, for even

the richest will become poor who forever pays out and takes nothing in. "Who has ceased to improve himself, has ceased to improve others," says Diesterweg. While general culture must certainly come in for a large part of the teacher's improvement, the central idea of further culture should be professional. Not only by means of books, but also through association with talented educators, will he gain inspiration for his work. He must not be ashamed to possess the peculiarities that characterize the teacher, though he should not cultivate offensive pedantic manners. Too often this latter characteristic subjects him to ridicule if not contempt. It shows itself by certain mannerisms that contact with children in the schoolroom has a tendency to foster. There he is superior in knowledge and authority, and it is very easy to acquire the habit of exhibiting his pedantry even when he is out of school. But in the school it is not necessary to assume these peculiar mannerisms, and the freer the teacher is from them the better will be his influence and his discipline.

It is as important for the teacher to cultivate a self-controlled and a pleasing personality, both in and out of school, as it is that he should be master of the details of method. There are many things in the schoolroom that try the patience, arouse anger, and awaken evil feelings. On the other hand, daily contact with young children, whose spirit is naturally joyous, and whose hearts overflow with love, ought to make the teacher generous, loving, sympathetic, and full of good cheer. In lifting others into a higher plane of living and opportunity, in implanting in them noble thoughts, in arousing better aspirations, and in inciting them to higher ambitions, the teacher himself acquires

nobler thoughts, aspirations, ambitions. It illustrates the divine truth, "With what measure ye mete, it shall be measured to you again." This is one of the teacher's richest rewards, and it, in a measure, compensates for inadequate salary and want of appreciation. In blessing others, he himself is blessed, and he finds that "It is more blessed to give than to receive." And this is true also in the teacher's intercourse with his people, to whom he may also be a blessing. One of the most important lessons that Booker T. Washington teaches his students at Tuskegee is that they are to go out not only to instruct the children, but also to teach the parents how to live better and to uplift the race. If the teacher possesses the qualities and the spirit that have been pointed out as necessary to success in the schoolroom, it will not be difficult for him to be interested in the community, and the same spirit that makes him beloved by his pupils will make him beloved and respected by his people.

To return to the three elements that a method of instruction must take into account, — *the selection and mastery of the subject to be taught, the consciousness of the pupil, and the personality of the teacher*, — it will be seen that the third element plays a most important part. If the teacher knows his subjects thoroughly, is earnest and impressive; if he understands his pupils and knows how to select and present suitable material; if he is so fully master of method as not to be fettered by it, but to be set free by making it his instrument and his aid; if he possesses the peculiar sympathy that attracts childhood and has the ability to enter into the thoughts and life of the child, — then his method is likely to be good and his in-

struction successful. White remarks,¹ "A method is but an orderly mechanism; its efficiency depends on what the teacher puts into it, and a teacher can never put into a method what he does not possess. In the last analysis, the vital element in teaching is the teacher. He is the soul of his methods and measures. If he is weak, they will be weak; if he is potent, they will be potent."

Different Methods. — Thus far we have discussed the general characteristics that determine method. It now remains to consider the individual methods and their employment in the work of instruction. The teacher, even if possessed with the genius of teaching, or of the necessary personal characteristics, must, nevertheless, be familiar with different methods of instruction in order to apply the method that is suited to the particular subject that is presented, and to the individual child. It is clear that the child in the primary classes will be reached by a different method from that employed with the student in college. Many subjects require their own peculiar manner of approach; and it is also certain that there is a great difference in children, even of the same age, in their ability to comprehend a lesson. Some can grasp it by one method, while to others it must be presented by another. If a traveler has the choice of several routes to a given destination, he will be more likely to secure the transportation that suits his time, his convenience, his purse, and his wishes, than if he has only one route at his disposal. Just so the teacher who is equipped with a variety of methods will be more likely to attain the best results than he could secure if limited to one.

¹ "Elements of Pedagogy," p. 210.

Smith¹ very clearly points out that "there are four distinct methods of teaching, which can be understood only in the light of a knowledge of the nature and the relation of individual concepts and general concepts. They are the analytic method, synthetic method, inductive method, and deductive method." He proceeds to define and illustrate what he understands by each as follows:—

Analytic Method. — "*The analytic method of teaching is the method in which we set out with individuals or wholes, and proceed to a consideration of the parts of which they are composed.* Starting with a flower, and proceeding to a study of its parts, calyx, corolla, stamens, pistil, etc., is an example of analytic teaching. As examples of the analytic method of procedure in other studies may be mentioned: taking a sentence in grammar and proceeding from that to a consideration of its parts, — subject, copula, predicate, modifiers, etc.; taking a problem in arithmetic and proceeding to its solution by the method of independent analysis; taking a state or country in geography and proceeding to learn the several parts (the names, locations, and characteristics of the particular rivers, mountains, towns, etc.) of which it is composed. In an analytic method of teaching, we have given us the individuals or wholes which are simply *the parts in their proper relation to each other*, and we proceed to consider each of these parts as if it were then a separate thing."

Synthetic Method. — "*The synthetic method of teaching is the method in which we set out with the dissociated parts*

¹ "Systematic Methodology," p. 111. This presentation is so lucid that I shall quote quite fully from it. The italicizing of the definitions is mine.

of things and proceed to bring these parts into proper relation to each other, so as to construct as a final product the individual. Having a pile of dissociated bones, studying the function of each, and then bringing them into such relation with one another as to produce finally the human skeleton, is an example of a synthetic method of teaching. Taking isolated words and building possible sentences with them is a synthetic procedure.

“It should be noted that, in the analytic method, the parts are given their relation to each other, and, hence, the relations are clearly present to be discovered; the functions of the several parts as they affect one another are thus made manifest. In the synthetic method the parts are given out of their proper relation to each other, and it is assumed that they can be studied in such isolation, and that their several relations can be discovered in the process of bringing them together to construct the unit, or individual thing. It should also be noted that *these two methods have to do only with the mental movement between single things and their parts*; the idea of classification does not enter into either of them.”

Inductive Method. — “*The inductive method of teaching is the method in which we set out with individual things and by a comparative study of several individuals — noting likenesses and differences — develop general notions or generalizations; or, we begin with generalizations of a given order and by their comparative study we arrive at still wider generalizations.* Taking several observable portions of land, and, from a comparative study of these, deriving the notion and the definition of island, is an

inductive procedure. Solving several problems in arithmetic by independent analysis, and then, by comparison of their processes, formulating a rule for the solution of such problems, is an inductive process. Generalizing definitions, rules, laws, and principles, from a comparative study of facts, is inductive. The very essence of induction is *comparison of members of a class* with a view to discovering similar elements."

Deductive Method. — "*The deductive method of teaching is the method in which we set out with generalizations (definitions, rules, laws, or principles) and proceed to their application in individual cases.* As example of the deductive method we may mention: committing rules in arithmetic, and then applying them to the solution of problems; studying the definitions of geography from a book, and then proceeding to find them illustrated in the land and water forms about the school; reading the generalizations about the human body, which are contained in the ordinary works on physiology, and then proceeding to examine our bodies in order to verify them; studying botany by first reading the book statements about plants, and following this by an examination of specimens of the plants previously described; starting with the axioms of mathematics and proceeding by a demonstrative process to principles, rules, and the solution of problems.

"A careful consideration of the above definitions and examples cited will enable the learner to understand that *the terms induction and deduction apply only to those mental movements which involve a passage from generalizations,*

never to mental movements between individual things and their several parts.”¹

Which of the methods explained should be employed in education? Doubtless all of them under varying circumstances. In general, the practice employed and illustrated in the recitation as set forth in the preceding chapter, should prevail. As outlined by careful thinkers, it is as follows: “(1) the apperception or assimilation of individual notions; (2) the transition from individual to general notions, whether the latter appear as definitions, rules, principles, or moral maxims; and (3) the application of these general truths to new concrete facts — the return from general notions to new individuals.” With young children the method to be employed should be either synthetic or analytic, chiefly the former, as these methods deal with single things and their parts, and do not require power of classification. With older persons, who are capable of understanding principles and laws, and who have the power of generalizing and classifying, either the inductive or the deductive method should be employed. It must not be forgotten, as has already been shown, that the personal peculiarities of both pupil and teacher, as well as the characteristics inherent in the subject itself, should be taken into account. Finally it may be repeated that the teacher must not be a slave to method, but should be so thoroughly master of the subject-matter, and so imbued with the spirit of teaching, that method becomes the uncon-

¹ These four methods are so often confused — synthetic with inductive, and analytic with deductive — that it has seemed wise to give the full presentation of each method with the illustrative examples so clearly set forth by this author, without further explanation or comment.

scious instrument through which he presents the truth forcefully, logically, earnestly, and in the manner to leave deepest impressions.

Summary

I. With young children illustrative material must be employed, not as an end in itself, but as a means to an end. Too many objects may dissipate the attention and defeat the end in view. The rule should be, employ suitable illustration whenever it will aid in making the lesson clear, even with advanced students, but abandon it when no longer necessary.

II. Method is the form in which the living content of the teacher's personality flows forth, the means through which that personality realizes its educative purpose. The three elements that method must take into account are the subject to be taught, the consciousness of the pupil, and the personality of the teacher.

CHAPTER IX

PLAY AS AN EDUCATIONAL FACTOR

References. — *Wiggin*, Children's Rights; *Harrison*, Study of the Child; *Roark*, Method in Education; *Hughes*, Mistakes in Teaching; *Forbush*, The Boy Problem; *Bain*, Education as a Science; *Educational Review*, Vol. VIII; *Young Folks' Cyclopædia*, Vol. VIII; *Ogden*, Science of Education; *Beale*, Work and Play in Girls' Schools; *Froebel*, Education of Man; *Griggs*, Moral Education.

A Natural Tendency of the Young. — There is a natural tendency in all young life to express itself in play. One sees this in the gambols of the young lamb, the friskiness of the puppy, the antics of the kitten, as well as in the ceaseless activity of the child. The period of play is the period during which the being is coming to maturity, the period of education. Hence many educators have sought to utilize this activity in the education of the child. The Chinese have never had many toys, or made use of play in their educational system, and this partly accounts for its serious defects. On the other hand, the Greeks encouraged play in their Olympian games and the preparation for them, and these great national meetings exerted a most important influence upon the character and the culture of the people. The toys of the Athenian child were greater in variety than those of any other people of antiquity. Their purpose, however, was to amuse the child rather than serve as a means of equipping for life's duties, as was the case in Sparta and Persia.

That play is a potent influence in stimulating a healthful physical and intellectual growth is an educational truth that has been fully recognized only within recent years. And yet, the Athenians appreciated it in the home, and utilized it in their educational practice twenty-five centuries ago. In this they anticipated the kindergarten.

Fénelon employed the principle of play in securing his remarkable success with the young Duke of Burgundy. Through this means this skilful teacher awoke interest in that intractable boy; and by means of his "Dialogues and Fables," Fénelon's success with his pupil was so phenomenal that the passionate and wilful prince became docile and obedient, a monument to the patience and wisdom of his teacher.

But to Froebel is due the credit of utilizing play in a systematic manner in the education of the young. Inspired by Pestalozzi, concerning whose influence upon him he said, "He set one's soul on fire for a higher and nobler life, though he had not made clear or sure the exact road toward it, or indicated the means whereby to attain it," Froebel began the study of "boys' play, the whole series of games in the open air, and learned to recognize their mighty power to awaken and strengthen the intelligence and the soul as well as the body." The outgrowth of this study was the kindergarten.

The Kindergarten. — It is not the purpose here to discuss the kindergarten plays or to consider their educational value. There are two dangers that one not fully acquainted with the philosophy of Froebel is likely to fall into. The first danger lies in the character, purpose, and employment

of the plays themselves. Under the unskilled, improperly trained teacher the plays may be so ill-chosen or so badly managed as to become formal and mechanical in their use. Indeed, they cease to be plays because they lack the spontaneity, the freshness, the ingenuousness so apparent in real play. The example of the boy who returned home from his first day in the kindergarten, threw his schoolbag on the sofa, and indignantly exclaimed, "I'm not going there any more! I can't waste my time that way!" illustrates this point. He had been treated to "play" that was neither play nor instruction, and saw through the sham, as children are likely to do. The teacher must be very careful that the real essence of play, that is, spontaneity, freedom, genuine joyousness, is retained, while she knows the definite end to be sought, and while she carries in her own mind the lesson to be taught. Such exercises must be to the children real play, or their value will soon be lost. When the children are too old or too far advanced to enter upon an exercise as pure play, the time has come to abandon such exercise as a means of education.

The second danger is the other extreme, that of mere amusement, that of entertainment. While, as has been said, from the children's standpoint the plays must be spontaneous, from the teacher's standpoint they must have an aim. Froebel must have had this thought in mind when he said, "Play is the purest, most spiritual activity of man at this stage, at the same time, typical of human life as a whole — of the inner hidden natural life in man in all things. It gives, therefore, joy, freedom, contentment, inner and outer rest, peace with the world. A child

that plays thoroughly, with self-active determination, perseveringly, until physical fatigue forbids, will surely be a thorough, determined man, capable of self-sacrifice for the promotion of the welfare of himself and others." Thus Froebel saw a definite purpose in play, and in his whole scheme he sought to utilize this natural instinct in laying the foundations of education. The employment of aimless plays teaches the children to be restless, impatient of control, fidgety, dependent upon entertainment, and incapacitates them to fix the attention. The training of the school should lead gradually to the power of concentrated work. The school prepares for life — an oft-repeated truism — or better still, as Colonel Parker puts it, *it is life*, and life is full of tasks that must be performed. This does not mean that childhood is to be repressed and its natural tendencies stifled, but its tendencies are to be utilized and guided rather than allowed to run riot. That is what the founder of the kindergarten meant, and that is what he taught. This danger under discussion is responsible, in part, at least, for so many children coming into the higher classes with no power of concentration, with so little disposition to self-exertion and self-application, and possessed of the notion that everything must be made superlatively easy.

Mr. Howard J. Rogers summarizes the present tendency most admirably :¹ "Beginning with the kindergarten and continuing into the elementary grades, we have run a little wild in the last decade or more in making things easy for the child. We have coaxed and coddled and bribed with sweetmeats till the child has a totally wrong impression

¹ Address at the meeting of the National Educational Association in 1905, on "Educational Progress of the Year."

of his relativity to his environment. I yield to no one in acknowledging the great work done by the kindergarten, particularly in the crowded portions of our great cities, and in approving its purpose, but this does not mean approval of all its methods. They should not be extended too far into the child's life, and the elementary schools should begin to differentiate *at once* between work and play. A child has a weak, imperfect, illogical mind, or he would not be a child. To appeal to his reason and his interest is to premise your work on negative quantities. Prescribe what *your* reason and the experience of the race have proven good for him, and see that he does his tasks through love if possible, through compulsion if necessary. If a subject be thoroughly disciplinary and wholly distasteful, and a child does it, it is good for the child. And above all, let us see to it that we instill into the child by leading him to conquer difficulties, and to subordinate his desires to his obligations and his duty, a moral fiber which will carry him straight through fire and water to his goal in life; and let us not be responsible for turning into the world creatures of flexible backbone, who will pursue their sinuous way along lines of pleasure, interest, and the least resistance."

This is not a criticism of the kindergarten idea, or of Froebel's teaching, or of the application of the principle of play in education. It is a warning against a misapprehension and misapplication of the great Thüringian's teachings. It is an appeal for the choice of suitable plays, those that call for spontaneous action on the part of the children, and yet are so directed and utilized by wise and intelligent teachers as to accomplish some definite aim. As planned and taught by its great founder, the kinder-

garten is the most natural and the wisest scheme for the training of young children yet devised by man. And its central idea is the utilizing of the instinct of play in the young.

The Clothing of Children. — Before entering upon the discussion of what we mean by play and of what value it is, we may briefly consider the character of clothing. The proposition that the child should be so dressed as in no way to interfere with the perfect freedom of his body will need no discussion. This is essential for all of his activities whether play or work. On this point Froebel says,¹ “In order to enable the child at this period to move and play, to develop and grow freely, his clothing should be free from lacing and pressure of all kinds; for such clothing would oppress and fetter also the spirit of the child. The clothing of the child in this as well as in the next period, should not bind the body; for it will have on the mind, on the soul, of the child, the same effect it has on the body. Clothes, in form and color and cut, should never become an object in themselves, else they will soon direct the child’s attention to his appearance instead of his real being, make him vain and frivolous — dollish — a puppet instead of a human being.” These wise words have value for moral as well as for physical well-being.

The Meaning of Play. — What do we mean by play? How is play distinguished from work? It is necessary to determine clearly the difference between these two activities to define them, in order to discover the educational value of play. Some would say that it is the element of

¹ “Education of Man,” p. 63.

pleasure that distinguishes play. This is not true, for many persons find pleasure in their work. "We go back to school to-morrow after a vacation of two weeks. I shall be glad, for I am always happiest when I am busiest," writes an enthusiastic teacher. Indeed, that one shall be fond of his work and take pleasure in it, is the first essential of success.

Play is easier than work, may be offered as the distinction. But some plays are very hard, both physically and mentally. No one would say that foot-ball or chess is easy, and yet they stand for play. Indeed, there is scarcely any kind of work that calls for harder physical application than foot-ball, or more severe mental application than chess. It will not be urged that a game of base-ball is easier for a boy than to go on an errand. In fact, many boys love those games best that require greatest activity, that offer supreme obstacles to be overcome. There is the greater triumph in winning.

Again, it may be said that length or intensity of the activity is what decides the question. But some of the games above mentioned require the greatest intensity of thought and action, and yet they are play. Still again, it might be urged that the desire to win is the characteristic of play. In many occupations men are as eager to win and as jubilant over success as the most enthusiastic college student over a base-ball victory. None of these distinctions clearly mark the difference between work and play.

Definition of Play and Work. — We are now ready for a definition of play and work. *Play is activity or effort that finds its end within itself, while work finds its end outside*

of itself. To illustrate: The amateur base-ball player reaches his aim in the activity itself, while the professional player has an end beyond the game, namely, the salary upon which he lives. Both may play with great skill, both may thoroughly enjoy the game, both may desire to win, but the latter has a purpose, an end, which is outside of and which follows the activity. Therefore the former engages in play, the latter in work. The same activity may be work or play according to the motive of it. The child drearly runs the scales in piano practice. He is at work because the end is in the future when he will be able to play with skill the same scales woven into wonderful harmonies to his own and his hearers' delight. The actor carries his part on the stage and finds pleasure for himself while he pleases his audience. To him it is work, because later his salary will be his reward. To his audience it is play. They have spent an hour in witnessing the production, and the end for which they came has been reached when the play is over.

One may read a book for the enjoyment it affords. Let the same book be read in order to write a review of it or pass an examination, and the latter becomes work because the end was not reached in the reading, while the former was recreation or play. I may take a walk for the mere enjoyment of it. But if I walk to my place of business in order to perform the duty of bread-winning, the walk is work. Indeed, in some trades the mechanics do not reckon their time from the moment they enter upon their job, but from the time they are said to leave the shop. It is the motive that governs the activity, and not the activity itself, that distinguishes work from play.

Purpose of Play. — Play strengthens all the powers of body and soul. “It is the telescope which lengthens life and extends its vision;” and the longer the spirit of play is retained in a man’s life, the younger he remains, the brighter his spirit, the happier and more optimistic he is. Hence it should be encouraged in the form of holidays and recreation in the arrangement of life’s plan in old as well as in young. Play teaches the child to be self-reliant, and that characteristic will best be brought out when the child has companions of about his own age in the home and in school. Through play he learns to measure his strength and skill with the strength and skill of others; he increases his powers, thereby acquiring greater agility and strength.

Without the advantage of play with other children the child is likely to grow up puny in body, selfish in spirit, exacting, overbearing, and self-opinionated. Nothing teaches a boy so quickly and thoroughly the place he is capable of holding among his fellows as contact and association with other boys in healthful, earnest, hearty, and suitable play. I used to watch a boy who had no one of his own age to play with during the earlier years of his life. He was an intolerant bully and a general nuisance to the whole neighborhood. When he went to school, however, and associated with other boys, he soon learned to know his place; he found that the whole world did not revolve around him, and he became a fine boy. Play under right conditions was the civilizing and educating influence that taught him the most important lesson of life.

Through play the child strengthens his muscles, acquires knowledge of distance, trains the judgment, learns much concerning nature’s laws, and becomes acquainted with

the moral principle embodied in the Golden Rule. Hence the teacher should watch over and direct the games of the playground, as truly as the lessons of the schoolroom, as an important educational means. Far more attention should be paid to this feature of education than is usual. Such games should be encouraged as will develop all the powers. There is no better game for boys than base-ball. Ideas of distance and accuracy of judgment are inculcated by throwing the ball, by catching "flies" in the field, and by attempting to hit the thrown ball. Skill is acquired by the same means in throwing and judging the ball. Alertness is necessary in deciding where to throw the ball when fielded in order to put out the opponent, — the boy must act at once with decision and accuracy. Agility is cultivated in running bases, and in picking up the swiftly batted "grounder." Unselfishness is engendered and genuine practice of the Golden Rule by the necessary team spirit which seeks to win the game through concentrated action and not through individual effort. Every one must do his best in the position he occupies, while he works in concert with his mates. Nothing puts in jeopardy the game in which a whole team is involved, as base-ball, basket-ball, or foot-ball, so much as self-seeking or jealousy on the part of individuals. Base-ball, then, may be made a most excellent educational means, teaching lessons that nothing in the schoolroom fosters, and it should be sustained by every school.

Basket-ball serves a similar purpose at the time of the year when base-ball cannot be played. For quiet indoor games those should be selected that furnish sufficient incentive and interest in themselves, and rest upon no external in-

centive. Any game that requires a money stake or a prize "just to make it interesting," should be discountenanced. If a game does not offer a healthful exercise of skill and judgment, a stimulating and lively interest to win for the sake of winning, it does not fulfil the conditions prescribed.

Indeed, it is not play, it is work, for the end is outside of the activity, the end is to secure the prize or money at stake, and not the mere enjoyment of a pleasurable pastime. If a game is played for the pleasure found in it, it is play; if the same game is played for a stake, it is no longer play, it is gambling. For this reason professional gamblers do not select games like chess or checkers, which depend upon skill and knowledge, but they prefer dice which requires no skill and which is quickly decided, or some kinds of card games in which the element of chance plays a large part. No one, on the other hand, would long play dice for amusement. It requires an outside stimulus to keep up the interest, and therefore should be discouraged, as well as all other games that fail in themselves to furnish the necessary interest. This will be a sufficient guide for parents and teachers in determining what games should be allowed.

Cricket serves the same purpose with English boys that base-ball does with ours. Concerning this game, Mr. Hughes says,¹ "The discipline and self-reliance on one another which it teaches is so valuable, I think, it ought to be such an unselfish game. It merges the individual in the eleven; he doesn't play that he may win, but that his side may."

Teachers will have to meet the question of marble-play-

¹ "School Days at Rugby," p. 381.

ing among boys. This game is harmless if merely a trial of skill. It may be very harmful if the children are allowed to play "for keeps," which is a species of gambling. With most children one merely needs to call attention to the evil, and explain its moral bearing. A most conscientious Christian gentleman was passing some boys who were playing marbles on the street. Although he was upwards of sixty years of age, the old spirit of his boyhood came over him, and he asked the boys to be allowed to come into the game. He borrowed a marble from one of the boys with which he won another, and then paid back his debt. He had not lost his skill, and soon he had won all the marbles the boys possessed. And he put those marbles into his pocket and carried them home for his grandson! It never occurred to him that he had been gambling, and a suggestion of that kind would have thoroughly shocked him. Boys should be taught the nature of such a game, and shown that it is evil. They should also be taught that the intrinsic value of the thing played for does not change the principle.

Teachers' Part in Games. — The teacher may exert a most positive and beneficent influence by encouraging and directing the right kind of games. This must be done with discretion so that the children will not feel that he is dictating their sports and hindering a free exercise of their natural right to play. It is certain that a feature of education that cannot be fostered in the schoolroom can be secured on the playground; and if the teacher possesses the ability to mingle freely with his pupils in their recreation, taking part with them at times, preventing harmful games and encouraging good ones, he will be able to do great

good to his pupils. Besides, he will discover characteristics that will aid him in discipline, and he will gain an influence over his pupils which cannot be gained otherwise. For in the hour of play the child manifests his true self. It often occurs that the pupil who is intractable and indolent in the schoolroom is the leader in sports. The watchful teacher may be able to discover by observing such pupils at play a means to interest them in their work.

The child should be taught early in life, to respect the property rights of others; he should also be made to feel that no luck or skill of his can justify his appropriating the property that he may win from another. The teacher should encourage the sports that develop agility, strength, alertness, judgment, and accuracy. The educational value of the Olympian games lay in the nature of the games themselves, as well as in the spirit of fairness that was cultivated. Running, jumping, throwing the discus, wrestling, trials of strength and endurance, constituted the earlier Grecian games, and they produced a magnificent type of manhood. The only material reward was a wreath of laurel placed upon the victor's brow, and it was enough. It was the insignia of honors that endured while life lasted. And the same effect would follow a like practice at the present time. Some boys, connected with the late Professor Stoy's school at Jena, were holding their annual gymnastic contests. On a branch of a neighboring tree were hung several laurel wreaths, the only prizes for which they were striving. There was no evidence of lack of interest because the prizes carried no intrinsic value. Indeed, every boy did his best; and when the contest was over the victors were called forward and crowned with impressive

ceremony, after the manner of the Greeks of olden time. Here a lesson in simplicity was inculcated; and through those games, and the simple rewards that followed, the most important lesson that play teaches was illustrated, namely, to find the interest in the activity itself and not in any external reward. The laurel wreath sufficiently distinguished the victor, but did not serve as pay for his success. Hence it was play and not work.

Play vs. Work. — While the early years of the child are devoted to play, and, as we have shown, this natural instinct should be employed for educational purposes, he must be gradually led to know that life has earnest purposes that can be satisfied only with work. It is not necessary that he gain the idea that work, which is the antithesis of play, is uninteresting or unpleasant. On the contrary, it should be shown to the child that work at the proper time and of the right kind to meet his stage of development may be extremely interesting. Professor Withers says,¹ "Work need never be irrational servitude, and the highest forms of work admit of the greatest amount of self-expression, and, therefore, of true freedom, relieved from 'the weight of chance desires.' Thanks, in a great measure, to Froebel, the whole world is coming to see that the work of the little child must be delicately adapted to its stage of growth, and must give full scope to its budding instincts, its love of muscular development, of variety, of constructiveness, of living animals, and plants, of pictures, and of cheerful sights and sounds. There is no reason why this should impair the seriousness and mental concentration

¹ Address before the Froebel Society of Great Britain.

which work ought always to imply. On the contrary, the 'strangle-hold' is far easier to get upon some subject which, to begin with, appeals to the child nature. So frail and wavering is the little child's power of continuous attention that we need not be afraid that we can ever make work 'too interesting,' if it be genuine *work*, *i.e.*, energy devoted to a definite object."

All education is self-activity, and play is the very best means by which the child expresses himself, satisfies the longing which every healthy child has to do something, and gives vent to the animal spirit within him which is likely to break out in some form of mischief unless properly directed. Professor Withers further adds, "It is of great importance, therefore, to bear in mind that, when we speak of play at the kindergarten stage, *we are not thinking of play in antithesis to work, but rather of play as the most convenient name for the sum-total of self-activity in the child.* This self-activity resembles play, in that it is pursued for its own sake and as the expression of inner impulse; but it resembles work in so far as it is quite earnestly carried on, and is the most strenuous form of action of which the child is, at that stage, capable.

"When once the antithesis has arisen, and the child's eyes are opened to know good and evil, then the child must be accustomed from time to time, in gradually lengthening periods, to attack the *task* with entire attention, and not take its mind off until that task has been completed."

Play does not cease with Childhood. — It may be well to state that the educative value of play does not cease with childhood, though at this period it is of greatest im-

portance. If it is "the great telescope which lengthens life and extends its vision," it may well be utilized even till old age. It may be called "recreation," but it is the same principle. Its purpose will be less to stimulate growth, and it need not be so constant or occupy so large a proportion of one's time, — the healthy adult should work a large part of the time, — but it is needed for rest, for change, for reviving the spirit, for the renewing of youth. Hence a reasonable amount of recreation, particularly out of doors with clean games, in society, with books intended to amuse or entertain, is absolutely essential to all. The devoting of a part of the time to holidays and half-holidays, in which the people give themselves up to wholesome out-of-door life and sport, not only conduces to health and longevity, but also brightens life, adds to its happiness, and fits for its more serious duties. Every life will be better if some time is devoted to recreation, in which there is utter freedom from the cares of business or household, and in which the individual yields himself up pure enjoyment. When he again engages in work it will be performed with greater zest, and life will be made brighter and better because of the interruption. Recreation gives new courage to the spirit and recuperates the body.

Playthings. — Closely allied to play itself are the implements employed in it, or playthings. They, too, have their educational lesson. Professor Paulsen says, "It may safely be stated that the real value of a plaything is generally in inverse ratio to its cost." It is not the expensive toy that pleases the child most by any means. The elegant china doll that costs several dollars does not please the baby

as much as the rag-baby that costs nothing, or the stuffed cat or rabbit that costs only a few cents. The child loves the plaything that it can handle and do with as it pleases. Therefore it is foolish to spend large sums for the toys of young children. A father purchased for his three-year-old son a beautiful music box costing twenty-five dollars. When the child was placed by the music box he would turn the crank and produce music. One day he discovered a nail-hole in the casing of the door, and he stuck the crank into the hole and turned it with as much glee as when it was inserted in the music box. The fact is, the only part of the plaything that interested him was the crank, which could have been bought for a cent. Doubtless at a later period he might have appreciated the costly music box, but at that time it was a total misfit.

The nurseries of many American homes are crowded with toys, and the greatest evil is not the expense. Children should learn to be unselfish, full of gratitude to those who sacrifice for their happiness, and satisfied with few things. There is nothing more beautiful in children than genuine simplicity, which is perfectly natural with them and should not be destroyed. Such lavishness in gifts teaches children to expect everything they see, it makes spendthrifts of them, and does not inculcate the lesson of economy. The country boy is not accustomed to many playthings. Many of them he must make for himself. If he must get boards and saw out the runners and other parts of his sled, if he must nail them together, and fit some iron hoops that he has taken from an old barrel upon the runners for shoes, he has an appreciation of the result far greater than the boy whose father purchases him

a beautiful "Greyhound." He certainly gets just as much fun out of it, and is far better off from having constructed it himself.

"But what has this to do with the teacher and the school?" may be asked. It must not be forgotten that the whole duty of education is not committed to the school. The home has its part to perform, and it should learn the lesson herein taught. But the school also has something to do with this question, for the "Schoolmaster is the high-priest of the future." The school, more than any other factor, is shaping the future, is laying the foundations of future civilization, is forming the ideals that are to govern the world. Hence the school should raise its voice for simplicity, for economy, for unselfishness, for gratitude, thankfulness, and sincere appreciation; and in teaching simplicity in the instruments of play, it is inculcating some of the very fundamentals of morality and forming right ideals.

Play and playthings, therefore, are most important educational agencies, which should be employed for the physical, intellectual, and moral development of the child. And there are no other agencies that can wholly take their place in this great work.

Summary

I. Play is activity or effort that finds its end within itself; work finds its end outside of itself. Play should be utilized in developing certain educational features that cannot be taught in the regular school exercises, while it fortifies other lessons that can be taught in the school. Recreation is essential to the well-being of adults as well as children. Playthings should be few in number and inexpensive.

II. *The object of play in connection with education is to utilize the natural activity of the child so as gradually to lead him to the power of concentration and self-direction as exemplified in work. The interest of play must be found in the activity itself rather than in something external. Such plays should be encouraged as develop strength, agility, alertness, judgment, decision, accuracy, generosity, unselfishness, and the spirit of fairness.*

CHAPTER X

HABITS AND THEIR FORMATION

References. — *White*, School Management; *MacCunn*, The Making of Character; *Coler*, Character Building; *Smith*, Systematic Methodology; *Patrick*, Elements of Pedagogics; *MacVicar*, Principles of Education; *Spencer*, Education; *Shearer*, Morals and Manners; *Adler*, The Moral Instruction of Children.

Habits and their Formation. — The character of a person is shown by the fixed habits he possesses. If the habits are good, the character is good; if the habits are bad, the character is bad. Most of the activities of life are controlled by habit, and he that is established in his habits is good or bad according to the nature of those habits. The individual may be relied upon just in proportion to the fixedness of his habits. Is he habitually punctual, truthful, honest, polite, men who have dealings with him recognize these qualities and are able to depend upon him. Hence the importance of definite, consistent, well-directed, and persistent effort on the part of the educator in training the child to possess good habits. Every function of the school — the thoroughness with which the lessons are taught, the steady and wise carrying out of disciplinary measures, the leading into good conduct, the whole relationship between teacher and pupil — should aim to form and establish good habits.

Rosenkranz says,¹ "Education seeks to transform every particular condition so that it shall no longer seem strange

¹ "Philosophy of Education," p. 30.

to the mind or in any wise foreign to its nature. This identity of the feeling of self with the special character of anything done or endeavored by it, we call habit (*Gewohnheit* — customary activity, habitual conduct, or behavior. Character is a ‘bundle of habits’). It conditions formally all progress; for that which is not yet become a habit, but which we perform with design and an exercise of our will, is not yet a part of ourselves.”

What is Habit? — Habit may be defined as the tendency to repeat the same act in the same way without conscious reflection. The most of the acts of life are controlled by habit. This is true in our physical, intellectual, moral, and spiritual activities, as a moment’s reflection will show.

1. *Physical Habits.* — We learn to stand upright, to place one foot before the other, to walk as a matter of habit. Any change in gait, as when one is trained to march as a soldier, or when one walks on the deck of a rolling ship, or when one attempts to keep step with another who takes unusual strides — long or short — occasions discomfort until one becomes accustomed to the change, forms a new habit. The steps of a staircase are usually constructed about eight inches in height, and we ascend and descend with comfort; but let the height be changed and we stumble and are more easily wearied. An illustration of the effect of peculiar stairs is found in ascending the leaning tower of Pisa. As one circles the upper side of the tower, one passes from stair to stair without really ascending, while on the lower side the ascent becomes the more pronounced owing to the peculiar situation created by the leaning of the structure. The stairs were all made originally of the

same height, but the settling of the tower on one side caused the curious effect described.

Eating also becomes a physical habit. The carrying of the food to the mouth, the use of table implements, the following of stated times for meals are habits. One of the most important lessons that mothers must teach their children is to expect their food at regular periods. When the time comes for the meal we are inconvenienced if there is delay, not so much because we are in need of food as because the regular habit is being infringed upon. Children are also trained to regularity in sleep, and the adult becomes accustomed to rise at a certain hour. If the necessities of his vocation demand, a man can acquire the habit of awakening at any hour of the night or day without much inconvenience.

Very much of the comfort and happiness, as well as the usefulness of life, depends upon the possession of right physical habits, and it is certain that good health is largely dependent upon them. A good example of the acquirement of physical habits and their effect upon character, is found in the soldier. A new recruit enters the army, crooked and bent from the hardship of farm or shop life. He is drilled in all the details of walking, carrying the body firm and erect, handling his gun, keeping his clothing and accoutrements in perfect order, and in all the requirements of military duty. He is closely inspected and punished for infractions of rules in all of these respects. He is trained to march and perform the various military evolutions at sharp word of command, and he may not choose what he will do, but must obey promptly and implicitly. What is the result of this training? Good physical habits are

formed, and the slouching, uncouth, awkward recruit learns to carry himself like a gentleman. The effect upon his moral life is also marked, for in learning control of his body he gains in that self-respect which is essential to moral living. It is the acquirement of right habits that has wrought the transformation, and he has received the kind of training that was needed in his educational development.

2. *Intellectual Habits.* — Keeness of observation, accuracy of comprehension followed by the power of accurate statement, vividness and richness of imagination, logical order in thinking, may become habit. Indeed, the purpose of intellectual training is to secure these habits. The child learns to read, to pronounce distinctly, to enunciate sounds and syllables, to give proper inflections and modulations, to grasp meanings as a matter of habit. He cannot become a good reader until these things are habitual. Just so in writing, the child becomes so habituated to the forming of letters and words that he no longer thinks of the pen, ink, and paper, he writes unconsciously, that is, from habit. The skilled accountant runs up the long columns of figures without a thought of them, and the child must be drilled in arithmetical work until the relations of numbers become so familiar to him that he does not have to stop and think them out. Certainly not, so far as the simpler combinations are concerned. The study of history has but little value if it does not train to habits of research, of weighing events to determine their importance in the development of civilization, and of noting the effects of the deeds of men and of events in shaping human destiny. And literature fails of its purpose if it does not create a

taste and establish a love for the good and pure things that men have written. The purpose of each and every study in the curriculum, from nature study in the primary class to higher mathematics, language, literature, history, and science in the most advanced university work, is to establish correct intellectual habits.

Even memory, so often neglected in modern methods of instruction and school requirements, should be trained so that committing accurately poems, texts, and formulas may become easy because memorizing has become a fixed habit.

3. *Moral Habits.* — It is surely the business of the school to inculcate those moral habits in the pupils which are so essential to well-ordered and successful life. Provided moral balance has not been established, the individual not only fails to attain an ideal education, but he also becomes positively dangerous to society, the more dangerous because of the keenness of intellect which makes him the more acute in wrong-doing and escaping punishment. Proper intellectual culture is also moral culture, for the marvel of beauty, symmetry, and perfection of God's handiwork as revealed in nature study, the exactness of mathematics and science, the unfolding of the facts of history, and the study of pure literature, cannot fail to exert a wonderful moral influence upon the child, if the teacher is alive to his opportunity. So, too, the very thoroughness required in study, and the perseverance demanded of the pupil in mastering tasks, must have a moral bearing.

But there are abundant opportunities for instilling moral ideas and establishing moral habits in the daily routine

of school duties, and in the exercise of discipline. Punctuality and regularity of attendance, neatness in schoolwork, tidiness of person, promptness in obedience and in the discharge of duty, faithfulness in meeting school requirements, honesty in the attitude towards tasks imposed, such as, examinations, tests, daily work, etc., consideration for the rights of others, both in the schoolroom and on the playground, regard for public property, and respect for law, are among the many moral lessons that the school should teach. In many homes there is neither the ability nor the inclination to teach these important lessons; therefore not only a great responsibility, but also a boundless opportunity, is afforded the school to train children into abiding and well-ordered moral habits.

“Sow a thought and reap a deed,
Sow a deed and reap a habit,
Sow a habit and reap character,
Sow character and reap destiny.”

4. *Religious Habits.* — There are certain habits that may be classed as religious, such as, regular church attendance, reading the scriptures, stated hours of devotion, reflection upon spiritual themes, and a recognition of God's providences and acts of mercy. The mother who teaches her young child to kneel at his bedside and repeat a little prayer each night before he goes to sleep is forming a habit that is likely to influence his whole life. He may not understand the meaning of the words he utters, or comprehend why he does it, but it is of untold importance in that it early teaches him to love and obey God, in whom he lives, moves, and has his being. Such a habit, early

formed, often clings to a person all his life, and proves a restraint as well as a blessing. It often lays the foundation for the consecration of self when the maturer years of understanding are reached.

Requiring children to attend upon and participate in the ordinances of the church, forms a religious habit that they are not likely to break away from in later life. Such habits also act as safeguards in the hour of temptation; indeed, they will save from many temptations. Reading from God's Word and reflection upon it may become so much a habit as not only to influence the thought, but also to mold the life of the individual. The old-time practice of daily taking down the family Bible, reading a chapter therefrom, and kneeling in prayer, — parents, children, and the whole household, bowing in humble devotion while the father lifted a petition to the eternal throne, — was an educational means for which no substitute has been found, and the effects of which are not lost during a whole lifetime. Through this means, through the Sunday school, through church attendance, through committing texts of scripture, and through the contemplation of God's goodness, habits of thought are formed that are likely to influence the destiny of the child so trained, and to lead him to a life of benevolence and usefulness.

The whole child must be educated; and therefore, while we establish his physical, intellectual, and moral habits, we must also find means somehow and somewhere to complete the ideal of perfect manhood and train the religious side also. Upon this last point we shall enter into further discussion in another chapter.

Choice of Habits. — Thus far we have considered habits whose formation is largely under the direction of another person, — a parent or a teacher. If this work has been well done in early life, it is likely that permanent good habits will be chosen in later life. But there comes a period of definite personal choice, when the individual must decide for himself whether he will form this habit and reject that. The boy sees his father and other men using tobacco, and decides that he will learn to use it. He doubtless thinks it manly, and this is the motive that influences him, for certainly it is not pleasant for him in the beginning. Quite early in life, before he has contracted the habit, he should be taught the evil effect of tobacco upon a growing boy, first upon his physical being, and later, as an inevitable consequence, upon his moral nature. Careful and exhaustive studies show that the tobacco habit with boys not only destroys their physical health and their intellectual power, but also their moral sensibilities. It is folly to tell him that the use of tobacco in itself is wicked, for it is not true. Moreover, his father, perhaps, and many good men whom he loves and respects, who have his confidence, and who, he believes, would not willingly do wrong, use it. Why should he not follow their example? For the simple reason that it would surely harm him, and does not harm them. There are many things that a man may do that a child may not do, and the sooner this lesson is impressed upon the child the better. The father may sit up late nights, belong to a club, engage in many enterprises that are perfectly proper, but would not be proper for his son until he too is a man. This does not mean that the parent may be indifferent as to his example before his

children. Far from it; but it simply means that a practice of the parent, which in itself is not wrong, may not be indulged in by the child if harmful to him, on the ground that his parent indulges in it.

A perfectly frank and clear explanation of this distinction should be made by the father to his son. A German father, a minister of the gospel, called his seventeen-year-old son to him one day, and said, "Fritz, I hear that you are beginning to smoke. Is it true?" "Yes," responded the son. "Now, my boy," continued the father, "you are still too young to acquire the habit of smoking. You have not yet attained your growth, and I want you to wait two or three years longer. It will be harmful to you now." "Very well, father," replied the boy, and that was the end of his smoking at that time. The father did not think it necessary to apologize for using tobacco himself, or hold himself up as a warning or example of the evil of tobacco; for he was an inveterate smoker; it did not occur to either that the boy had a right to do a thing because the man did it. The use of tobacco *per se* was not condemned, it was simply shown to be bad for a *growing* boy. That confidence between father and son should exist which will enable the former to advise frankly, and the latter to accept such advice without stopping to question its wisdom.

The child should be shown the right and wrong of an act, and then be encouraged to choose for himself, especially as he approaches maturity. The father cannot always be with the son, and therefore he must be trained to make proper choice. Dr. McClure touches upon this point very forcibly in speaking of the life of Joshua under the text, "Choose ye this day whom ye will serve." He says,¹ "As

¹ "The Voluntary Adoption of Good Habits."

Joshua became aware of his approaching death, there appears to have come to him the realization of a new idea. It was this, that it mattered not how good the habits of the people then were, the permanent value of those habits, for themselves and their children, largely lay in their conscious and voluntary adoption of those habits, if possible, through some form of act. He seems to have become convinced that unless he could bring the people to face the moral issues involved in their good habits and then persuade them to adopt anew, or adopt for the first time, by a distinct act of choice, those good habits would not be a very portion of their being, and consequently would not have a lasting control over them. To Joshua the supreme benefit of a good moral habit was in its intelligent adoption by the person for himself. Physical habits formed unconsciously have little, if any, tendency to change: the person who is left-handed, or the person who is right-handed, need have no anxiety about a change in the habit of using his hand. The left-handed man will continue to be left-handed whether he continues to reside in his birthplace, or moves into an entirely different environment; the right-handed man will be right-handed at forty years of age as well as at twenty. Physical habits once practiced for a considerable time are not subject to unconscious change.

“But moral habits are subject to change. If those moral habits are superficial, touching only the outward features of our lives, they may be put off as easily as we put off a garment when we come into a different atmosphere. They may even slide off, as a cloak slides off when the air gradually becomes warmer and the cloak becomes loosened little by little. Superficial moral habits sometimes glide away

from a man or youth almost before he is aware that they are gone — and only some new experience, or forced contrast of his present with past conduct, makes him aware that his habits have left him.

“Moral habits to be permanent must be a part of one’s inner self. They must be a man’s very being, so that they go with him where he goes, and stay with him where he stays. This can only be through a voluntary adoption of such habits; the intelligence must consider them and believe in their value, and then the will must engage to do them. Thus they become inworked into the interior life. When this is done they are no longer like a cloak, they are rather like our life-blood, an abiding and constituent element of our being.”

Further he adds, “Yes, good habits are a benefit. They are always to be taught as such. Blessed is the child who has had them about him from infancy up; they put him in a safe atmosphere, and hold him back from many injurious surroundings. But a human life is not like a twig or a stream. Bend the twig, and the tree grows as an exterior force has determined. Start the stream from the summit of the Rocky Mountains toward the Atlantic or toward the Pacific, and you may be sure what the trend of its whole course will be. But it is not so with human life. ‘Choice’ comes in — a factor that neither twig nor stream can know. Solomon may be well trained in boyhood, and still go to pieces in maturity. Africaner may be hurtfully trained in boyhood, and still reach a splendid character in maturity. And all because of this wonderful power that we name ‘the power of the will,’ whereby we choose and determine whether the old habits shall hold us.”

It is not enough that the child shall be trained to good habits. This is external. He must be brought "to a personal adoption of good habits by a clear, decisive, everlasting choice of his own; and the child must realize that beyond all he has ever heard concerning the benefit of temperance, integrity, self-control, he is called upon to choose for himself what his habits of life shall be with reference to these virtues.

"Here there are two elements: one the necessity for information, and the other the necessity for choice. Joshua made the people see what was involved in choice — a clear-cut separation of themselves from hurtful things; and then he said, 'Choose, choose, choose,' and when a choice has been made to record it in some open pledge that the world may know the stand taken, and that the individual himself may feel that a final decision has been made and duly recorded."

There must be first instruction as to the nature of the habit to be formed, its meaning and consequences, and then the child should be led to form it of his own free choice. And this instruction and this choice should be brought about early in life before evil habits are yet in possession and while the child is yet plastic and easily molded.

It has been said that "Habits are built into the reflex nervous system by the will; but we have to rid ourselves of many habits; this, too, is the work of the will; but it is harder to unlearn than to learn a habit, for the will has to contend with the inherent tendency to repeat what it has once done. Here is seen the value of education; the educated man can see reasons for unlearning a bad habit, or acquiring a new one, — reasons that may powerfully influ-

ence his will. Life consists in action; to live aright we must have good habits, for habits direct our acts. Teachers well know they can do much more for the pupil who has good habits; that is, good home training to start with. A vast number are under bondage to habit, few are free men. . . . Some lie simply from habit; many are truthful from habit; as we are what we are more from training than from education, the wise teacher is always training into good habits or training out bad ones; he who simply presents a fact is a poor teacher."

The Changing of Habits. — In order successfully to eradicate a bad habit it must be supplanted by a good one. Thus the habit of laziness is changed to one of diligence by introducing those activities that interest the child; that of lying to the habit of truthfulness by showing the beauty of truth and the sin of lying, and following this by encouraging the telling of truth; that of slovenliness to that of neatness and cleanliness by furnishing examples of cleanly children and extolling the merit of cleanly habits; tardiness and irregularity are to be supplanted by punctuality and regularity, by showing the evil to the individual, as well as the interference with the rights of others as the result of these evils, and by making these virtues an essential requirement of school life; the habit of generosity and thoughtfulness for others in place of selfishness through exhibiting the blessedness and joy of service, and of giving without expectation of recompense. And so all the vices should be supplanted by corresponding virtues, and in this way right habits may be established and wrong ones eradicated.

Every child is strongly influenced in his habits by his comrades and his environment. When it becomes clear that a child is not amenable to the influences that form good habits and good character, that he is a danger to others, he must be removed from contact with them, else he may be instrumental in establishing evil habits in those who are innocent. Smith remarks, "A habit is established by repeatedly performing an act, and it is destroyed by refraining from the performance of the act. In no other way can a habit be established, and in no other way can a habit that has been formed be removed." It may be added that great assistance is rendered to one who is endeavoring to rid himself of evil habits by leading him to abandon the associations that foster those habits, and by substituting other associations that foster opposite habits. Thus the inebriate must abandon the saloon and the company of other inebriates and seek the influence of the temperance society and the church, and of sober people. There is little hope of permanent reform unless the bad habits are supplanted by corresponding good ones.

In the early part of this chapter the general kinds of habits — physical, intellectual, moral, and spiritual — were treated. "Education deals altogether with the formation of habits. For it aims to make some condition or form of activity into a second nature for the pupil. But this involves, also, the breaking up of previous habits. This power to break up habits, as well as to form them, is necessary to the freedom of the individual."¹ Since the formation of habits is so important to education, it may be profitable to consider the fundamental habit of obedience.

¹ Dr. Harris. Note in Rosenkranz' "Philosophy of Education," p. 35.

Obedience. — The child should be educated to implicit, unquestioning obedience from the outset. The parent first of all, and later the teacher, owes it to the child to teach him this lesson because so much of his happiness and usefulness as an individual depends upon it. When this habit has been formed, parental and school discipline will be reduced to a minimum. The question naturally arises, How early should its formation begin? When should the parent expect the child to obey? For surely the lesson must be learned long before the child goes to school. In general it may be said that the formation of the habit of obedience should begin as soon as the child is able to understand what is required of him, and this is when he is only a few months old. A concrete example will illustrate the point. A young father was brought face to face with the problem of securing obedience from his eighteen-months-old boy. He assured himself thoroughly that the child understood what was required of him, and that an act of his was a clear case of disobedience. He punished the boy until complete submission was secured, although it required fully half an hour before the child yielded. He believed that this was the first step towards the formation of the habit of obedience which would only need be followed by steady and firm treatment. I met that father sixteen years later, and inquired as to the success of the form of discipline which he so early inaugurated. He replied that from the time of the first struggle in which the child was brought to obedience till that time, when he was nearly eighteen years old and about to enter college, he had never offered any serious resistance to parental discipline. He also said that the same plan had been followed with his three younger children with a similar result.

There is no doubt that the formation of the habit in children of implicit obedience early in life would save parents many hours of anxiety and doubt, and would also guarantee to the children themselves a greater degree of real happiness and freedom. It is natural that the parent should exercise authority and that the child should obey, and the same is the true relation between teacher and pupil. The child, being weak, must rely upon one who is strong, and this is true in the intellectual as well as in the physical world. And this reliance, this obedience, must be confiding, unquestioning, absolute. The child must obey because one who is wiser, stronger, older, and possesses authority gives the command. Such command need not be harsh and must not be unreasonable. The reason need not be given to the child until he is old enough to comprehend it. It destroys discipline to allow the child to stop and argue. When he is old enough to comprehend the reason it may be given him, but it will hardly be necessary if the early training has inspired confidence in the wisdom, justice, and love of the parent. "Charles (four years old) does not know why he should obey me any more than I should obey him," said a father to me. I have watched that boy for the past ten years since that time, and he has given his father a great deal of trouble simply because he had not been taught at the outset the law of obedience.

The great lesson of divine government is obedience, and the better that lesson is learned, the more confidence is there in the Father's everlasting love and kindness. "Hath the Lord as great delight in burnt offerings and sacrifices, as in obeying the voice of the Lord? Behold, to obey is better than sacrifice, and to hearken, than the fat of rams,"

is the rebuke of the prophet Samuel to Saul when the latter excused his disobedience on the ground that the spoils of war, saved contrary to divine command, were to be offered as sacrifices. And the parent, in his relation to his children, stands as the representative of Jehovah.

Instead of destroying the independence, the spirit of freedom, which Americans love to inculcate in their children, it gives them true ideas of freedom, — the freedom that respects the rights of others; that submits to the necessary regulations of the family and the school, and to the laws of the state; that finds its highest ideals met by submission to rightful authority; that expresses itself through perfect self-control. The man who disobeys the laws of the State and becomes a criminal, is outside of the law, or an outlaw. He must be deprived of his freedom because he fails to comply with the laws of society. Even if he is not incarcerated in jail, he is not free, because he is in constant fear of the vengeance of the law, and in dread of apprehension by its officers. Thus he is never free. But he who lives in obedience to law is free indeed. No policeman watches his domicile, and no detective dogs his footsteps. Greatest freedom, therefore, is enjoyed by those who live within the letter and the spirit of the law. This is as true with the child in the home, the pupil in the school, who obeys the necessary regulations, as it is with the citizen under the laws of the state. Obedience to constituted authority alone gives true freedom, and therefore, in training the child to the habit of obedience, he is being prepared for his most precious birthright of American citizenship. It is the lack of this training in early life that is responsible for the growing disrespect for law and disregard for authority

which may well awaken alarm in the heart of every patriot. And the only way to correct these tendencies is by early implanting the habit of obedience.

With the fundamental habit of obedience thoroughly established, the fixing of other right habits in the home and in the school becomes a natural and an easy matter. For the child is ready to heed the admonitions against habits that are evil, and follow directions concerning those that are good. Without the habit of obedience there is no certainty that other good habits will be formed.

Punishment. — Some form of corrective means must at times be resorted to in securing the habit of obedience and of other habits. Hence a discussion of punishment must be connected with this theme. "Punishment," says Rosenkranz,¹ "as an educational means is, nevertheless, essentially corrective, since, by leading the youth to a proper estimation of his fault and a positive change in his behavior, it seeks to improve him." By punishment we mean a penalty imposed by some one in authority as a consequence of some wrong done. It must not be lightly or thoughtlessly inflicted. "Only when all other efforts have failed is punishment, which is the real negation of the error, the transgression, the vice, justifiable. Punishment intentionally inflicts pain on the pupil, and its object is, by means of this sensation, to bring him to reason, — a result which neither our simple prohibition, our explanation, nor our threat of punishment, has been able to reach."²

It must not be forgotten that the purpose of punishment in the school is quite different from that of the State. In the State the object of punishment is to satisfy justice, to

¹ "Philosophy of Education," p. 39.

² *Ibid.*, p. 38.

serve as a warning, to act as a restraint upon others, to be retributive. The State deals with those who have arrived at the age of personal accountability, and it holds them answerable for their acts. Such attitude on the part of the State is necessary in order to secure a wholesome respect for law, and in order to prevent crime. In the home and the school, however, the transgressor is immature, and largely irresponsible for his deeds, and therefore *the object of punishment is corrective and reformatory rather than retributive*. The State also acts in this spirit in dealing with its juvenile criminals in that it sends them to reformatories instead of prisons. It must be said that the recent tendency in prison methods, even with adult criminals, is to seek their reform as well as to satisfy justice.

This leads us to say in the next place that *punishment in the case of children should be individual rather than serve as an example for others*. What is for the good of the individual child for a particular offense, the nature of which is clearly understood by him, is the problem, and his individual offense should be in mind in the punishment inflicted. Doubtless others will be restrained by the knowledge that such punishment has been inflicted, but the effect upon them should not enter into the consideration. Again, it will be noticed that this is an entirely different motive from that which must control the State in dealing with its mature offenders. The motives of the child, his home training, his environment, his temperament, the temptations that have beset him, the circumstances connected with the wrong, must all be taken into account. It must never be forgotten that he is a child. He must be treated with a view to his reformation and the formation of the

habit of right action and obedience to law. The teacher must have no fixed penalties for given offenses, as in the case of the State, but must consider each individual case, taking into account the considerations above enumerated, and then administer such punishment as will meet the particular case in hand. The State, with certain limitations within the discretion of its courts, fixes the penalties for each crime. The school cannot do this because the purpose of its punishments is so essentially different, as has been shown, and because it deals with immature beings.

Again, *the punishment with children should, as far as possible, be the natural sequence of the offense.* This principle was laid down by Basil the Great in the fourth century, by Rousseau in his theory of training *Émile*, and emphasized by Herbert Spencer. Mr. Spencer discusses this point as follows:¹ "When a child falls, or runs its head against the table, it suffers a pain, the remembrance of which tends to make it more careful in the future; and by an occasional repetition of like experiences, it is disciplined into a proper guidance of its movements. If it lays hold of the fire-bars, thrusts its finger into the candle-flame, or spills boiling water on any part of its skin, the resulting burn or scald is a lesson not easily forgotten. So deep an impression is produced by one or two such events, that afterward no persuasion will induce it again to disregard the laws of its constitution in these ways.

"Now in these and like cases, Nature illustrates to us the simplest way, the true theory and practice of moral discipline.² . . . Observe, in the first place, that in bodily

¹ "Education," p. 172.

² The discussion is too long for these pages and I can only quote excerpts. The reader is advised to study the whole passage in Spencer's "Education."

injuries and their penalties we have misconduct and its consequences reduced to their simplest forms. Though, according to their popular acceptations, *right* and *wrong* are words scarcely applicable to actions that have none but direct bodily effects; yet whoever considers the matter will see that such actions must be as much classifiable under these heads as any other actions. . . . Note, in the second place, the character of the punishments by which these physical transgressions are prevented. Punishments, we call them, in the absence of a better word; for they are not punishments in a literal sense. They are not artificial and unnecessary inflictions of pain, but are the beneficent checks to actions that are essentially at variance with bodily welfare — checks in the absence of which life would be quickly destroyed by bodily injuries. It is the peculiarity of these penalties, if we must so call them, that they are nothing more than the *unavoidable consequences* of the deeds which they follow: they are nothing more than the *inevitable relations* entailed by the child's actions.

“Is it not manifest that as ‘ministers and interpreters of Nature,’ it is the function of parents to see that their children habitually experience the true consequences of their conduct — the natural reactions; neither warding them off, nor intensifying them, nor putting artificial consequences in place of them?”

As to the effect of this method the author further adds, “Among the advantages of this method we see — First, that it gives that rational comprehension of right and wrong conduct which results from actual experience of the good and bad consequences caused by them. Second, that the child suffering nothing more than the painful

effects brought upon it by its own wrong actions, must recognize more or less clearly the justice of the penalties. Third, that, recognizing the justice of the penalties, and receiving those penalties through the workings of things, rather than at the hands of an individual, its temper will be less disturbed; while the parent occupying the comparatively passive position of taking care that the natural penalties are felt, will preserve a comparative equanimity. And fourth, that mutual exasperation being thus in a great measure prevented, a much happier, and a more influential state of feeling will exist between parent and child."

As the teacher in a large measure stands in the place of the parent, it will not be difficult to apply the same line of reasoning to the punishments of the school. If the general principles above outlined are followed, school punishment will be reduced to a minimum. Rosenkranz, in speaking of the kinds of punishment, says,¹ "Generally speaking, we must take into consideration the sex and age: (1) some kind of corporal punishment is most suitable for children, (2) isolation for older boys and girls, and (3) punishment based on the sense of honor for young men and women."

The strong tendency of modern times is to abolish corporal punishment from the schools, and many states have enacted laws forbidding it. There is no question that this tendency has had a most humanizing influence upon the schools. The old-time brutality that characterized the schools has gone forever. It is certain that the teacher who cannot control a school without frequent resort to severe discipline is lacking in the most essential requisite

¹ "Philosophy of Education," p. 40.

of the good disciplinarian. The best discipline is that which remains in the background, which controls without noise or friction, and in which the pupils quietly and almost unconsciously govern themselves. That children can be accustomed to this kind of self-government is beyond question. When frequent punishments must be resorted to, whatever be their nature, the supreme end of school government has not been attained. When the pupils have learned to obey and to exercise self-control and self-government, and when this has become a habit, the end of discipline has been reached and the teacher can devote himself to the real purpose of the school, that of instruction.

Summary

I. Habit is the tendency to repeat an act in the same way without conscious reflection. The character of the individual is outwardly exhibited by the nature of his habits; hence it is the function of education to superintend the formation of the child's habits. Bad habits, to be effectually eradicated, must be supplanted by good ones. As the child becomes mature he should first be taught the nature of a habit, and then encouraged to choose right ones.

II. Obedience is a fundamental habit which should be formed early in life. It is the natural relation between parent and offspring, teacher and pupil, and is necessary to the real happiness and genuine freedom of the child. Properly inculcated in the home, the school, and the State, it secures that respect for law which is essential to patriotic citizenship.

III. Punishment is a penalty imposed by some one in authority as a consequence of a wrong act. With children it should be corrective and reformatory rather than retributive, individual rather than as an example for others, and it should be the natural sequence of the offense. Its ultimate purpose is to establish the habit of self-control, and self-direction.

CHAPTER XI

EDUCATIONAL LIMITATIONS

References. — *Smith*, Walks and Talks; *Marden*, Pushing to the Front; *Helen Keller*, Story of My Life; *Shearer*, Morals and Manners; *Lamson*, Laura Bridgman; *Seeley*, Foundations of Education; *Barbe*, Going to College.

Education is Emancipation. — The process of education is a process of emancipation. The normal child is born into the world entirely ignorant of its wonders, its beauties, and the vast field of knowledge it embraces. But he possesses the capacity to learn, not everything it is true, but many things, and therefore marvelous possibilities lie before him. He has no knowledge to begin with, and is weak and powerless; and yet, in a few years a world of knowledge may be mastered by him, and the forces of the whole realm of nature may be subject to his command. What a measureless expanse lies between the helpless infant just opening his eyes upon a great world, and a Bacon, a Newton, a Gladstone, an Aristotle! The child is in the bondage of ignorance, and every act of curiosity, every exercise of hand, foot, or mind, every question asked, every impulse expressed is a struggle toward freedom from that bondage. For intelligence is freedom, and he who is in the bonds of ignorance is a slave indeed.

The education of every child must start with the presumption that he possesses capacity. No device of teaching, no well-conceived method, no arrangement of the educative material, no zeal, or wisdom, or skill, or enthu-

siasm on the part of the teacher can avail if the pupil does not possess the capacity to learn. Dr. Marble writes, "There is a presumption at the start that the child has brains. It is safe, also, to assume that he has used that organ to some extent, and in more directions than one, before coming to school; and he must be compelled to use it again, and to use it constantly. This presumption will enable the teacher to skip many of the methods and to lighten and shorten the work." He speaks of the various methods employed, and adds, "I am not objecting to these ingenious methods at the beginning; but they ought to be dropped at the earliest possible moment, so that the child may be compelled to employ his own activity — to use his brain; for, let it not be forgotten, the child is presumed to have brains."

Only in such directions as the child has capacity can he be educated. Some possess capacity for music, some for art, some for handiwork, some for business, some for invention, some for investigation, some for literary pursuits, and each individual can attain highest efficiency and success only in the field in which nature has endowed him. No amount of training can avail to secure marked results where such endowment is wanting. Of course the teacher must not be too ready to pronounce the child who may be slow to respond as incapacitated. Rapid physical development, material unsuited to the period of the child's life, false method of presentation may cause the child to appear dull and incapable of certain work. Child study has discovered many of the causes of arrested development and led to the adoption of means of correcting mistakes and meeting irregularities in intellectual growth. And still greater results are to be expected in this field of investigation.

Sometimes the material is offered at the wrong time. Mrs. Wilson gives us a case in point with one of her own children. She writes,¹ "We had a child whose mind balked in arithmetic. We lost all patience — so much easier it is to preach than to practice in the matter of patience. Then common sense and consistency flashed the thought upon me: 'This child is of at least ordinary intelligence; I am surely of *extra*-ordinary patience in educational matters; we must, therefore, be attempting unnatural things.' On the spot I said to the child: 'There! Close your book. You need have no more to do with arithmetic for one year. We'll see if you won't grow to that! We'll try a rotation of crops.'

"We were given grace (which I think was quite remarkable) to adhere to that decision, and when at the end of the year, the child went again about her arithmetic, we were delighted and inconsistently amazed to observe the naturalness and ease with which she skipped along, making not the slightest difficulty over the particular subject on which she had stumbled so vexatiously. And that child, at a later date, performed some quite unusual feats in mathematics, which I cannot help fancying she would never have done if she had continued to be nagged instead of being set free."

Dulness not Incapacity. — Again, a child may be naturally slow, not dull, but a type of mind that grasps the truth only with difficulty, but often, as a compensation, holds what is once grasped with remarkable tenacity. A superficial examination may lead the teacher to think that

¹ "Pedagogues and Parents," p. 183.

capacity is lacking, when it is simply a slow unfolding. The morning glory unfolds its petals almost at the first burst of sunlight and exposes its brilliancy to the world; the calla lily requires days to reach the fulness of its wonderful grace and exquisite beauty. So it often is with minds that are slow in unfolding; when once they reach the completeness of their development, they exhibit power, strength, and sometimes even brilliancy. Patience must be exercised in discovering the presence or absence of capacity.

Even if there be lack of capacity in some particular direction, it by no means sets one down as an imbecile. The late Colonel Parker used to say, "So far as music is concerned, I am an idiot." And yet, he did more to influence elementary education in this country than any one since Horace Mann. General Grant remarked, "There are only two tunes that I know: one is 'Yankee Doodle,' and the other isn't." Wellington, Goldsmith, James Watt, Anthony Trollope, and Sir Walter Scott were incapable of meeting many of the requirements of the school course. Marden remarks,¹ "Give every boy and girl a fair chance and reasonable encouragement, and do not condemn them because of even a large degree of downright stupidity; for many so-called good-for-nothing boys, blockheads, numskulls, dullards, or dunces, were only boys out of their places, round boys forced into square holes."

Thackeray says, "Let us people who are so uncommonly clever and learned, have a great tenderness and pity for the folks who are not endowed with the prodigious talents which we have. I have always had a regard for dunces, — those of my own school days were among the

¹ "Pushing to the Front," p. 86.

pleasantest of the fellows, and have turned out by no means the dullest in life; whereas, many a youth who could turn off Latin hexameters by the yard, and construe Greek quite glibly, is no better than a feeble prig now, with not a pennyworth more brains than were in his head before his beard grew."

But when it becomes evident that capacity for a certain thing is lacking in a child, school life should not be made a burden to him by insisting that he take work which he has no power to grasp. George Combe said, in speaking of mathematics, "I can speak on this subject the more decidedly from being myself very deficient in this faculty, notwithstanding my exertions to cultivate it. Arithmetic has always been to me a profound mystery, and the mastery of the multiplication table an insurmountable task. I could not now tell you how many eight times nine are without going to work circuitously and reckoning by means of the tens, and yet for seven years I studied arithmetic. This deficiency has been the occasion of much trouble to me. I could understand everything relating to accounts, but had always to employ clerks to perform calculations. This faculty in me is in fact idiotic." And yet, he was a great scholar, anthropologist, and lecturer.

With the possession of capacity, all things are possible to the human mind. Illustration of this is found in the many instances of young men who have been handicapped by lack of means and by other unfavorable circumstances, and yet have overcome all obstacles and achieved success. The most remarkable instance of this in modern times is the case of Helen Keller, who, though deprived of seeing and hearing, the two most important avenues of com-

munication with the external world, burst the fetters that bound her, prepared for and passed through college, and obtained a breadth of knowledge surpassing that of most young people of her age. Although handicapped in the means of obtaining knowledge, she overcame the obstacles because she possesses capacity. It shows what can be accomplished by one determined to succeed, even though placed under extraordinary limitations, and her case should therefore serve as an inspiration to others. Indeed, it proves that possession of capacity is a far more valuable heritage than wealth, than "blue blood," or even than the senses of seeing and hearing, however desirable these things may be.

Self-Activity. — But no amount of zeal or skill on the part of the teacher, no approved method, no superior instruction, no choice of material, no employment of circumstance, environment or mechanical means, however essential all these may be, can avail unless the self-activity of the pupil can be aroused. Froebel lays great stress upon the child's self-activity; Herbart upon educative instruction (*Erziehende-Unterricht*). Inspector Hughes makes a most vivid comparison between the conceptions of these two great educators.¹

"Both Herbart and Froebel studied the child in order to lay down a system of education that would help to ennoble man, and enable him to work out his highest destiny. They were fully in accord in regard to the true aim of education. Both made the development of moral character the great purpose of all education, and their study of

¹ *Educational Review*, Vol. X, p. 240.

the child was made to find the surest way to reach this desired end. There was a radical difference, however, in their attitude toward the child. Herbart studied the child to find the best that could be done for it; Froebel studied it to learn how it could be aided in working out its own best development. Herbart magnified the work of the teacher; Froebel magnified the work of the child. Herbart made instruction and Froebel made self-activity the source and cause of growth in knowledge and character. . . . Froebel's educational system rests broadly on two great laws: the law of unity, and the law of self-activity. . . . Froebel believed that the child has within him a self-active soul, an element of divinity, the selfhood or individuality of the child, and this develops by being put forth in gaining a knowledge of his environment, and in performing the duties pertaining to social relationships. These opinions led him to discover his law of spontaneity or self-activity, which he made the underlying principle of all his developing and teaching process in the kindergarten and in the school. Herbart studied the child to mold it; Froebel studied it to guide it in its growth. Herbart studied the child as a philosopher; Froebel studied it as a sympathetic friend. . . . Herbart saw the need of control much more clearly than the need of freedom; Froebel saw the harmony between freedom and control. Herbart made instruction the basis of virtue; Froebel made morality depend on true living in the home and in the school, on the awakening of the ideal as a counterpoise to the sensual, and on the recognition of, and reverence for, the life principle in and behind nature. Herbart made will result from action; Froebel made action result from will. Self-activity developed the

will according to Froebel, but will increased in power is the result of its exercise in causing creative self-activity."

Doubtless the truth lies between these two positions. Left absolutely to his own self-activity, the child would make little progress, nor would the race progress. The child would move in a circle, would not be able to utilize the results of the world's intellectual advancement, would fail to begin where others have left off, and would be unable to avail himself of the experience and knowledge that others have gained. He must be directed in his activity, and through wise and systematic instruction be inducted into the wisdom that the world has already attained. On the other hand, to depend entirely on instruction, to expect that through the superior knowledge, skill, and enthusiasm of the teacher, education may be secured, is equally futile. Only when wise and suitable instruction directs, systematizes, and stimulates the child's activity will the end be reached. The truth, then, lies between the extreme Froebelian and the radical Herbartian view.

The true method will employ both of these ideas, — it will stimulate self-activity in a child, without which he will acquire nothing, and it will lead and direct that activity by means of instruction. The child must think and act for himself, and the teacher must never attempt to do for him what he can do for himself. But left entirely to himself, he will fail to make systematic progress, he will waste effort in doing over again what has long since been done; hence the necessity of instruction.

Self-Employment. — Following closely upon the idea of self-activity is that of self-employment. The child is

naturally active. This activity at first shows itself in various kinds of play. We have seen how play may be utilized for educational ends (p. 116). Gradually the child must learn to work, and if he never learns to work, except under the supervision of another, he will forever remain a menial and a drudge. The difference between the man who directs and the one who is directed by others, lies in their power of self-employment. The man who is placed over others as superintendent, must first have learned how to set himself at work before he is capable of directing his subordinates. This is the chief characteristic of leaders in every field, and it is the most important element of success in any sphere of life. The school, therefore, finds here a most essential duty. It must train the pupils to set themselves at work, and tenaciously to stick to their tasks until they have mastered them. Discipline will be much easier when the child has learned how to employ himself, when to keep busy has become a habit.

Nor is the danger of getting into mischief when unemployed confined to children. It is not during the hours of occupation in the shop or the factory that the saloon tempts men, but during their idle hours. Nor is it the man who possesses within his own resources the means of entertainment and employment who seeks places of evil. The proprietors of these places understand human nature and therefore they provide entertainment — music, cards, and other attractions. The best way to fortify the youth against these allurements is to establish in them the ability to employ themselves profitably and entertainingly. Provide men with this power and more will be done to close the saloon than any other means that can be devised, for it will rob the saloon of its patrons.

Training to employ one's self thus becomes a most important duty of the teacher, because it equips the pupil for success in life and establishes a moral influence that enables him to satisfy his needs through his own resources, and furnishes an outlet for the expression of his energies. Such training should be persistent and systematic throughout childhood until the habit is established. And if such a habit has become fixed, it will be of more value than a knowledge of many books, than the learning embraced in a whole curriculum, for these will be within his future mastery.

The home can materially aid in securing this educational equipment by providing good books, suitable games, and the right kind of tools. Professor Stoy of Jena used to provide a plot of ground which was divided among his school boys, each having a section which he was allowed to plant with whatever crop he pleased, care for as he would, and enjoy the harvest in his own way. It furnished a splendid opportunity for the boys to employ themselves in healthful out-door work, under the inspiration of the hope of future reward in the crop raised. And valuable moral lessons were taught, for those that were most diligent and painstaking reaped the largest harvest, while those who were negligent were punished with a limited reward. The wise parent who lives in the country, will make use of the same practice with his children by giving them a garden of their own to cultivate, putting into their charge fowls or young animals to bring up, holding them responsible for their charge, and letting them have the increase therefrom. The many opportunities thus furnished on the farm, largely will account for the sterling men and women it produces,

who are early trained to habits of responsibility and self-employment.

Self-Control. —

“The noblest lesson taught by life
To every great, heroic soul,
Who seeks to conquer in the strife,
Is self-control.”

One of the best evidences of an education is the power of self-control. The cultivated person is far less likely to give way to unreasoning and unbridled passion than the ignorant man. Indeed, want of power to hold one's self in check under extraordinary provocation is an evidence of lack of good training. The person who has learned to be urbane, polite, polished, until he exercises these qualities from force of habit, exhibits the result of long training and education. Self-control on the part of a person accused of crime is regarded by courts as an evidence that he is accustomed to being called before the bar of justice, and is therefore educated in crime, whereas, perturbation on the part of the accused is evidence that he at least is not an old offender, if not innocent.

If the purpose of education is to establish character, the cultivation of self-control should be an important function of the school work. The most salutary means of training the child to this valuable habit may be mentioned as follows:

1. Make him feel the loss of love of those dear to him, and the respect of those about him, when he gives way to unbridled anger, to selfishness, or to other intemperate actions.

2. Appeal to his sense of shame, and make him uncomfortable as a result of his wrong-doing.

3. When he is old enough, appeal to the fear of God, and the wrong in His sight of yielding to passion, as a means of leading him to abstain from evil and to control himself.

4. Through a wise and judicious employment of the principle of appeal to honor as a means of discipline, lead him to be self-governing, rather than to depend upon being governed by means of the watchfulness of the teacher or the parent.

5. Teach him the meaning and importance of this principle and lead him to desire to practice it himself.

6. Give him the opportunity to practice self-control upon all occasions, hold him responsible for failure to do so, and by wise and gentle admonitions lead him always to do his best.

A celebrated German educator who visited this country in 1893, as a royal representative of educational interests at the Columbian Exposition, was struck with the remarkable self-control manifested by the American people. Said he, "I was at the Exposition on Chicago Day when 750,000 people passed through the gates. Every transportation facility was taxed to the uttermost. Immense crowds gathered at each terminus, patiently and good-naturedly waiting their turn to get into the cars. I did not see a single disgraceful jam. Why, if five persons wanted to get on a Berlin street car, there would be more confusion than I saw in that great crowd. It was the most remarkable exhibition of self-control that I ever saw." Doubtless

this result is largely owing to the American theory that every man must take care of himself, must be independent, as against the German theory of paternalism, of control by those in authority.

This power of self-control is fostered by such experiences as those of Erasmus, who starved himself to buy Greek books; by Faraday, who lived over a stable and peddled newspapers; by Lincoln, who read the Bible and *Æsop's* fables by the light of a pine knot; by Franklin, who told his landlady to "make the soup thinner" when she informed him that she would have to charge more for his board, and by many others who became great in spite of unfavorable circumstances.

Material Means of Education. — There are certain material means that must be taken into account in considering the limitations of education, such as, the time involved, and the necessary money. Rosenkranz speaks of this as the objective limit as follows:¹ "That the talent for certain culture shall be present is certainly the first thing; but the cultivation of this talent is the second, and no less necessary. But how much cultivation can be given to it, extensively and intensively depends upon the means used, and these again are conditioned by the material resources of the family to which one belongs. The greater and more valuable the means of culture which are found in the family, the greater the immediate advantage which the culture of each one has at the start. With regard to many of the arts and sciences, this limit of education is of great significance. But the means alone are of no avail. The

¹ "Philosophy of Education," p. 48.

finest educational apparatus will produce no fruit where corresponding talent is wanting, while on the other hand talent often accomplishes incredible feats with limited means, and, if the way is only once open, makes itself the center of attraction which draws to itself with magnetic power the necessary means."

This interpreted, means that if there be the possession of talent, and the determination to overcome the disadvantage of the lack of money, a way can always be found to gain an education. Abundant illustrations of this fact are found on every hand, in the experiences of students, poor in this world's goods, but rich in energy, determination, and capacity. Every college in the land can furnish numerous examples of students who are working their way through the course, wholly dependent upon themselves, performing all sorts of labor of hand and brain in order to meet their expenses. And it is a fine comment on the spirit of American youth that such students rarely lose caste among their fellow students. This furnishes an example of true democracy, where a man is esteemed for what he is and what he does, rather than for his wealth or social position. The lack of capacity is an insurmountable obstacle to education; but the lack of material means can be overcome by every one who is determined to secure an education, and many a man is better through being compelled to bear this burden. The noblest fiber of the individual is brought to light and tested, the real value of education is understood, and lessons of great import in after life are learned never to be forgotten. It thus often happens that lack of material means, instead of being a misfortune becomes a real blessing; instead of being an evil it proves to be a

most valuable means of self-culture. Certain it is that many of the leaders of the world's thought and activities to-day, have passed through just this crucible.

The Power of Self-Direction. — No man's education is ever completed as long as life lasts. The wider the intellectual horizon the greater the possibilities of further knowledge. If a candle be placed in the center of a dark space it will light up objects near at hand for a space of, say, twenty feet in diameter. In the horizon of the circle about this diameter, there will appear many indistinct objects. Substitute a lamp for the candle and the dim objects in the former horizon become perfectly clear; but a large horizon of perhaps fifty feet in diameter will be formed and consequently a far greater number of unknown, indistinct objects will appear. Once more, substitute for the lamp an arc light, capable of illuminating a space five hundred feet in diameter, and again the objects dimly seen in the former horizon become clear; but we find a still greater number of unknown objects in the much enlarged circle. So it is with the widening, enlightening power of education. A little learning fosters conceit; the horizon being small there are but few things that are unknown. Enlarge the horizon and the conceit diminishes — the wisest men are noted for their humility. Every enlargement of the horizon increases and extends the view, while it impresses the mind with how little relatively the wisest can know. An educated man has been described as one who has found out that he knows but little.

Instead of leaving one satisfied with a narrow horizon, or discouraged by the immensity of the field of knowledge,

it is the province of education to awaken a thirst for intellectual acquirement, to stimulate ambition for its possession, and to cultivate the power of pursuing it independently. The teacher that accomplishes these ends bestows the greatest boon upon his pupils, a far more important result than if he gives them great knowledge and fails to teach them to be self-directive.

Rosenkranz calls this the absolute limit. He says,¹ "*The absolute limit of education* is the time when the youth has apprehended the problem which he has to solve, has learned to know the means at his disposal, and has acquired a certain facility in using them. The end and aim of education is the emancipation of the youth. It strives to make him self-dependent, and as soon as he has become so, it wishes to retire and leave to him the sole responsibility for his actions. To treat the youth after he has passed this point still as a youth, contradicts the very idea of education, which finds its fulfilment in the attainment of this state of maturity by the pupil. Since the completion of education cancels the inequality between the educator and the pupil, nothing is more oppressing, nay, revolting to the latter than to be excluded by a continued state of dependence from the enjoyment of the freedom which he has earned."

When one considers that a large proportion of pupils leave school at twelve years of age or earlier, the importance of training children to be able to direct their own future educational development becomes evident. This object should be clearly in the minds of the teachers of the elementary schools, else the great majority of the people will never

¹ "Philosophy of Education," p. 49.

attain to it. The teacher that inspires the child with a desire for learning and equips him with the power of directing his own acquirement, has done the very best thing that can be accomplished in the school. It puts him in the way of attaining the complete emancipation of which Rosenkranz speaks. The work of the elementary teacher is thus shown to be the most important in the whole field of education, (1) because it alone reaches some eighty per cent of the whole mass of children that go to no other school; and (2) because it gives even to those who extend their course the inspiration, the impulse, the power of self-direction without which future study would be misdirected and inefficient. With the abundance of educational facilities at hand, the libraries, the lecture courses, the magazines and newspapers, the pulpit, the literary club, the intercourse with cultured persons — there is no limit to the development of one who has learned how to direct his intellectual energies.

Advantages of Superior Education. — Possessing the capacity and the material means, and having acquired the power of self-direction, is it wise to secure an advanced education? Does it pay? is the question that Americans are apt to ask. From an analysis of a list, given in "Who's Who in America," of 8000 persons who have achieved distinction in the United States, the following result is apparent:

1. "That an uneducated child has one chance in 150,000 of attaining distinction as a factor in the progress of the age.

2. "That a common school education will increase his chances nearly four times.

3. "That a high school training will increase the chances of the common school boy twenty-three times, giving him eighty-seven times the chance of the uneducated.

4. "That a college education increases the chances of the high school boy nine times, giving him 219 times the chance of the common school boy, and more than 800 times the chance of the untrained." Of the nearly 8000 notables given in this book, 4810 are full college graduates.

Dr. William T. Harris thinks that the chances of success of the properly educated person in both character and attainment, are as 250 to 1 over the uneducated. Investigations have shown that in the ministry, law, medicine, teaching, journalism, and even in merchandising, manufacturing, and other business enterprises, education greatly increases a man's likelihood of success. James M. Dodge shows by careful statistics that the expenditure of time and money for an advanced education adds to the potential value of a man and increases his earning power far beyond the investment. He says,¹ "I have endeavored to find out what the money investment is in a boy of sixteen. The census reports and statistics from abroad cannot possibly give all the items. It is so difficult to decide upon the class to which any individual belongs. I feel satisfied, however, that the world at large places a very accurate value on any commodity, and labor certainly is a commodity, and the community in which we live says that a sixteen-year-old lad in good health entering a shop is worth \$3.00 per week, and, consequently, his potential or invested

¹ Address before the Williamson Trade School, Philadelphia, on "The Money Value of Training."

value is \$3000. We will, therefore, establish this as his value." After a course of careful reasoning, amply illustrated, he concludes, "A trained man at twenty-five years of age has a potential value of \$22,000 (earning \$22 per week), or in nine years he has increased his value \$19,000, or at the rate of \$2100 per annum, as compared with \$1300 per annum for the untrained man (who may be expected to earn only \$13 per week at twenty-five years of age), and with this manifest additional advantage over the untrained man — that his line has no limitation, so far as we can see."¹

But the money value of education is by no means the most important. Education increases a man's influence and his usefulness. In general, it may be asserted that the most useful and influential persons of a community owe their superiority to education rather than to wealth, social position, or any other means.

Then, too, must be considered the personal satisfaction, the power to comprehend and enjoy life, and make the most of it by those whose minds have been opened to the rich things of the world through the instrumentality of education. The power of enjoyment and appreciation is increased through the refining, broadening, and uplifting character of knowledge, and through the revelation of one's own capacities. The world of books, of science, of art, of nature, of the works of God and man is opened to the soul, and the invitation to enter, possess, and enjoy is understood and accepted.

Education invites a man to make the most of himself and shows him how to do it. This attainment is his duty as well

¹ See also Barbe, "Going to College."

as his privilege. Hence the work of the teacher, who stimulates the youth to desire education and take advantage of his opportunities, who guides him in that work and unfolds unknown possibilities to him, who arouses his self-activity, is the greatest work in which man can engage. And the State through its generous support of schools, and private benefactors through their munificent gifts have made it possible in this land for every boy and girl who possesses the capacity, and who desires it, to gain a liberal education.

Summary

I. Education starts out with the assumption that the child possesses capacity, and this alone limits his possible achievement. Training should be along the line of the child's particular endowment, but the teacher must not be hasty in determining the special field in which the child is best fitted to work.

II. Without self-activity on the part of the pupil all attempts to development are futile. This activity, however, must be aroused by the teacher through instruction. The teacher must stimulate and guide the child, but never do for him what he can do for himself. The end ever in view must be the systematic direction of the child's activities so that he will have to employ himself and exercise self-control.

III. A second limit of education is found in the material means at command, such as time and money. This, however, can be overcome if there is determination and zeal coupled with capacity.

IV. *The final limit is reached when the individual has acquired the ability to direct his own education. He then is emancipated, and is able to continue his development even if he cannot attend school or employ teachers. The attainment of this end is of far more importance than much knowledge and the possession of many facts. Wide culture increases the influence, the efficiency, the success, and the power of enjoyment of those possessing it.*

CHAPTER XII

FACTORS IN THE EDUCATION OF THE CHILD

References. — *Educational Review*, Vol. XXIV; *Ogden*, Science of Education; *Seeley*, Foundations of Education; *Butler*, The Meaning of Education; *Spencer*, Education; *Wilson*, Pedagogues and Parents.

Primitive Education. — Many are disposed to relegate the work of education entirely to the school, — the secular school for secular education, and the Sunday school for religious education. This is a conception that too often prevails. In primitive times the home undertook the whole work of training the young. There were neither schools nor teachers in the modern sense, nor were these needed. In the simple nomadic life the father tended his herds, followed the chase, and moved his tent from place to place as was necessary to seek pasturage for his flocks. Naturally his son went with him and obtained all the education needed for the simple life they lived, through associating with and assisting his father. How to strike tent, to sling the stone or hurl the spear in battle or chase, how to prepare the skins of beasts for clothing and their flesh for food, how to defend himself, how to meet and conquer his enemies, were lessons he learned from his father in daily association, and they constituted all the education he needed. So, too, the daughter learned the ordinary duties of her home from her mother. But as civilization advanced, as the simple gave way to the more complex form of life in the home and in the vocation, as new demands were

made upon parents and new duties had to be assumed by them, they could no longer meet the educational requirements of their children and they were obliged to seek some other agency for their education. Hence the necessity for schools and teachers. Under the strenuous requirements of modern life in business, in the professions, as well as in society, neither the father nor the mother, even if well qualified to do so, can devote the necessary time for the education of their children. In addition to the increased demands upon the parents' time in meeting the duties of life, there are also greatly increased educational requirements, which can be satisfied only by employing persons specially prepared to teach, and by devoting a great deal of time in order to fulfil these requirements.

But with all the multifarious duties of modern life that crowd upon parents, there can never be an excuse for turning over the whole matter of educating their children to others — the duties of parentage involve the training, as well as the nourishing, clothing, and housing of their children. While, as we have seen, in the primitive period of the world's history, the whole duty of education could be assumed by the parents, they should not go to the other extreme at the present time. Attempt will be made later to show what agencies enter into the education of the child and the duties that should be assumed by them respectively.

Importance of Education. — The problem of the education of the young is one of the greatest problems that has ever commanded the interest and thought of mankind. Many of the greatest men that ever lived have devoted their

noblest thoughts to this question. Socrates, Plato, Saint Augustine, Charlemagne, Luther, Locke, Bacon, Rousseau, Comenius, Pestalozzi, Spencer, and many others, have added to the riches of the world's literature in their writings on this subject. And these works have mightily forwarded the progress of civilization. Upon the solution of this problem depends the future of the child, the home, the community, the State, and in the largest sense, the welfare of man himself. Education must teach the child his duty to his parents, to his comrades, to society, to his country, and to the world at large. It shapes the relationship of the home — between husband and wife, parents and children, brothers and sisters, master and servant, between the family and the outside world. It shows what one owes to the community, it teaches regard for the rights of others, awakens interest in public affairs, and leads to the practice of the Golden Rule in dealings with one's neighbors. It fosters genuine patriotism, informs as to the duties of citizenship, and makes peace-loving, law-abiding, duty-respecting members of the State, who are patriotic in peace as in war, who believe that municipal integrity is as essential as personal righteousness, and of the same character, and who are consequently the support and bulwark of the State. The problem of education recognizes that the material and the intellectual in man do not comprise his whole being, but it assumes that he is also spiritual, and unless this side of his life is developed the full work of education has not been accomplished.

There are at least five factors that enter into the education of the child, namely: *the home, the school, civil society, the State, and the Church*. Each has its duty to perform

which cannot be delegated to any other instrumentality without the child suffering in the completeness of his development.

1. *The Home.* — We have seen how in primitive times the home was obliged to take the full responsibility of education, and how under the existing conditions it was easy for it to bear that responsibility. Under modern conditions, this is impossible in most families. But the home cannot be absolved from its duty whatever the conditions. In the first place, the first five or six years of childhood belong solely to the home. The child must be trained to good habits, such as cleanliness, regularity in eating, caring for its personal wants. It also learns to use a language, and much future trouble will be prevented if it learns correct forms of expression. In the next place, it must not be forgotten that in this country the school has the child for only about five hours a day for something like two hundred days a year and for an average of about five years. This leaves by far the larger part of the child's time under the jurisdiction and influence of the home, even during its school life.

Again, with reference to the school itself the home cannot escape responsibility. It must see that the child attends school punctually and regularly; that it is provided with suitable books and other school material, and that it gives obedience to the necessary school regulations. And when the child is old enough to do home-work, parents must see to it that these tasks are performed. It is not the duty of the parents to perform these tasks for their children, or even to assist them, and no wise teacher expects this. Indeed, the teacher generally prefers that parents shall not

aid their children in their school work. The child is sent home with work that has already been explained and that should require no outside aid, work that is within his ability, and therefore aid from the parents is not desirable. It is the duty of the school to give the necessary instruction, to assign home tasks that are intended to fortify that instruction, and all that should be expected of the parents is to see that their children are faithful in performing their work, devoting a reasonable amount of time thereto. In this way the parents will have a part in the intellectual education of their children, but will not be burdened with its details. This belongs to the school.

If the intellectual development cannot be neglected by parents, how much more must their attention be given to their moral and spiritual upbuilding, which also is an essential part of the education of every human being. Religious culture as such cannot be undertaken in the State schools, for the support of which the public are taxed; hence the obligation upon parents in this respect is doubly binding. The moral teaching carried on in the schools should be supplemented by work in the home. The Church, the Sunday school, the Young Men's Christian Association, and various other institutions may furnish religious instruction for the young, but they should only serve as aids to the home, where children are to be regarded as "Gifts of God," and in which teaching them their duty to God and their fellow-men is accepted as a sacred obligation as well as a blessed privilege. Where the home is a sanctuary in which instruction in God's Word and in personal duty toward Him is supplemented by the holy, pure, and consistent example of the parents, there is no

substitute for it in any other institution as a means of teaching genuine religion.

“Fads.” — It is perfectly proper that parents should hold the school responsible for its work. It is an institution created and supported by them, their children are committed to its care, and much of the future success of these children depends upon its efficiency. But parents should not be too ready to criticise the school. They should visit it, study its work, become acquainted with the teachers, enter into their plans, sympathize with their difficulties, and intelligently aid them in every possible way. They should realize that most teachers are earnestly seeking to be a blessing to the children under their care, and therefore are worthy of support rather than antagonism. They should also remember that the school must prepare the children for present civilization and present conditions, and that the requirements of even a generation ago will not suffice to-day. New discoveries and inventions have been made which have added greatly to the world’s knowledge; business methods have changed, and the curriculum of the school has necessarily been enlarged to meet the new conditions. The improvements of the school must keep abreast with the progress of the world, if not anticipate it. Besides this, greater knowledge of child development and of educational problems bear fruit in better methods of instruction and in a more rational course of study. For these reasons the common school course of study cannot be confined to the “Three R’s.” That reading, writing, and arithmetic should be thoroughly taught goes without saying, and it may be confidently asserted that they are

being better taught at the present time than at any period in the history of our schools. No teacher minimizes their value; but they are not the only subjects to be taught, nor even the most important ones. They are the instrument, the key that opens the door to the great riches of literature, art, science, and other stores of knowledge.¹

2. *The School.* — The second factor in order of sequence is the school. In the ordinary conception of education, that of mere intellectual development, the school is the most important agent. But thinkers regard education as the development of the whole man, physical, intellectual, moral, and spiritual, as has already been shown in Chapter II, and with many children, it must be admitted, about the only hope of their spiritual, as well as secular salvation, lies in the efficiency of the school. It is certainly true that the other agencies that largely influence the child in his environment are so demoralizing, in many cases at least, that if the school does not save him there is little hope for him. It is a blessed truth that many a man has been saved to usefulness and honorable life through the instrumentality of a devoted teacher who established him in good habits and inspired him to right living in spite of the evil surroundings of his home. This is one of the compen-

¹ In a comparative study of results in spelling, arithmetic, writing, etc., in 1846 and 1905, made in Springfield, Mass., it was found that even in the "Three R's," the school of the present time is far ahead of the old time school, — the percent correct being as follows:

	1846	1905
Spelling	40.6	51.2
Arithmetic	29.4	65.5

See New York School Journal. Vol. LXXI, p. 589.

sations of the life of a consecrated school teacher, and it makes his sacrifice worth while even if the world fails suitably to recognize his efforts.

But the school is clearly responsible for instruction in the conventionalities of education, such as, reading, spelling, arithmetic, geography, history, etc. If the school fails in this work the parents certainly should call it to account. The teacher is professionally prepared to do this work, the school is equipped for it at great expense, and time is set apart for its accomplishment. Intellectual instruction must ever occupy the chief part of the school's time, although the moral and physical must not be neglected, inasmuch as they are so essential to success. The school takes the child at five or six years of age, keeps him in charge for perhaps five hours a day, and superintends, in a measure, his intellectual work outside of these hours. This continues for a period of years. Because of the sacrifices made by parents, because of the expense devoted to the maintenance of schools, certain definite results may be demanded. While the school thus becomes the chief instrumentality of education, it may be again remarked that it is not the only one.

Dr. Harris says:¹ "It is important to know the exact province of the school, and to see that it is only one of the five forms of education that civilization provides for man. Much of the carping criticism leveled against schools, in times of financial distress or general social depression, is based on the assumption that the province of the school is *all* education instead of a small but important fraction of it. The school may do its share of correct education,

¹ Rosenkranz, "Philosophy of Education," p. 58.

but it cannot correct the effects of neglect of family nurture, nor insure its youth against evil that will follow if civil society furnishes no steady employment, no opportunity for settled industry, and the State no training into consciousness of higher manhood by its just laws, and by offering to the citizen a participation in the political process of legislation and administration, carefully guarding its forms so that its politics does not furnish a training in corruption. Nor can the school insure the future of its pupils unless the Church does its part in the education of the individuals of the community.”

Upon the school, then, is laid the duty of the systematic and scientific intellectual development of the child almost entirely, and of a large part of the physical and moral education, while the religious training must largely be left to other instrumentalities.

3. *Civil Society.* — There are two aspects in which civil society acts as an educative influence: (1) in the trade or vocation that one follows, and (2) in the effect of the environment in which one lives. As to the vocation pursued, the school may lay the foundations which prepare the way for the final preparation for life work, but it cannot make the preparation itself. Manual training and trade schools do much to fit for mechanical pursuits, technical institutions give a higher form of preparation, but even they cannot complete one's education in this field. Their efficiency is made the greater by an equipment of tools, machines, and apparatus, which the student is required actually to use and become familiar with, but even these experiences, at best, can only prepare him to grapple more easily with the actual problems of his voca-

tion. He is still in his apprenticeship even after completing the most extended school course, and must serve under the direction of a master who has practiced in the real work of his calling. The same is true in the professional world. The best courses in the medical college must be supplemented by hospital work. Otherwise the practitioner in his future experience would be seriously handicapped. The normal school course, however much of theory and practice it may offer, however careful it may be in presenting to the young teachers the problems of education, at the most, can only open the way to that larger conception of their work which comes from actual experience in the schoolroom and in life.

The vocation itself must be taken into account in summarizing educational effects. Thus the teachers of a school refused to recommend their boys as butcher's apprentices, or as waiters in restaurants, not because these callings in themselves are dishonorable, but because they tend to brutalize and debase the nature. Some vocations ennoble the nature, broaden the mind, elevate the thoughts, sweeten the life, arouse the benevolent tendency, stimulate the spirit of altruism in man, while others produce the opposite results. Therefore the vocation is a most important and subtle educational influence.

In the second place, society in its broader sense exerts a powerful influence upon human development. Parents recognize this in the selection of places of residence in which to rear their children. The atmosphere that prevades a community — social, intellectual, moral, religious — has a marked effect in forming the ideals of those brought up in its midst. To live in a community where there are

superior educational advantages has a tendency in itself to foster a desire for learning. This is shown by the large number of those who go to college when they are brought up under the shadow of such an institution. Even the presence of a good high school, or a private academy, is a great stimulus to advanced education, and its effect is felt not only upon those who take its courses, but also upon their parents, and upon others who come within the radius of its influence. Many mechanics and laboring people of a college town are elevated by the work of the institution through free lectures, through the pervading educational spirit, through contact with professors and other people of superior intelligence, and through the various activities that characterize a small college town. And through these influences many of them are led to have their children avail themselves of the opportunity that lies at their door, and which they have learned to appreciate.

Then the moral tone of society has its effect upon the education of youth. If vice predominates so that it is popular, it becomes very easy to drop into evil practice. One has only to compare the situation in a new frontier town where the saloon, gambling dens, and other places of evil flourish, and where a low standard of moral living prevails, with a settled community where evil places are discountenanced, where churches abound, and where a healthful moral sentiment rules. The pure life of every man and woman is an educative influence that cannot be measured, and the higher the social position occupied the wider is that influence. As the moral tone of the community is so important an agency in education, parents, when they are able to do so, select their places of residence with reference

to this condition fully as much as with reference to the physical health. The ideal place for a home, from an educational standpoint, is that in which there is not only healthful physical environment, but also society of high moral tone, with suitable means of intellectual growth, together with the inspiring spiritual life exemplified by Christian manhood and womanhood. These influences, though subtle and difficult to measure, are none the less real and vital to education.

4. *The State.* — It is not the purpose here to discuss the office of the State in assuming control of education, in building schoolhouses, in training and licensing teachers, in supervising the schools, in directing and administering educational forces, and in taxing itself for the same. This is accepted as the duty of the State, and is recognized as essential in order to secure its own safety and perpetuity. Especially is this true in a republic where the final responsibility of government rests upon the individual citizen. In no country in the world is the burden of public education more cheerfully assumed than in ours. It is universally understood and accepted that our schools must be maintained, their standard raised, and no expense spared to keep them in touch with the mighty progress of the age. Upon this question there is no dissenting voice, the nation is a unit.

But there is another sense in which that institution which we call the State is a tremendous force in education. There is "the political education into citizenship, resulting from obedience to laws and participation in making and sustaining them." By the enactment and enforcement of just laws, by inspiring respect for its authority, by demanding

strict integrity and faithfulness on the part of its officials, by proper economy in public expenses, by dispensing the funds committed to it by the people wisely, honestly, and judiciously, the State gives an example and teaches lessons that have a positive influence upon the individual and upon the community. And where the State is wanting in these practices, evil lessons are correspondingly taught. Striking examples of the evil effects of pernicious municipal government unfortunately are not lacking in our land. The presence of a ring in a city government, the rule of "bosses," the existence of dishonest men looting the public treasury for private ends, rewarding subservient followers and punishing opponents, cannot fail not only to exert a most debasing influence upon public morals, but also to have a baneful effect upon the young.

So long as public servants do not feel bound to render adequate service in the discharge of their duties the same as if employed by private concerns; so long as robbing the public is considered less a crime than robbing an individual; so long as a different standard of ethics exists with reference to a man's attitude towards public and private matters, a false notion of right and wrong prevails that is sure to work evil with the youth. When the notorious Tweed debauched all the branches of the government of a great city and seemed to prosper thereby, the worst effect was not upon those directly corrupted, nor upon the suffering public who were robbed, but upon the great mass of young people who were dazzled by the immediate success of a career of crime, and whose moral sense was vitiated thereby. Without doubt many a young man was led into evil practice by the prevalence and success of crime on the part of those whose

duty it was to administer just laws. Righteousness in high places has a tendency to foster righteousness in the individual, while an evil atmosphere in places of authority likewise stimulates evil. And these things must certainly be reckoned with in education.

Patriotism. — True patriotism can never be fostered in a community in which there is lacking strict integrity in the discharge of public duty, in which office-holders regard their places as opportunities for graft rather than a sacred trust committed to them in order that they may serve their country, and in which the standard of righteousness is other than that of God's law. It is useless to deliver orations on the Fourth of July boasting of our great country and our free institutions, it will not avail even to float the flag over the schoolhouses and sing patriotic songs in the schools with the expectation that patriotism will be the result, if the children are confronted with dishonest practices of office-holders and party leaders, such as buying votes, looting the treasury, corrupting legislation, and failing to render honest service. Civic righteousness must be the prevailing tendency if a healthful, genuine, and inspiring patriotism is to be fostered in the youth of our land.

Again, the enactment and enforcement of just and wholesome laws have a salutary effect upon the ideals of a people. Respect for and obedience to the laws of a State is an important part of that education which prepares for good citizenship, and this is a lesson that American youth need to learn. The State owes it to itself in order to insure its stability and perpetuity to make only just and equitable laws, and to insist upon their honest and faithful enforce-

ment. There are too many laws on the statute books that are wholly forgotten or totally ignored. As a consequence evasions of the law are common, not only by criminals and large corporations, but also by citizens of every class, and gross indifference to the requirements of laws that interfere with the wishes of individuals is far too common. This is a result of the negligent enforcement of law by those to whom this duty is committed until the sacredness of law has lost its force. As an example of this tendency, one has but to note the violations of speed laws concerning the automobile, by which the rights of many are disregarded and their lives endangered.

Strict integrity in public affairs as in private, faithful and honest discharge of public duty are essential to the well-being of the nation, and in securing such a condition the State becomes a mighty factor in the education of youth. If this is wanting, it will be practically impossible for the home and the school to counteract the evil emanating therefrom, and to implant in youth those high ideals of life and citizenship which are particularly essential in a republic, and which are necessary under any form of government. Both the home and the school can inculcate the spirit of obedience to authority, but the State must supplement this by an honest and rigid performance of its duty. This is not an infringement of the liberty of the individual but rather a protection of it. The highest ideal of liberty is inculcated when the individual is taught to respect the rights of others and to submit to constituted authority. The disregard for law which some parents rather approvingly denominate as the "Young America" spirit, is neither wholesome nor sane. It is often the asser-

tion of a spirit of lawlessness that is not in accord with republican institutions, which are the highest form of government because it is government "of the people, by the people, for the people." The true spirit of "Young America" is the embodiment of respect for the laws which the people themselves have made, and an appreciation of a dearly bought liberty. In the enjoyment of that liberty they must never forget that others, too, have equal rights with them. Thus the State in the broadest sense becomes an important factor in the education of a people.

5. *The Church.* — We shall not here discuss the function of religious education, that subject being treated in a later chapter. That religious education is essential to a complete manhood is universally accepted. A great responsibility lies upon the home in respect to religious training, for, in a State like ours, where Church and State are separate, the public school, supported by general taxation, cannot undertake this work. The Church must supplement the religious training of the home, and, indeed, in many cases owing to parental neglect, it is obliged to assume practically the whole work of religious teaching.

Attention is here called to the subtle, constant, ever-pervading, and powerful influence of the Church as an instrument of education through its presence rather than through its instruction. Every church, every chapel, every Christian hospital or institution, every minister of the gospel, every consistent Christian man or woman, is a silent, mighty, and salutary element in the education of a people blessed with their presence. Who would live in a community destitute of these agencies! Every man that comes in contact with them is consciously or unconsciously

affected by them. Life and property are more secure, peace is less disturbed, happiness is assured, and the rights of the individual are guaranteed by the presence of the Church and what it represents. Remove the Church from a community and not only would vice and crime lift their monstrous heads, but general ignorance also would increase. A New York police commissioner recently said, "Were it not for religion and the faith behind it, there are not enough policemen in all the world to keep order in the city of New York." If this be so, every citizen is under obligation to support religious institutions, even if he does not attend divine service. It reduces his taxes, restricts crime, and therefore adds materially to the financial value of his property, while it makes life safer.

Every person living within the influence of the Church is affected thereby even if he never enters its sacred edifices. It engenders respect for the Sabbath, compels vice to hide its head, lessens crime, on the one hand; while on the other hand, it establishes institutions of mercy, elevates moral sentiment, gives correct ideas of justice, stimulates right living, encourages every good word and work, not to mention its more direct and holy influence upon the lives of those who accept its ministrations in their own personal experiences and lives. Hence this institution must be counted as one of the educational agencies both directly and indirectly, and its silent, ever-pervading, holy influence should be cherished and its work sustained.

It may then be asserted that each of these factors — the home, the school, civil society, the State and the Church—must enter into the work of education, that each has its part to perform that cannot be undertaken by the others.

Let each do its work, none attempting to shirk responsibility, but all working together in harmony, sustaining, upholding, strengthening one another. Then will result the highest type of manhood and womanhood, individuals well-rounded in character, efficient in their callings, conscientious, moral, patriotic, and God-fearing.

The school, upon which the principal burden of education is laid, is ready to discharge that responsibility according to the wisdom and strength given it. But it has a right to expect the aid and coöperation of each of these other factors. And if in individual cases the final result falls short of the ideal manhood, the teacher may justly feel that others must share the responsibility of that failure.

Summary

While upon the school is laid the chief responsibility of the education of youth, there are four other agencies that must share this work, namely, the home, civil society, the State, and the Church. Each must perform its own special function in a right manner in order that the children may develop into perfect manhood and womanhood.

CHAPTER XIII

PHYSICAL DEVELOPMENT

References. — *Overton*, Applied Physiology; *Anderson*, Gymnastics; *Lukens*, The School-Fatigue Question in Germany, *Educational Review*, March, '98; *Burnham*, Fatigue, New York Teachers' Monograph, Vol. III, No. 4; *Spencer*, Education; *Maclaren*, Physical Education; *Lagrange*, Physiology of Bodily Exercise; *Wood*, Brain-work and Overwork; U. S. Commissioner's Report for 1898.

A Sound Mind in a Sound Body. — The first six years of the child's life are devoted chiefly to physical growth. The child must learn to walk, to use its hands, to control bodily activities; it must acquire regular habits of sleep, of taking food, of caring for its physical needs. Its physical development is brought about chiefly through play. Its very restlessness, its ceaseless activity is a means which nature provides for developing the physical powers. The child that is inactive is ill either in body or mind, or both, for physical activity is a law for the normal being, a law which continues in force as long as the body is coming to maturity, and which is closely allied to intellectual growth all through life.

Locke taught the principle, "A sound mind in a sound body," asserting that there can be no complete and successful mental development unless there is corresponding physical development. While he himself struggled with disease all his life, he believed that far greater success would have crowned his efforts had he possessed a sound body. He therefore laid down a set of rules as to the food, sleep, physical exercise, and clothing of children.

Montaigne writes, "I would have the youth's outward behaviour and mien and the disposition of his limbs formed at the same time with his mind. It is not the soul, it is not the body, that we are training up, but a man, and we ought not to divide him." Rousseau says, "Exercise, therefore, not only the physical strength but also the senses that direct it, make the best possible use of each, and verify the impressions of one by those of another. To learn to think, therefore, we should learn to exercise our limbs, senses, organs, since these are the instruments of our intelligence, and in order to make the best use of these instruments it is necessary that the body which produced them should be robust and healthy."

"The laws of health are the laws of God, and are as binding as the Decalogue," asserts Colonel Parker. Dr. Munger declares that, "You will never get fine thought out of a coarse body. Nor less will you get a sound thought out of an unsound body. The bodily condition strikes through and shows itself in the quality of the thought. A vast amount of the poor, illogical, insipid, morbid, extravagant, pessimistic thought that finds its way into books and sermons and conversation has its origin in poor bodies and bad health. The body lies at the basis of success in all respects. A poor body means a poor life all the way up, even to the highest stages of spiritual life. Any religious experience that is connected with a weak or diseased body is to be regarded with suspicion. There can be no healthy thought, no normal feeling, no sound judgment, no vigorous action, except in connection with a sound body."

G. Stanley Hall believes that morals are largely dependent upon the condition of the body. "I plead strongly for

physical education on the ground of good morals. I believe that the temptations that assail young people nowadays are to quite an extent those that would not overcome them if their muscles were strong. They are of that insidious, corroding, undermining kind that are somehow or other so prone to creep in as the contractile tissues become relaxed and habitually flabby."

The usefulness of that apostle of American education, Horace Mann, eminent though it certainly was, undoubtedly was seriously impaired and his life shortened by a weak body, caused by ignorance of the laws of health. He says, "At college I was taught the motions of the heavenly bodies, as if their keeping in their orbits depended upon my knowing them, while I was in profound ignorance of the laws of health of my own body. The rest of my life was, in consequence, one long battle with exhausted energies."

"Mind and body should be viewed as the two well-fitting halves of a perfect whole, designed in true accord mutually to sustain and support each other, and each worthy of our unwearied care and unstinted attention, to be given with fuller faith and more reverent trust than they have who would argue that He who united in us our twofold nature made them incompatible, inharmonious, opposed. No, no; even blind and blundering man does not yoke two oxen together to pull *against* each other. Mind and body can pull well together in the same team if the burden be fairly adjusted."¹

¹ Maclaren, "Physical Education," p. 34.

Nourishment. — If the child comes to school ill-fed and ill-nourished, it is certain that he cannot perform the tasks that may be expected of one in normal condition. It has been observed that in times of great strikes, when there is a scarcity of food in the home, and uncertainty as to the necessary supplies in the families of the strikers, that there is a marked diminution in the ability of their children to perform the ordinary school requirements. Doubtless the lawlessness and agitated state of mind prevailing, affects not only the discipline of the school, but also the ability to study. But the chief cause of the falling off in work is found to be the depleted condition of the body. Children of the extremely poor are ever placed at a great disadvantage from this cause. London, Paris, Berlin, and other great cities provide food for children of the poor, in order that they may be able to do better school work. It is recognized that it is useless to expect good intellectual work if the body is poorly nourished, hence the expenditure of public funds for food is ultimately an economy in the matter of education.

Splendid school buildings, modern apparatus, efficient teachers call for large expenditure of money. All of these things avail nothing if the child is not in condition to be taught. Therefore the State may well consider the question of the physical ability of the child to study as dependent upon nourishment, as it already considers the matter of the eyesight, and contagious diseases among children.

That weakness of the body affects the mind, is shown by the decreased mental power caused by severe illness, in feeble-minded children, and in forms of insanity. Long-continued illness, like a case of typhoid fever, pneumonia,

or consumption, not only reduces the vigor of the body, but also that of the mind, which shows itself by peevishness, childishness, and other evidences that do not appear when the body is sound. Mental power returns only with the restoration of health. In the case of the feeble-minded, it may be stated that the length of their lives is generally inversely to the degree of their weak-mindedness. Idiots are usually short-lived. Authorities state that the average length of life of those classed as feeble-minded is about twenty-one years, while that of mankind generally is about forty. And the efforts of institutions for the feeble-minded in stimulating their minds, as well as caring for their bodies, have resulted in increasing the length of their lives by about three years within the last two decades. One rarely meets a person destitute of mind, an idiot, who reaches maturity.

The same law holds in insanity. Violently insane persons seldom live more than four years, usually much less than this, while mild cases may live many years. It is certain that there is a close relationship between the mental and the physical activities, each mutually supporting and affecting the other. Of course there are exceptional cases where these laws do not hold. Rosenkranz remarks, "*Mens sana in corpore sano* is correct as a pedagogical maxim, but false in the judgment of individual cases; because it is possible, on the one hand, to have a healthy mind in an unhealthy body, and, on the other hand, an unhealthy mind in a healthy body. Nevertheless, to strive after the harmony of soul and body is the material condition of all normal activity. The development of intelligence presupposes physical health."

The care of the human body is then essentially an educational question. Knowledge of food, clothing, cleanliness, fatigue, and rest, as well as other matters pertaining to the body should be possessed by the teacher and taught to children. While works on physiology and hygiene must be consulted for details, the subject is so important to pedagogy that a discussion of elementary principles will not be out of place.

1. *Food.* — The American people generally are ignorant as to the nature, use, and character of foods. Hot-breads, prepared breakfast foods, sweetmeats, and mixtures totally incongruous and harmful are swallowed with impunity. As a result, perverted and unnatural appetites are created, indigestion invited, and stomach and intestinal disorders have become most common. These conditions invite gross forms of intemperance in eating and drinking in order to satisfy the unnatural craving that has been created. Most states in the Union require instruction in the public schools as to the nature and effect of alcohol upon the human system. A much more salutary effect would be produced directly in furthering the cause of temperance, as well as in establishing the health of the people, if such teaching were preceded, accompanied, and supplemented by intelligent and practical instruction as to the nature and use of foods. For there is intemperance in eating as well as in drinking, possibly fully as serious when one considers the far more general character of the former, and that it very often leads to the latter.

Such intelligent instruction is carried on in every school in Germany. I once witnessed the instruction given to a class of six-year-old boys in Leipsic on the subject of

bread. The teacher asked, "How old must bread be before it is eaten?" The answer was, "Not less than twenty-four hours." It is instruction of this character that has taught the German people to abstain from the use of fresh bread, and of other harmful foods, as well as to know the nature of foods that may be mixed and those that may not be. As a consequence of such instruction, one rarely meets with a dyspeptic among that people, and gross forms of drunkenness are by no means so common as in this country. The use of candies and sweetmeats is discouraged, the amount of sugar consumed being less than one-fourth per capita of that consumed in this country.

Instruction should be given not only as to the kind of food essential to good health, but also as to the quantity. Physicians assert that most people eat too much rather than too little. Without doubt the death or permanent disability of so many men in middle life is owing, not so much to the strenuous life they live, as to the eating of highly-seasoned, incongruous, and unsuited foods, and eating them at the highest possible rate of speed. In this respect we need to learn the lesson of the "simple life," thereby increasing the capacity for labor, lessening the ravages of disease, fortifying the system against its attacks, and thus materially lengthening life.

The purpose here is to call attention to the necessity of such instruction as a part of practical education. Surely there is none more practical, for the right food is necessary for health, and without health it is impossible to reach the highest intellectual development. The details as to foods will be found in every good physiology; happily recent

works on this subject are giving attention to this vital question.¹

2. *Clothing.* — The primary purpose of clothing is to protect the body against the loss of heat and keep it at normal temperature. Hence the material chosen should be such as to prevent the escape of bodily warmth in cold weather, and allow it in warm weather. Wool, being a poor conductor of heat, is therefore more suitable for the winter, and linen and cotton being good conductors are selected for summer wear. “The amount of clothing which one needs depends largely upon a person’s occupation and previous habits. A day laborer seldom needs an overcoat, but works in his shirt sleeves, while a clerk would be chilled were he to step outdoors without extra wraps. It is a mistake to think that by exposure to the cold one can always become hardened to it. It is true only when a person takes active exercise and lives out of doors continuously. The body cannot adapt itself to the sudden changes from hours spent in a warm room to an hour or two in the cold air. Enough clothing should be worn so that the body does not feel chilled on entering the cold air.” Clothing, like food, is essential to keep the body at its normal temperature, without which health cannot be maintained.

Every individual should understand the danger of exposure to draughts. Colds are taken, pneumonia invited, and diseases contracted which may be difficult of removal, through sitting in a draught. A few moments in a draught may do the deadly damage, while consequences arising from a stuffy room are not so immediate. Because the

¹ I call especial attention to Chapters XII and XIII of Overton’s “Applied Physiology, Advanced,” on “Animal and Vegetable Food.”

draught is pleasant to one suffering from heat, careless and inconsiderate persons take chances that often involve later suffering. Two mothers with sleeping babes in their arms, entered a trolley-car about nine o'clock one October evening. They sat with the windows open in front of them and a perfect hurricane blowing upon the faces of the babies when the car was in motion. They seemed to be utterly ignorant of the fact that they were exposing their offspring to deadly danger. The ignorance and indifference of most people in regard to this matter are appalling. Children should be trained to avoid draughts whether in a car, a public hall, the home, or the schoolroom. Especially dangerous are draughts when one is freely perspiring. A moment's exposure will often result in a cold. Hence careful athletes cover themselves with wraps whenever a respite in a game occurs, even though it be but for one or two minutes' duration.

3. *Cleanliness*. — Rosenkranz says, "Cleanliness is a virtue to which children should be accustomed for the sake of their physical well-being, as well as because, in a moral point of view, it is of great significance." It teaches good order and system, it inculcates a sense of fitness of surroundings, and is disturbed when things are out of harmony. It is very essential that the schoolroom be kept neat and clean, that the walls be decorated, that school books and school apparatus be taken care of. There are æsthetic as well as hygienic reasons for keeping text-books clean and properly covered. Attention should be given to the cleanliness of person and dress of pupils. No school can secure the highest educational development, especially from the standpoint of morals, that fails to inculcate habits of cleanliness. And

wise instruction in this matter will not only lead the pupils to come to school clean and decent, but will also affect their home habits and life. Where the sentiment of the school demands neat but inexpensive clothing, and cleanliness of person, every child, whatever be his home environment, will be affected thereby and gradually acquire the prevailing habits. Definite instruction as to the manner of keeping clean and the physical and moral benefits to be derived therefrom, should be patiently given to all children, in addition to the good example set. The school that neglects this duty cannot attain to a high standard of morals. Every school should be provided with such accommodations as modesty and decency require, and it is incumbent upon the teacher to insist upon strictest cleanliness for hygienic as well as moral reasons.

4. *Fatigue and Rest.* — A careful study of fatigue has revealed some notable results. For instance, Wagner found that the effects of fatigue produced by various subjects may be represented as follows: Mathematics (higher), 100; Latin, 91; Greek, 90; history, 85; geography, 85; arithmetic, French, and German, 82; natural science, 80; drawing and religion, 77. This table would suggest that as a change from one subject to an easier one serves, temporarily at least, to lessen and relieve fatigue, the arrangement of the daily schedule of work should be based upon the principle of alternating the easy with the difficult subjects. It certainly proves that the arrangement of the program of studies requires careful thought.¹

There are certain signs of fatigue that are manifest to the

¹ See chapter on "The Daily Program" in "Foundations of Education."

casual observer. Some one has outlined these signs as follows: "*Physical signs* — (1) angles of mouth depressed, (2) furrows across the forehead, (3) eyes wandering, (4) coloration beneath the eyes, (5) white lines around the mouth, (6) bluish spots on cheek and neck, (7) pulse unusually slow or rapid, (8) frequent attacks of headache, (9) awkward position of body, (10) neurasthenic voice, (11) unnatural action, (12) general appearance of depression. *Mental signs* — (1) lack of ability to give attention, (2) weakening of perception, (3) unreadiness and inaccuracy of judgment, (4) diminishing power of insight, (5) loss of sensitiveness, (6) lack of self-control, (7) lessened work-rate, (8) lengthened reaction time, (9) deep sense of misery in the morning, (10) one or more insistent ideas which cannot be thrown off."

It must be admitted that these manifestations, especially of the latter, are not always chargeable to fatigue. They may be caused by lack of interest, by the dull manner and want of enthusiasm of the teacher, by an unnatural method of presentation of the subject, by ignorance of the subject-matter on the part of the teacher, or by an inherent dislike for the subject on the part of the pupil, which causes him to seem bored. But generally speaking, the signs above given are evidences of fatigue.

True fatigue must not be considered as unnatural, or even undesirable. It presupposes activity, which is essential to human development, both physical and mental. Proper and healthful fatigue is followed by sweet and refreshing sleep. The laborer who drags his tired limbs to his home at eventide after a day's hard work rarely suffers from insomnia. The child that has been active all day in play falls into

slumber as soon as he touches his bed at night. Over-exertion and over-weariness are to be guarded against, but not that healthful weariness which is the natural result of physical or mental activity. Every one should work enough to get tired. The body will be made healthier thereby, the mind happier and more contented, and rest sweeter. But overwork exacts an inevitable penalty. It may be sleeplessness — “I am too tired to sleep,” is a common expression; it may break down the health, it may bring the victim prematurely to the grave. A sure test as to the sufficiency of sleep is found in the answer to the question, “Are you rested when you get up in the morning?” Many a man has succumbed to the inexorable laws of nature far too early in life because he has “burned the candle at both ends,” because he has set too hard a pace. Broken health or death is the fate of many who might have been vigorous and useful for many years had they obeyed the laws of health, husbanded their strength, and allowed fatigue to be followed by suitable and complete rest.

Again, it has been remarked that “an understanding of the laws governing overwork, and the penalties of over-exertion should be of the utmost value to every student and worker. When a man is tired he has, either by inactivity or over-activity, committed a chemical, physiological, and psychological violation of the laws of the human economy, and is then in no condition to withstand the wear and tear of life. Fatigue is the result of labor, and as such is a periodic symptom with which every healthy person should be familiar. It is one of the laws of organic life that periods of relaxation shall succeed periods of activity. The heart itself is normally in repose for about one-third

of the time consumed by each beat — a fact in which there is something peculiarly suggestive, since it is generally agreed that about one-third of the twenty-four hours should be devoted to sleep. Life itself is made up of a series of vibrations, in which tension and rest succeed each other. The heart vibrates about seventy times per minute; the vibrations of the respiratory organs occur about sixteen times within the same period; while the vibrations of the whole organism may be said to complete their cycle once in the twenty-four hours.

“An abnormal fatigue, a state approaching exhaustion, occurs when one attempts to alter nature’s rhythm, when the hours of tension are made to encroach upon those which should be devoted to rest, when brain, and muscle, and nerve are driven to the furthest exertion. Fatigue of the kind known as over-training results, in the case of the athlete, in heart weakness and shortness of breath; while the long-continued fatigue occasioned by excessive application to study, or to business or professional pursuits, results often in nervous prostration, and not infrequently lays the foundation for paralysis.”

A change of occupation may rest some muscles that have been overworked while it brings into activity other muscles that have been idle. A similar result is also true in mental work. But absolute relief from general fatigue can only be obtained by rest.

Dr. Lukens says, “Change of work in school is, nevertheless, undoubtedly advantageous. In the first place, the interruptions give a time for recreation; secondly — and this is the most important reason — the school subjects do not all require an equal effort of attention and an equal

expenditure of energy. After a difficult lesson an easy lesson will afford an opportunity for a partial recovery from the fatigue previously produced. The change of work, therefore, must not be merely a change of subject, or even a change of occupation, but a change in the difficulty of the task. Easy and difficult must alternate. Thirdly, we may obtain refreshment by change of work, on account of the fresher mood with which we turn to new work. Of course this change must not be too frequent or sudden; in that case it becomes an unpleasant disturbance, owing to the difficulty we feel in going from one mood to another. In order to work well we must gain the necessary absorption in the subject-matter, our feelings must harmonize, and our thoughts directed toward the object. In this way we become 'warmed up' to a subject, and this warmth is all lost when we go over to an entirely different subject."

As sleep is the only complete restoration for fatigue, it may be asked, "How much sleep is necessary?" Doubtless some people require more sleep than others. A Napoleon may be satisfied with a daily average of four hours, while many others need ten. Children, who are active, need more sleep than adults. The average person needs about eight hours, and time devoted to sleep must by no means be considered wasted. It restores the body to its normal strength, refreshes and reinvigorates all the faculties, and prepares for the activities of a new day. Sleep is a great, an indescribable blessing, and the proper time devoted to it should not be begrudged.

As to the application of these principles to the school, Griesbach demands "(1) No scientific work in the afternoons; (2) later beginning of the school in the morning

(never before eight, the German schools often begin at seven in the summer); (3) abolishment, as far as possible, of school examinations; (4) reduction of home-work, and especially less mechanical learning by heart."

5. *Gymnastics*. — Left to itself the body is apt to acquire unnatural, and perhaps uncouth proportions, and lack that grace which is an evidence of perfect self-control. Therefore the physical body must receive special training. The whole man is to be educated, and if the body is not properly developed all the other powers are affected, as has already been shown. Gymnastics seeks to give the body grace of movement, self-control, and complete self-command. Indeed, Rosenkranz well remarks,¹ "The fundamental idea of gymnastics must always be that the spirit shall rule over its body and make this an energetic and docile servant of the will. Strength and adroitness must unite and become confident skill. Strength, carried to its extreme, produces the athlete; adroitness, to its extreme, the acrobat. Education must avoid both. All gigantic strength, as well as acrobatic skill, fit only for display, must be discouraged and so too must be the idea of teaching gymnastics with the motive of utility; *e.g.* that by swimming one may save his life when he falls into the water, etc. Among other things, utility may be the consequence; but the principle in general must always be the necessity of the spirit subjecting its bodily organism to the condition of a perfect instrument, so that it may ever find it equal to the execution of its will."

Physical exercises in general are usually classified as follows:

¹ "Philosophy of Education," p. 65.

a. Exercises of strength, requiring strong effort of the will, fixation of the chest, and straining of the muscles to the utmost. They include wrestling, and lifting of heavy weights, and are unsuited to children.

b. Exercises of skill, intended to train the power of coördination; they involve brain and nerve activity, with more or less muscular exertion. They include compound movements in calisthenics, work with apparatus, such as, the vaulting horse and horizontal bar, and are excellent for all ages up to and including the early years of maturity. They are carried to the extreme in manual training, performing on musical instruments and handicraft work generally.

c. Exercises of quickness, requiring the repetition of similar movements in the shortest possible time, resulting in very great activity of heart and lungs, and, when carried too far, temporarily exhausting these organs. They include racing in all its forms, running, climbing, etc. In moderate degrees, they are excellent for children.

d. Exercises of endurance, requiring a moderate degree of exertion in movements kept up for a long period. They include such exercises as long distance racing. They are exhaustive in their effects, particularly upon the will, and are unsuited to children.

e. Exercises of the attention, requiring a small amount of muscular effort, but making great demand on the attention. As illustration of these may be mentioned marching in its various forms, and the learning of new movements of all kinds. For persons that are hard

worked mentally, these exercises should be employed sparingly.

f. Exercises of alertness, involving quick response to varying conditions. They include most games, especially of a competitive nature. They are particularly enjoyed by children, and are beneficial for almost all years, up to middle life.

While there is some over-lapping in the different divisions in this classification, the scheme outlined is the one generally followed by the leaders in the department of physical training at the present time.

By means of attention to food, clothing, cleanliness, and proper physical exercise, a better understanding of the laws of health, and the enforcement of sanitary regulations, the death rate has been considerably reduced. In 1867, the death rate of New York City was 32.27 persons in the thousand. In 1904 it was 18.2, being a saving of 14.07 persons to the thousand, or nearly one-half. This would be 56,280 lives saved each year in a city of 4,000,000 inhabitants. A like saving in the 80,000,000 population of the whole country would mean that over 1,000,000 persons who go down to untimely graves would be spared, to say nothing of the increased efficiency of the whole population because of more vigorous health. Surely the problem of physical training, as well as education in the laws of health, becomes of mighty import, not only to educators, but also to statesmen, philanthropists, and public economists everywhere.

Summary

I. Intellectual and moral development is closely connected with the development of the body. Hence specific instruction upon all matters that affect the physical being should be included in every system of education. Especial attention should be given to fatigue and rest. While change of occupation may afford temporary relief, sleep is necessary to obtain absolute rest.

II. The fundamental principle of gymnastics is that "the spirit shall rule over its body and make this an energetic and docile servant of the will."

CHAPTER XIV

INTELLECTUAL DEVELOPMENT

References. — *Horne*, Philosophy of Education; *Tompkins*, Philosophy of Teaching; *Froebel*, Education of Man; *Bowen*, Froebel and Education Through Self-Activity; *Rosmini*, Method in Education; *Parker*, Talks on Pedagogics.

TO many the whole conception of education is embraced in the development of the intellect. We have shown that the whole man must be educated. Without doubt, however, the work of the school is centered in the intellectual development of the child, and upon this idea is focused all other discipline, even though it be recognized that the highest end of education is moral character.

Self-Activity. — The first essential to success is the arousing of the child's self-activity. Unless this is done there can be no education. Rosenkranz well remarks,¹ "All apparatus is dead, all arrangement of no avail, all teaching fruitless, if the pupil does not by his free self-activity receive into his inner self what one teaches him, and then make it his own property."

Dr. Hervey, in discussing "The Doctrine of Self-Activity," says:² "Of all the conceptions that give aid and comfort to the teacher, that of self-activity is one of the most inspiring and fruitful. The notion is a fundamental one in philosophy and psychology, and it is therefore basal in educa-

¹ "Philosophy of Education," p. 115.

² New York, "Teachers' Monograph," Oct. 1901.

tion. This fact was never more clearly recognized than it is to-day. In modern works on philosophy, we meet again and again such expressions as these: 'Primal being can be conceived only as self-activity;' 'The soul is self-activity.' "

"Imitation, interest, and effort," says Horne,¹ "this trinity of wonderful words, each representing a way to which the self-active mind works out its own growth, almost covers the theoretical part of contemporary educational discussions." Arnold Tompkins remarks, "Whenever teaching is found to be dead it is because the teacher strives to induce action from without, instead of utilizing the self-activity of the pupil. Witness, for example, the dire distress of the teacher in striving to secure oral or written expression from the pupil when there is no inner motive to expression!"

No apostle of education has laid so much stress upon the principle of self-activity as Froebel. He asserts that² "The prescriptive, interfering education, indeed, can be justified only on two grounds; either because it teaches the clear, living thought, self-evident truth, or because it holds up a life whose ideal value has been established in experience. But, where self-evident, living, absolute truth rules, the eternal principle itself reigns, as it were, and will on this account maintain a passive, following character. For the living thought, the eternal living principle as such demands and requires free self-activity and self-determination on the part of man, the being created for freedom in the image of God."

Bowen cites from Froebel as follows:³ "Instruction begins

¹ "Philosophy of Education," p. 175.

² "Education of Man," p. 11.

³ "Froebel and Education Through Self-Activity," p. 29.

in the fifth year of the child's life by leading him simply to find himself (get the command of his senses), to distinguish himself from external things and these from one another, to know clearly what he sees in his nearest surroundings, and at the same time to designate it by the right word, to enjoy his first knowledge as the first contribution towards his future intellectual treasure. Self-activity of mind is the first law of instruction; therefore the kind of instruction given here does not make the young mind a strong-box, into which, as early as possible, all kinds of coins of the most different values and coinage, such as are now current in the world, are stuffed; but slowly, continuously, gradually, and always inwardly, that is, according to a connection founded on the nature of the mind, the instruction goes on without any tricks . . . from the simple to the complex, from the concrete to the abstract, so well adapted to the child and his needs that he goes as readily to his learning as to his play."

It may be stated, then, that the first essential of intellectual development is to stimulate self-activity on the part of the person to be taught. Until this is accomplished all effort at instruction, all skill in method, all zeal, enthusiasm, and learning on the part of the teacher is in vain.

· **Attention.** — Before the child can be stimulated to intelligent and proper self-activity his attention must be gained. Without this no instruction can be given, no knowledge acquired. It is not sufficient to demand attention, the interest of the pupil must be aroused. Without interest there can be no real attention. The method of stimulating interest will depend upon the maturity of the children, the

subject to be taught, and the individuality of the teacher. There are certain general principles, however, that should be borne in mind, which hold true in all cases. These will be considered later.

But what is meant by attention? Rosmini defines it as follows: "Attention is that power of the mind which directs the intellect to one object rather than another; attention itself, again, being directed by sensible wants."¹ Hughes says,² "Attention is the direction of the powers of the mind to the impressions received through the senses or to subjects of reflection."

Colonel Parker very clearly sets forth that, "Attention is a process of mental or conscious action stimulated, excited, aroused, induced, or caused by the attributes of external objects upon consciousness." Professor James remarks, "To excite a pupil's attention and hold it is the greatest task of the teacher's life. Our ability to remember a thing depends on the attention we give to it when under consideration. There are many external methods of awakening attention, but to gain the interest is more effective. You will never gain attention by demanding it, unless you awaken the child's interest. The young child as a rule has very little native interest. The teacher must arouse and hold it by action — experiments, anecdotes, diagrams, drawings, etc.

"How can we get the child interested when these means cannot be used? There is one rule; you must connect the new matter with some other matter that you know the child is already interested in. Associate the uninteresting new

¹ "Method in Education," p. 50.

² "Securing and Retaining Attention," p. 4.

with the interesting old and the whole will become interesting. This is the abstract principle, but the application is by no means easy. Here the teacher's native tact, ingenuity, and invention are demanded. It is this ability that marks the born teacher."

Superintendent Brooks gives nine suggestions for securing attention: "(1) Manifest an interest in the subject you are teaching. (2) Be clear in thought and ready in expression. (3) Speak in your natural tone, with variety and flexibility of voice. (4) Let your position before the class be usually a standing one. (5) Teach without a book as far as possible. (6) Assign subjects promiscuously when necessary. (7) Use concrete methods of instruction when possible. (8) Vary your method, as variety is attractive to children. (9) Determine to secure attention at all hazards."

Ability to give attention may be taken as a measure of intellectual power. Sir Isaac Newton ascribed his superiority over other men in intellectual power to his ability to concentrate his attention. There are four steps that distinguish the powers of attention, namely, isolation, analysis, abstraction, and the essential relations of analysis and abstraction to each other. Let us consider these steps separately.

1. *Isolation.* — The object to which attention is called is separate from others so that it stands out by itself. Thus a tree standing in an open field is an object of greater attention than it would be in a forest; a man dressed in fantastic costume parades the streets as an advertising medium — his dress isolates him from others and he is able to attract attention to his wares; an advertiser employs skill in setting

type so as to catch the eye of the reader, one or two isolated articles standing out prominently; the show-window or parlor of a millinery establishment exhibits only a few typical hats separated from each other on standards, thus attracting attention to the individual. The purpose of advertising is to attract attention, and the secret of it lies in the ability to employ the principle of isolation. Examples might be multiplied showing that the first essential in winning attention is to isolate the object from all others, and the same law holds good in intellectual as well as in material matters. If an exercise or a thought is to be considered, it must first be set apart from all others. The teacher must therefore exclude all other matter but the particular thing to be considered, present this in the most vivid manner, and employ concrete illustrations with young children. Thus may attention in its simplest form be gained.

2. *Analysis.* — When the attention to the individual isolated thing has been gained, the next step is to analyze it into its parts. Thus if an advertisement catches the eye, wins the attention, it will be read to see what is offered. The description of the article advertised, its price, by whom offered, etc., will be taken into account, the attention being intensified in proportion to the needs of the reader and to the skill of the appeal made. Or the hat that gains attention as it stands isolated is examined as to its shape, its trimmings, its color, its materials, its style. The tree standing alone in the field is noticed as to its shape, its foliage, its kind. The street advertiser, dressed perhaps as "Uncle Sam," is noticed as to his tall hat, his striped trousers, his ribbon-tailed coat, and then to the thing he is

advertising. The attention of a class is called to a picture which is first seen as a whole. Then the various features of the picture may be brought out by analysis. Or a sentence is placed on the blackboard, read by the class, then its subject, predicate, modifiers, etc., pointed out. Thus it will be found that the second step in the process of attention is analysis, and but little material will be fixed in the mind if this step is not taken.

3. *Abstraction.* — It has been shown elsewhere (p. 43) that an ultimate aim in the process of instruction is to bring the child to a conception of the abstract notion; that to stop short of this aim is to fail to establish the relations of knowledge; that this end is essential in order to fix the material in the mind so that it may be used unconsciously, habitually, masterfully; and that this power distinguishes man from the lower creatures. In the process of attention, having analyzed the object with its parts, the next step is to “seize upon one of the distinctions found by analysis” and proceed to abstraction. As a concrete illustration we may once more refer to the hat. A feature of its trimmings, as the flowers, may be considered in the abstract as to their color, beauty, faithfulness in representing genuine flowers, etc. The same may be true of any feature of the street advertiser, “Uncle Sam,” that may be thought of without any relation to the whole; also the object of the fantastic costume, which is to get the attention fixed upon the thing advertised, may be thought of independent of the advertiser. A word in the sentence analyzed may be thought of as a noun, a verb, an adjective. A class may have analyzed the celebrated painting, “Washington Crossing the Delaware.” Washington

can be thought of as a great historic character without regard to the picture; the other occupants of the boats, the blocks of ice, the peril, each of these can be considered in the abstract. A whole train of events — the battle of Trenton immediately following, its effect upon the cause of the patriots, Washington's subsequent career, the establishment and growth of the nation, its effect upon the world's history, all these ideas naturally flow out of the incident portrayed by the artist. Thus the attention awakened by the picture comes to have a breadth and meaning far beyond anything that the picture itself contains.

4. *Finding relations.* — The final act of attention consists in a synopsis, a summary of the whole, an establishment of the relations that exist between the parts. Dr. Harris speaks of this point as a "process of synthetic thought, a grasping together, a comprehension — a higher activity of the mind — a fourth potency of the power of attention." We may illustrate this process by once more employing the examples already cited and proceeding a step further. In the picture "Washington Crossing the Delaware," a whole train of events is suggested, as already pointed out. By reflection the attention is easily led to a great many relations and circumstances that flow out of the event pictured, such as, the battle which immediately followed, its good effect upon the cause of the patriots, and the corresponding disastrous effect upon our enemy who spoke of it as "that unfortunate affair at Trenton." Employing again the illustration concerning the choice of a hat, its suitability of style, shape, color, etc., to the wants of the person considering it may be spoken of as the employment of attention to determine the relations. To quote

once more from Dr. Harris,¹ "Reflection, or attention in its higher powers, discovers necessary relations, and forms more adequate ideas of truth. Isaac Newton saw the sun and planets as one gravitating whole — a system — and his knowledge certainly came nearer the truth than did the knowledge of previous astronomers who merely knew the sun and planets in their separate existence. In going into the truth of objects, the mind goes into itself at the same time. Psychology points backward to the great fact that reason made both the world and the human intellect."

Practical Suggestions as to Attention. — It is useless to attempt to teach without attention. If a teacher is willing to go on with the recitation with only a part of the class attentive, he will soon find that all are inattentive and hence there is no instruction being given. Children soon learn whether or not the teacher is oblivious to his surroundings or whether he will not teach unless all attend to the matter in hand. Nothing is so fatal to successful instruction or to good order as want of attention. It is useless to demand attention without providing the means to win and hold it. When this cannot be done, it is better to close the recitation.

The following suggestions may be of use, especially in dealing with children.

1. *See to the material conditions.* — It is impossible to hold the attention of a class very long if the surroundings are unfavorable. A high temperature or bad air in the room, the flapping of window-curtains, draughts, direct sunshine, uncomfortable seats, mischievous neighbors, may

¹ Rosenkranz, "Philosophy of Education," p. 72.

defeat the effort to gain attention. A moment spent at the outset in regulating these things will prove to be time well spent. Indeed, unless these conditions are favorable there is little use in beginning the lesson.

2. *Proper attitude must be required.* — Children should be required to sit or stand erect, facing the teacher and in as close proximity to him as possible. It is difficult to hold the interest of a class located a long distance away, especially if other pupils are at work in the same room. It may be said that the effectiveness of the instruction varies inversely with the distance between the teacher and the class. While it is useless to demand attention, it is not useless to require a proper attitude in class.

3. *Awaken the interest.* — Having attended to these preliminary matters, the teacher may proceed with the instruction. The first thing necessary to gain attention is interest. "Interest," says Dr. Johnson, "is the mother of attention; attention is the mother of memory; to get memory, get her mother and her grandmother." If, then, the pupil is to remember the truths taught, his attention must be gained through awakening his interest. With young children this is done chiefly by means of concrete illustration. The child is interested in what appeals to his senses. Nor does the use of illustration as a means of stimulating interest cease with children, as we have seen elsewhere. The preacher employs it to enliven his sermon and to enforce the truths he would teach; the lawyer uses it in his pleas in court; the medical professor and the surgeon utilize it in the clinic before their students; the orator makes use of it in appealing to voters; and the lecturer clarifies his theme through

this means. With young children it is absolutely essential, while with adults it may be employed to arouse the flagging interest. So long as interest is maintained attention can be held and no longer.

4. *Use judgment as to the length of the recitation.* — There is a limit to the length of time that attention can be held, depending upon the maturity of the pupils, the character of the subject, the method employed, the time of the day, and the personality of the teacher. In general, the attention of young children can be held only for a brief period. In most subjects, ten or fifteen minutes in the primary grades is as long a period as the children can be held in profitable recitation, as their interest is sure to flag. Subjects that admit of illustration or experimentation may be treated for a longer period. Laboratory work in physics, chemistry, biology, etc., may be successfully continued for an hour, and even for a number of hours, especially where the pupils are engaged in individual work in which they may move freely about, selecting material, arranging apparatus, and experimenting. The same is true of manual training. Other subjects of the curriculum also offer in themselves incentive to extended attention, and this is true of various phases of the same subject. For example, it would be more difficult to hold the attention of a class in English grammar than in the thrilling events of history; and stories of the personal life of Washington or Benedict Arnold would be phases of history that would appeal to the interest more than an account of the formation of the American constitution.

The method of instruction is a very important factor in holding the attention. The lecture method wearies rapidly

— even adults do not like a sermon to be over thirty or forty minutes long, and it takes a good lecturer with a most interesting theme to hold an audience for a very long time. Children must be allowed to take part in the exercise by asking and answering questions, while the method employed in high schools and colleges that secures the best results is a combination of lecture and recitation. Although a knowledge of the subject on the part of the teacher is most essential, the method of presenting it must not be lost sight of if interest is to be maintained and attention held.¹

It is evident that keener interest can be secured early in the day, when the pupils are fresh and strong, than later the day when the body is weary and when the mind has already grasped about all that it is capable of taking. Therefore the schedule should be so arranged as to place subjects requiring close attention at the beginning of the day and those requiring less concentration at later periods.²

Finally, the personality of the teacher is an important factor in winning attention. The teacher who is enthusiastic, alert, pleasing, fertile in expedient, himself interested, will certainly keep the attention longer than one who lacks these qualities. All of these factors — the age of the pupils, the subject, the method, the period of the day, and the personality of the teacher should be taken into account in determining the length of time the attention may be held and therefore the length of the recitation period.

5. *Never attempt to teach without attention.* — Whatever the condition, or the cause, whatever the age of the

¹ See Chapter VIII on "Methods of Instruction."

² See "Foundations of Education," Chapter V on "The Daily Program."

pupils, when they cease to give attention, it is time to make a change, perhaps to close the recitation. It is utter waste of time and effort, and nothing whatever can be accomplished. Every teacher should understand this and never attempt to teach without the interested attention of every member of the class. A careful adherence to these suggestions will soon secure the attention that is expected, and there will be a gradual increase of the power on the part of the pupils to give attention to any subject at will. The possession of this power is the best possible evidence of a trained mind, of an education. "The great skill of the teacher is to get and keep the attention of his scholars," says Locke.

"Attention, depending as it does on the self-determination of the observer, can therefore be improved, and the pupils made attentive, by the educator. Education must accustom him to exact, rapid, and many-sided attention, so that at the first contact with an object he may grasp it sufficiently and truly, and that it shall not be necessary for him always to be changing his impressions concerning it. The twilight and partialness of intelligence which force a pupil always to new corrections because he has all along failed to give entire attention must not be tolerated."¹

Industry. — The child is naturally active, and total inertness may be taken as a sign of mental or physical weakness. "There never was such a thing as a lazy child born on earth," asserts Colonel Parker. From morning till night the little child is busy, ceasing only when weariness compels sleep. Such activity is nature's method of introducing the child to his environment, of securing his development, of

¹ Rosenkranz, "Philosophy of Education," p. 116.

enabling him to gain command of himself. One of the most important functions of education is so to utilize this natural activity that the individual shall become purposeful, systematic, self-directive, and constant. Laziness may be considered as relative rather than absolute. While it is true that the normal child is active, it is also true that all men will escape, if possible, uncongenial tasks, that is, they are lazy with reference to them. In the spring of 1894, the contractors of the Chicago drainage canal offered employment at small pay to the great crowd of men left stranded after the hard winter succeeding the World's Fair. Thousands of men responded to the call and offered themselves for work, bravely taking up pick and shovel to earn daily bread for themselves and families. Before noon large numbers abandoned the job, and by night only a few were left. The unthinking declared that the men were too lazy to work. The fact that they walked miles to secure work, that they entered upon it and did the best they could, disproved the charge of laziness. They were clerks, bookkeepers, and other men unaccustomed to manual labor and were, therefore, in their half-famished condition, unable to stand the heavy work. Many of them returned the next day and persevered until they were able to endure the labor, thus giving evidence of their industry.

The mathematical expert would soon lay down the spade on a hot August day, while he might spend half the night in the solution of some abstruse problem. On the other hand, the man accustomed to manual labor would work all day in the ditch but would fall asleep in a few moments over a theorem in Euclid. Each might be said to be lazy in one field and industrious enough in another, thus proving that laziness is relative.

The teacher will need to employ tact in utilizing the interests of the child — those things in which he is active enough, in order to lead him to be industrious in fields where he has less interest, but where it is his duty to go. For the child must not be excused from performing tasks that are uncongenial to him. In the words of Locke, "The foundation of all virtue consists in following the dictates of reason even though appetite lead the other way."

Many of the world's greatest geniuses have been called lazy. The father of Sir Joshua Reynolds wrote on one of his son's drawings, "Done by Joshua out of pure idleness." James Watt was scolded by his grandmother because he was too lazy to do anything but watch the steam of the tea-kettle!

Again, the child must be trained to systematic industry. Rosenkranz says,¹ "Education must accustom him (the pupil) to use a regular diligence. The frame of mind suitable for work often does not exist at the time when work should begin, but more frequently it makes its appearance after we have begun. The subject takes its own time to awaken us. Industry, inspired by a love and regard for work, has in its quiet uniformity a great force, without which no one can accomplish anything essential. The world, therefore, holds industry worthy of honor." Everyone knows what it means to set himself at work, and it will often be found that the disagreeableness of uncongenial tasks soon disappears. Very often dreaded tasks become a delight when one has fully entered upon them, when their mastery is being accomplished, and when their value comes to be appreciated.²

¹ "Philosophy of Education," p. 117.

² See my "New School Management," p. 102.

An important difference between a barbarian and a civilized man is found in the fact that the former is content to be idle, while the latter is most happy when employed either at work or in some form of recreation. Elsewhere it has been shown that the ability to direct one's activities serves as a moral safeguard, as well as conduces to success in life. (See p. 166.) Hence industry, which is so essential to moral and intellectual growth, is an evidence of advancement in civilization and of well-developed educational habit. It thus becomes most important that the teacher shall insist upon industry in his pupils, and wisely direct it so as to form systematic and permanent habits.

Summary

I. The child's self-activity must be stimulated and directed, without which he cannot be educated. Left to himself such activity would be misdirected and little progress would be made. Hence the necessity of a teacher, who unfolds to the child the results of the world's intellectual achievement. The teacher's knowledge, skill, and enthusiasm are devoted to the end that the child may reap the results of all past civilization and proceed to new fields of conquest and higher planes of thought. By this means he starts "on the shoulders" of the world's attainment.

II. Without attention all efforts to instruct are fruitless. The first essential to attention is interest, and ability to give attention may be taken as a measure of intellectual power. The steps marking the different degrees of attention are isolation, analysis, abstraction, and finding the relations. As

practical suggestions in regard to gaining and holding the attention may be mentioned, — (1) see that the physical conditions of the room are normal; (2) require a proper attitude of the class; (3) awaken their interest; (4) cease when the pupils become weary; (5) never attempt to teach without it.

III. The child is naturally industrious, laziness being relative, — it is an evidence of physical or mental defect, or of lack of interest in the matter in hand. While the child must be trained to perform tasks, even though they may not always be agreeable, the skill of the teacher should be employed to utilize his natural interests, to win his love for tasks, and to bring him to the performance of duty. The child that has been trained properly and systematically to employ his activities has the key to the mastery of the world and is possessed of a moral safeguard.

CHAPTER XV

THREE STAGES OF INTELLECTUAL DEVELOPMENT

References. — *Smith*, Systematic Methodology; *Eckoff*, A. B. C. of Sense-Perception; *Burton*, The Observing Faculties; *Morgan*, Studies in Pedagogy; *Rosmini*, Method in Education; *Hughes*, Dickens as an Educator; *Adler*, The Moral Instruction of Children; *Howland*, Practical Hints to Teachers; *Parker*, Talks on Pedagogics; *McMurry*, Method of the Recitation; *Dodd*, Introduction to Herbartian Principles of Teaching; *Schaeffer*, Thinking and Learning to Think; *Hopkins*, How Shall my Child be Taught? *Hall*, Adolescence.

I. SENSE-PERCEPTION. — The normal child at birth possesses five senses, seeing, hearing, taste, smell, and touch, which are the avenues through which he is to obtain a knowledge of the world. The brain is reached only through the senses, and there can be no education in any particular direction if the sense whereby that knowledge is gained is wanting. Thus the blind person can have no conception of color, the deaf person of the melody of music, and to the individual destitute of smell, savory odors and sweet perfumes can bring no delight. Especially is this true if the defect dates from birth.

Rosenkranz defines sense-perception as “the free grasping of an object immediately present to the mind.”¹ He further asserts that “Education can do nothing directly towards the performance of this act; it can only assist in making it easy : (1) it can isolate the object of consideration;

¹ “Philosophy of Education,” p. 76.

(2) it can give facility in the transition to another; (3) it can promote the many-sidedness of the interest, by which means the return to a perception already obtained has always a fresh charm." Each sense is not only capable of the general development necessary in ordinary life; but it also may receive special development, as we have seen (p. 60). The following suggestions for the cultivation of the perceptions may be found helpful.

1. *Perception is dependent upon the number of sensations received.* — I meet the same person many times and gradually a perception of him becomes fixed. An object is held before a class day after day and in time it fixes itself upon their minds even if it is not particularly studied or described. I hear a voice repeatedly until the sound of it becomes familiar and I recognize it ever afterward. The blind man touches the minute points representing the alphabet and after repeated trials he knows these characters instantly, and is on the road to reading. A perception of the characters is gained, then the words are formed into sentences, and the avenue to the recorded thoughts of other men is open.

2. *Perception depends upon the order in which the sensations are received.* — If I meet the same man at about the same time and place, and under like circumstances, the perception of him will be more readily and more permanently fixed than if I meet him irregularly. The presentation of a subject to a class in a systematic manner, not only repeating it many times, but also in the same way, has a tendency to fix the perception of the subject. Recitations occurring at the same hour of the day, with regularity and system are

more likely to secure good results than if they are held at irregular times and without order.

3. *Perception depends upon the vividness of the sensations.* — A startling event as a cry of fire, a call for help, a unique or fantastic dress, a peculiarity of some kind, makes a vivid impression upon the perceptions. A great disaster even though witnessed but once, will be remembered as long as life lasts because of the vividness of the impression made. We have seen elsewhere how this fact is employed in advertising schemes to attract attention. (See p. 220.) Carl Schurz in his "Reminiscences of a Long Life," tells of seeing a man executed by the guillotine in a public square in Cologne when he was a boy ten years old, over sixty years ago. He narrates the details with remarkable explicitness and adds, "I remember walking home shuddering and trembling, and finding it impossible to eat my breakfast. Nothing could have induced me to witness another execution."

4. *Perception depends upon the associations connected with it.* — In ascending Vesuvius I met a fellow-countryman among a party. The fact of my being in a foreign land, of climbing a volcano, and of there being only two Americans in the party leads me to gain an unusual perception of my compatriot, such as I would be unlikely to gain of any other member of the group. A classmate in the laboratory failed to take the precaution to cut a piece of phosphorus under water and, as a consequence, the heat of his fingers ignited the phosphorus and he was severely burned. This made an impression upon his fellow students as to a characteristic of phosphorus that was never forgotten. There

are incidents in the experience of every teacher which make a strong impression upon the class.

5. *Perception depends upon the attention given to minute details of the thing considered.* — An object said to be a mermaid was brought before a scientific society and, after looking it over, an old teacher said, "This is certainly a genuine mermaid, the first I ever saw." A young professor present after examining the object carefully, showed it to be a most clumsy hoax. The latter was accustomed to minute and careful study of details and was therefore able to discern the truth. The more careful consideration, the more exact study an object commands, the more complete and correct will be the perceptions gained. For this reason it becomes a most essential educational process to train the senses to careful and painstaking observation.

To recapitulate, then, the senses are trained and the perceptions perfected by repetition of the act or experience, by following systematic order, by making the perceptions vivid, by taking into account the associations connected with their reception, and by a minute consideration of the details. The importance of these processes will be understood and emphasized if we remember that it is only through the senses that the brain is reached, and that as we develop the senses we also develop the brain.

Object Teaching. — The first work of the school is directly connected with sense-training. Hence the use of objects or the concrete in primary work, and this is the principal means to be employed. This continues during the first two or three years of the child's school life, but gradually the use of the concrete will be lessened and the

work become more abstract. Education seeks to give the pupil general notions, abstract ideas. The process is from the concrete to the abstract. A few cautions, however, should be observed.

1. Too many objects should not be employed. (See p. 104.) Every particle of attention which objects attract to themselves is just so much attention drawn away from the lesson to be taught and for which purpose the objects are employed. Thus, for example, in teaching number, the approach must be made concretely, but some simple objects like blocks of uniform size and color should be chosen. They will serve to bring the knowledge to the mind through the sense of sight or touch without the distractions of color, taste, or desire for possession to interfere. After the abstract notion has been gained, the application may be made to other objects, but the instruction must not cease until the abstract notion has been gained.

2. The use of the concrete should be abandoned when it is no longer necessary. Illustration may be employed, even with mature minds in some cases. Whatever the stage of development, it may be safely urged that when the concrete is no longer necessary, when the abstract truth is reached directly without its aid, it should be abandoned. The abstract notion is the end sought.

3. There should be a definite aim in the employment of the concrete. There are two reasons for the use of objects: first, they are employed in teaching lessons concerning the objects themselves; second, they are employed as a medium of knowledge concerning something else. To illustrate the first point, if a class were studying botany

the most direct means would be to take them to the plant, or to place it before them for examination. The object is exhibited in order that it may be studied. The lessons learned are direct and immediate. To illustrate the second case, we employ blocks, not for their own sake, but as a means of teaching the number. The blocks have no interest, in themselves, but are merely a means whereby interest in other knowledge is awakened. Therefore they should possess no characteristics that would attract interest to themselves. With a definite aim in view, the teacher will select such illustrative material as will best meet that aim to the exclusion of all else.

Use of Pictures. — In the absence of the object itself, recourse is often had to pictures as a means of direct illustration. In many respects the picture is preferable to the object itself. Many large animals cannot be brought into the schoolroom. Rosenkranz shows that pictures have certain decided advantages.¹ "Pictures are extremely valuable aids to instruction when they are correct and characteristic. Correctness must be demanded in these substitutes for natural objects, historical persons, and scenes. Without this correctness, the picture, if not an impediment, is, to say the least, useless."

Pictures must be accurate, clear, typical, and true to the object they seek to represent. In some respects they are better than the object itself. As has been said, many animals cannot be brought into the schoolroom. Indeed there are very few animals that can be profitably studied in the school. The difficulty of securing a suitable animal,

¹ "Philosophy of Education," p. 78.

its restlessness when brought, the excitement of the children all tend to disturb the school and prevent any genuine study of its characteristics. Nor does a visit to the menagerie — seldom convenient to the school — avail as a means of study. Animals thus seen serve as a curiosity and nothing more. The picture, on the other hand, may show the animal in its natural environment — the tiger in the jungle, the bird in its nest or upon a tree, the squirrel in the forest, or the beaver in the river. Thus the picture becomes a natural means of showing the life and habits of the creature as well as illustrating the type of the animal itself.

The employment of illustrated text-books, beginning with the “*Orbis Pictus*” of Comenius in 1658, has been a most valuable educative means for training the eye, cultivating the taste, and conveying knowledge. Publishers are fully alive to this requirement, and illustrated text-books have materially furthered educational progress. Not only is animal life made familiar, but also an acquaintance is made possible with historical scenes, important personages, geographical places, works of art, and other things that cannot be brought into the schoolroom. The illustrated book thus becomes a most valuable adjunct to instruction, both in the home and in the school.

Making Collections. — Most children delight in making collections, and this fact may be employed in the cultivation of the senses, especially the eye. Collections of plants, coins, postage-stamps, insects, etc., can be made of great value to the child, provided he is guided in making such a collection, encouraged to make it complete, arrang-

ing, classifying, studying, and accurately observing it. Mere collections without systematic classification, have little value either educationally or commercially. Not long ago, an examination of the botanical collection of a gentleman recently deceased was made with view to purchasing it for a state museum. It was the most extensive collection ever made in that state, many years and large expense having been devoted to it. The specimens were mounted on scraps of newspaper, bits of wrapping paper, and writing paper without regulation or plan. Had the specimens been properly mounted, the collection would have been worth not less than twenty thousand dollars. As it was, no purchaser could be found for it.

Not only the eye and the æsthetic nature, but also the practical and the utilitarian sense of the child may be cultivated by pictures and by collections. Besides this, a decided moral value may be attached to this kind of training. Order, system, perseverance, faithfulness, neatness, and other virtues may be inculcated. A practical use may be made of some of these collections in the work of instruction. It will not be difficult to interest the child in the geography, history, government, customs, and peoples of a country from which he possesses stamps or coins; or in the habits of insects, or the uses of plants collected. It must be emphasized that the value to the child does not lie with the mere collecting, but rather with the use made of the objects after they are collected.

Another most valuable means of training the eye is drawing. Through it the child learns to judge distances, to estimate size, to distinguish color, as well as to gain control of the hand so as to enable it to obey the direction of the

will. Nothing else in the school course is so valuable as a means of furnishing this training, indeed, through no other means can these ends be attained.

Training the Ear. — Attention thus far has been directed chiefly to the means employed in training the eye. The other sense that is susceptible of training in the school is that of hearing. The ear is cultivated by music, and if music had no other office than this, it would be worthy of a place in the curriculum. Much of the enjoyment of life is lost to one who cannot appreciate harmony of sound. An appreciation of harmony is apt to affect the tone of voice so that speech and reading are improved by music. A pleasant tone of voice can be cultivated also by securing a proper pitch in reading. The best means of doing this is found to be the training of the ear to distinguish differences in pitch. Hence, the training of the ear should receive especial attention, and every course of study must include such studies as will develop the various senses. This is especially true of the course for the first few years when most knowledge is obtained through the senses and when sense-perception is the dominant power of intellectual development.

II. IMAGINATION.—The next period in the mental development of the child is that of imagination, which may be defined as the power of calling up images or experiences of perceptions already gained through the senses, and combining them into new images. Rosenkranz says, “The activity of perception results in the formation of an internal picture or image which intelligence can call up any time at

pleasure, and imagine it as occupying an ideal space, although the object is absent, in fact, and thus the image or picture becomes a sort of general scheme (or pattern applicable to a class of objects), and hence an image-concept. The mental image may (1) be compared with the perception from which it sprang, or (2) it may be arbitrarily altered and combined with other images, or (3) it may be held fast in the form of abstract signs or symbols which intelligence invents for it. Thus originate the functions (1) of the verifications of conceptions, of (2) creative imagination, and (3) of memory."

Creative Imagination. — The progress of civilization is dependent upon the power of creative imagination. Smith remarks,¹ "In all acts of original illustration either of philosophical, scientific, or practical truth; in all mechanical inventions, original compositions, or decorations; in the performance of intelligent manual labor, or the production of an ideal human character — in a word, in all mental advancement held within the bounds of individual notions and not directly supplied by the senses, the imagination is involved as the dominant faculty."

The value of the "Sistine Madonna" is not found in the canvas, the material used in the exquisite colorings, or in the time devoted to sketching and painting it. But it lies in the originating, creative genius of a Raphael who could conceive and bring to realization such a masterpiece. Leonardo's "Last Supper," painted upon the walls of the Maria delle Grazie chapel in Milan, scarred by the ravages of time and neglect, is not so beautiful as a dozen copies

¹ "Systematic Methodology," p. 39.

standing upon easels in front of it, where modern artists are reproducing the original; but it is of infinite more value because it is an original creation, and therefore it adds to the riches of the world. A bar of steel may have a value of a few dollars, but if drawn into fine wire and constructed into watch-springs its value is increased a millionfold. Words may be simply expressive of individual and heterogeneous ideas; but if they are so placed together as to convey a noble thought, expressing that thought in an essay or a poem, they become immortal. Ideas gained through the senses are combined, rearranged, and developed through imagination and the result is an essay, a poem, a painting, an invention, a new thought, a creation, a contribution to the world's progress.

Citing Smith again,¹ "Objection is sometimes urged to the use of the term 'creative' in reference to the human imagination. It is stated that the imagination can create nothing new; it can at best only take old materials and put them into new relations. All the elements in the product are old, and we are totally incapable of making anything in imagination which was not furnished in its elements by the senses. If by creation we meant bringing into being, then the criticism would be a valid one; but when it means producing that which in its present form did not previously exist, the objection to the word seems unfounded. We speak of persons making new houses, new wagons, new art designs, or new clothing, and the expressions go unchallenged; and yet most people have doubtless never stopped to think in what the element of newness consists. All the materials in a new house — the wood, stone, iron, slate, etc. — are all

¹ "Systematic Methodology," p. 42.

old. What is it, then, that makes it a new house? We distinguish between new clothing and 'made-over' clothing, and yet all the materials in the new garments may be as old as those in the others. What, then, is the ground for the distinction; and just what do we mean by a new garment? Every material product of man's skill is made up of two things — material elements and relations. The material elements man must always find at hand ready for his use; he cannot bring any of them into being. The relations, or arrangement of these elements, he furnishes. And these new relations constitute the only element of newness in any of the products of man's skill. A new house, then, is all old, except the arrangement of the materials which compose it. If these materials have never before been put into the relations required for the production of such an object as is before us, we call the object new; if they have been in such a relation before, we call the object a 'made-over' one. A new garment differs from a made-over one only in this: the materials of the 'made-over' garment have been used in garments before, while those of the new one have never been so used. Now, in the products of imagination we have just the same amount of newness that we have in material products — new relations. All the elements (ideas) which serve as the data of imagination are old; the arrangement alone is new, and these new relations man creates."

Cultivating the Imagination. — Since imagination is so important to the advancement of the individual and of the race its training becomes a vital problem of pedagogy. How is the imagination, especially the creative imagination,

to be cultivated? It is cultivated chiefly by works of art and literature. The study of fine paintings has a tendency to create a love of the beautiful and to fill the mind with noble thoughts. For this reason the Church has decorated her chapels and her cathedrals with the finest works of the greatest masters. Scarcely a masterpiece of the old artists can be found outside of a religious edifice, unless it has been brought away from such a place. Hoffmann's "Christ before the Doctors," Rubens' "Descent from the Cross," Raphael's "Sistine Madonna," Millet's "Angelus," whether found in a cathedral, an art gallery, or a home, cannot fail to awaken noblest sentiments and inspire better thoughts and higher imaginations in those who live in their presence. On the other hand, vulgar pictures stimulate evil thoughts and imaginations. Hence, the walls of saloons are decorated with pictures that incite evil passions. No better commentary on the wickedness of Pompeii when it was overwhelmed could be made than the testimony of the vile mural paintings that have been unearthed after twenty centuries of oblivion. The depraving effect of evil pictures upon public morals is fully recognized by the government, which visits severe punishment upon any one offering them for sale or circulating them through the mails.

Illustrated books, copies of masterpieces for wall decoration and for class use, free picture galleries, and the many art schools established at public expense afford ample means for the cultivation of good taste in art. The teacher can utilize these means in training the imagination.

But the most important and available material is offered in the field of literature. Here, too, remarkable changes have taken place whereby the best and most suitable

classic works are brought within the reach of all, both as to cost and as to suitability for classroom use. The term "Dime Novel," which used to be a term of reproach, because only trashy stories were published at that price, need be no longer so, for many of the best works of literature are now published for ten cents, or even half that amount. Suitable literature for all ages of children is provided so that the child may have such reading as he needs to stimulate his imagination at any period.

Rosenkranz well remarks,¹ "The best literature designed for the amusement of children from their seventh to their fourteenth year consists always of that which is honored by nations and the world at large. One has only to notice in how many thousand forms the story of Ulysses is reproduced by the writers of children's tales. Becker's 'Ancient Stories,' Gustav Schwab's most admirable 'Sagas of Antiquity,' Karl Grimm's 'Tales of Olden Times,' etc., what were they without the well-talking, wily favorite of Pallas and the divine swine-herd? And just so indestructible are the stories of the Old Testament up to the separation of Judah and Israel. These patriarchs with their wives and daughters, these judges and prophets, these kings and priests, are by no means ideals of virtue from the standpoint of our modern lifeless morality, which would smooth out of it pattern-stories for the 'dear children' everything that is hard and uncouth. For the very reason that the shadow-side is not wanting here, and that we find envy, vanity, evil desire, ingratitude, craftiness, and deceit, among these fathers of the race and leaders of God's chosen people, have these stories so great an educational

¹ "Philosophy of Education," p. 84.

value. Adam, Cain, Abraham, Joseph, Samson, and David, have justly become as truly world-historical types as Achilles and Patroclus, Agamemnon and Iphigenia, Hector and Andromache, Ulysses and Penelope." The Culture Epochs theory outlines suitable literature for each year, and many schools have adopted courses of reading for each of the twelve grades. Nothing could be more practical and valuable in the training of children for life.

Myths and Fairy Tales. — The myth often gives a semi-historical account of primitive times, and it possesses a peculiar fascination for children. The story told the children should be free from everything morbid or creative of a false idea. For example, stories that represent step-mothers as wicked, unfeeling, or wanting in the qualities of motherhood, even for children of another, should be wholly eliminated. Without doubt, fairy tales are in a large measure responsible for the ill-favor that still clings to the name "step-mother," and the prejudice that so commonly exists against women who have accepted this heavy burden. German schools and homes have long since banished all literature that teaches this false notion, and, as a consequence, the step-mother is most cordially received, not only by the children, but also by the friends of their mother.

The fear is often expressed that myths, which are not a statement of absolute fact, will have a tendency to teach the child to be untruthful. As a consequence, some would never allow the Santa Claus myth to be introduced to the home at Christmas time. Such matter-of-fact people remind one of the character Mr. Gradgrind in Dickens.

“‘And what,’ asked Mr. Gradgrind in a still lower voice, ‘did you read to your father, Jupe?’ ‘About the Fairies, sir, and the Dwarf, and the Hunchback, and the Genies,’ she sobbed out.

“‘There,’ said Mr. Gradgrind, ‘that is enough. Never breathe a word of such destructive nonsense any more.’”

Another example — “Louisa had been overheard to begin a conversation with her brother by saying, ‘Tom, I wonder — ’ upon which Mr. Gradgrind, who was the person overhearing, stepped forth into the light, and said, ‘Louisa, never wonder!’”

The child loves the mysterious and it is hard for him finally to accept Santa Claus as only a myth. And he will neither lose confidence in any one nor be made one whit more untruthful when he discovers that the cherished character is only a myth. Myths and fairy tales are perfectly natural material for children, and it is uneducational, if not cruel, to rob them of this beautiful means of cultivating the imagination in their early life.

Good Taste for Literature. — It has been shown that it is no longer necessary to depend upon trashy books as a means of supplying literature for children because of their cheapness, as standard works are issued in cheap editions. It is the duty of the school to get possession of the ground before evil seed has been sown. Weeds flourish in unoccupied soil, and if good seed has been first planted and has taken root there is little danger of noxious plants getting a start. Applying the analogy to reading, if plenty of good books are put into the hands of children little is to be feared from the evil ones. A good taste can be established only

by furnishing wholesome, pure, and interesting material and leading the children to read it instead of that which is vicious. A great deal more attention should be paid to children's reading than is common. There should be systematic, constant, watchful effort to lead the children into reading good works. Little need be said of evil books or the curiosity to see what they contain will be stimulated. Leave no place for the bad by occupying all the territory at the outset with the good.

A teacher of a fourth grade class pursued a very practical and excellent plan whereby she led her pupils to read such books as she desired. The plan was this — each pupil contributed five cents to found a class library, and with this money forty-five of the "Five-cent Classics"¹ were purchased. One of the pupils was appointed librarian, and the books were circulated according to rule, and thus each child would be entitled to more than a book a week for the entire year. Not only were the members of the class interested, but their parents and older brothers and sisters became interested and were allowed to join the club upon paying fifteen cents, and the movement became a neighborhood blessing, while each child was furnished with all the reading it needed. Biography, stories of patriotism, history, and classic works can thus be put into the hands of children. No more important and fruitful work can be undertaken by the teacher. A love for the good, the true, the chaste, the noble, the beautiful, can be inculcated, the imagination furnished with plenty of pure material, and the moral life stimulated and fortified.

¹ Published by the Educational Publishing Co., New York. This house publishes also the "Ten-cent Classics." The Normal Instructor Publishing Co., Dansville, N.Y., publishes many books of this character.

It has been said, "If you can cultivate or establish in your pupils a genuine love for good reading, you will have conferred upon them a perfectly inestimable blessing. A boy who really enjoys the fine thoughts of our great writers can never go far wrong. Though absolutely alone, he need never be lonely. Though friendless and forsaken, he can associate with the master minds which the ages have labored to produce. Though poor in this world's goods, he can claim and enjoy as his rightful heritage all the best that has gone before."

Memory. — This power is most retentive during the period when the imagination is most active. Indeed, more definite and lasting impressions are made upon the mind during the period from seven or eight to twelve or fourteen than during any other time of life. I knew a woman who had passed the century mark and who was in full possession of her mental faculties. She remembered perfectly events that took place ninety years before when she was ten years old, but could recall nothing that took place twenty years before when she was eighty. G. Stanley Hall maintains that the principal mental training during the period under discussion is "arbitrary memorization, drill habituation with only limited appeal to the understanding." And James M. Greenwood, commenting on this statement, forcefully asks — "Is this man a seer? Has he seen into human nature farther and better than multiplied thousands of others? He is neither mad nor dreaming. He is telling the teachers of America gospel truth." ¹

¹ *Educational Review*, Vol. XXIX, p. 360.

If this be true, and most thoughtful educators accept it as true, texts of scripture, memory gems, poems, and other material that should be woven into the intellectual and moral fabric, should be thoroughly memorized during this period. Dr. Edson remarks, "Suitable memory gems and recitations should have a place in every school and in every grade. Time and effort given to memorizing some of the standard selections in verse and prose will bring rich returns in many ways. Not only will memory be trained — a much neglected faculty in these latter days — but the head and heart will be filled with 'beautiful thoughts, beautifully expressed.'"

Another lesson is also apparent, namely, that our courses of study, which place the beginning of the study of languages in the high school — when the child is fourteen or fifteen years of age — are based upon false principles. The chief thing in beginning to learn a foreign tongue is to fix the declensions, conjugations, and other accidents, together with the acquirement of a vocabulary. This certainly is largely a matter of memory, and therefore the acquirement of these languages should be begun and carried well forward during the memory period previous to the fourteenth year.

The Training of the Memory. — That the memory should receive training as truly as any other power of the mind is a fact that needs to be reiterated and reestablished. This training has been by far too much neglected and children as a consequence are lacking in exactness and thoroughness. Artificial means should be totally discarded, as they fail to produce any permanent result in aiding the memory.

Rosenkranz suggests that to train the memory, "The means to be used (and these are based on the nature of memory itself) are, on the one hand, the pronouncing and writing of numbers, and on the other, repetition; by the former means we gain distinctness, and by the latter, sureness of memory."

There are three things that must always be observed in cultivating the memory and in permanently fixing material in the mind. First, the attention must be given to the thing to be remembered. No impression will be made unless the mind attends to the matter in hand. Second, there must be many repetitions in order to deepen and fix the impression made. And third, logical order must be followed. Thus if the dates of history, the kings or presidents of a country, the verses of a chapter are taken in order, they will be more easily remembered. Association also assists the memory. A friend whom I have not seen for twenty-five years calls upon me. Scenes and events that occurred in boyhood and of which we had not thought for many years, are called up through the meeting between us, by association. I wish to recall a name that has gone from memory, and, starting with the first letter of the alphabet, I ask, "Does it begin with A, with B, with C, etc.?" until possibly I can recall through the associating process the whole name.

Memory should have definite and systematic training, and there is need of a revival of interest in this respect. *Attention, repetition, logical order* are the key-words in training memory, and the teacher can improve the memory of his pupils or of himself by adhering to these ideas.

It is urged by many that the child should never be

required to commit to memory what he does not understand. While this may be accepted as a general principle, there are certainly many very forcible exceptions to it. Some things that should be exactly remembered cannot be understood until mature life, if even then. The Lord's Prayer, the Apostle's Creed, the Catechism, gems of literature, should be committed to memory during the retentive period long before they are understood. Their meaning will become clear in maturer life, and the material so thoroughly fixed in the memory becomes a precious and appreciated acquirement. If the memorizing of them is delayed until they are understood, the fixing of most valuable material in the mind becomes very difficult if not impossible. Hence they should be memorized during the early years even before they are understood.

III. REASON. — The third epoch in intellectual development is the logical epoch, or the epoch of reasoning. No hard and fast lines can be made fixing the period of sense-perception, of imagination, or of reason. But knowledge is gained during the first seven or eight years chiefly through the senses, during the next six or seven years through imagination, and after that through reason. This fact must be taken into account in the arrangement of the course of study, and in the method of instruction. The thinking activity is dependent upon the processes which have preceded. Thinking employs all that has been gained through the senses and through imagination, but it leads into a realm of its own, it forms images of its own, it comprehends the general notion, it proceeds to abstraction, which represents the highest form of intellectuality, the end to be sought in education.

There is no doubt that, "The fostering of the sense of truth, from the earliest years up, is the surest way of leading the pupil to gain the power of thinking. The unprejudiced, disinterested yielding to truth, as well as the effort to shun all deception and false seeming, is of greatest value in strengthening the power of reflection." Lying inculcates looseness, not only in expression, but also in thought, while truth fosters accuracy both in expression and thought. Exaggeration and untruthfulness, and often the distinction between the two is difficult to mark, have a tendency to create a state in which one does not know whether one's statements are true or not, and surely this is destructive to correct thinking. Therefore, the training of youth to think and speak the truth has an intellectual as well as a moral value. There is little hope of attaining intellectual power unless the sense of truth is entrenched in the very fiber of the soul. The great thinkers of all ages have been noted for their love for and practice of simple truth according to their enlightenment.

Training the Logical Powers. — Many have believed that the chief means of training the logical power is mathematics. The reason for this is that mathematics cannot be taught without employing the reason, while many other subjects of the curriculum can be. History can be merely committed to memory and the teacher can hear the pupils recite. Geography work may consist in learning definitions and hunting up places on the map. Reading may be a mere calling of the words of the text with correct emphasis and inflections without a comprehension of the beauties of literature or of the thought contained. Science may be

studied by simply committing to memory text-book statements. But this is not the best teaching, perhaps not teaching at all. Every subject of the curriculum should be so taught as to call forth the causes which led to certain effects. The least value of all in history is the memorizing of events. The underlying cause must be discovered, the various incidents that have led up to certain results must be traced in their relation to each other and to the final outcome, and the effect of the whole upon civilization and upon the world's progress be brought to light. And this requires the exercise of the highest reasoning power. The location of cities and causes that led to such location, the effect of climate, temperature, etc., the influence of rivers and other bodies of water upon climate and commerce, these and other matters of geography must be studied in relation to the earth as the home of man, which also necessitates a consideration of cause and effect. While due attention in reading must be given to the conventional requirements—the correct pronunciation of words, the inflections, the pauses—the great purpose of reading is to get at the thought, to comprehend the meaning of the author, to grasp the truth taught. The study of science takes the student into the deep things of Nature and reveals her symmetry, her eternal laws, and the logical sequence of her manifestations. And so, whatever the subject taught the teacher will be able to make it contribute to the training of the pupil to reason, especially if he has reached the period of life when reason predominates. And, while the logical power is thus trained, the subject itself will be far better taught, its truths revealed, and it will be made to serve its purpose as a means of the development of

the child. All the subjects of the curriculum should contribute to the cultivation of the reasoning power, though none can take the place of mathematics, which is essential to the cultivation of pure reason.

The Use of the Rule. — The final step in logical training is the complete statement, which brings the whole matter into small compass in the form of a principle, logical summary, or rule. Some object to requiring the child to commit to memory a rule, urging that if he has grasped the subject he may be left to express his knowledge of it in his own words and in his own way. This attitude is the extreme opposite of the earlier method which started out by requiring the rule to be committed to memory without regard to an understanding of its meaning, and then attempting to apply its teaching. The falsity of this method being understood, educators immediately swung to the other extreme and declared that the rule should never be learned, an error almost as great as the former. The truth evidently lies in the middle ground. Take a concrete illustration, as for example, learning long division. Teach the child the process, have him explain how he worked a given example, then let him tell in his own words how any example in long division should be worked, thus forming a rule, and finally, let him commit to memory the stated rule. It will not then be beyond his comprehension, it will be in more accurate language, it will express the whole truth and no more.¹

¹ See p. 93 for further treatment of this topic.

Summary

I. The medium through which the child begins to get acquainted with external things is his senses. Accuracy of perception depends upon the number of sensations received, upon the order they are received, upon their vividness, upon association, and upon the attention that is given. Concrete material should be employed when necessary, but abandoned as soon as the abstract notion is gained. Definite training of the eye is given through pictures, collections, and drawing; of the ear, chiefly by means of music and the proper pitch in reading.

II. The second stage of development is imagination, which may be defined as the power of calling up images, perceptions already gained through the senses, and combining them into new images. Through combining, rearranging, and developing these ideas by means of creative imagination the result is a new creation, — a poem, an essay, a painting, a sculpture, an invention, a contribution to the world's riches and to the progress of civilization. The imagination is trained chiefly through works of art and literature. Good taste can be formed by furnishing the pupils with wholesome, pure, and interesting material.

III. Memory is most retentive during this period. Hence memory gems, texts of Scripture, the beginning of foreign tongues, and other material requiring accurate memory should be taught at this time. Memory is trained by fixing the attention, by repetition, and by presenting the subject-matter in logical order. Artificial means should be discarded.

IV. *The final stage of intellectual development is that of reason, or the logical epoch. Thinking, while based upon perceptions and conceptions, enters a realm of its own, it comprehends the general notion, it proceeds to abstraction, — the highest form of intellectuality, the end to be sought in education. Every subject in the curriculum may be so taught as to develop the reasoning power. While in each of the three stages of development, — sense-perception, imagination, and reason, — these are the predominant characteristics, as has been shown, there is an overlapping between them, and no period belongs exclusively to any one of them.*

CHAPTER XVI

THE ACT OF LEARNING

References. — *McMurry*, Method of the Recitation; also, Series of Works on Special Methods; *Ogden*, Science of Education; *Parker*, Talks on Pedagogics; *Spencer*, Education; *Sabin*, Common Sense Didactics; Report of the Committee of Ten, and of the Committee of Fifteen; *Shaw*, A New Course of Study; *Chancellor*, Our Schools, their Administration and Supervision.

INSTRUCTION presupposes a person qualified to teach and another possessing the capacity to learn. The teacher must first have knowledge to impart, and then know how to bring that knowledge within the range of the learner's comprehension. While special methods are valuable as a means of increasing the skill in the art of teaching, and adding to the efficiency of the work, they are necessarily subordinate to knowledge itself. (See p. 108.) The acquirement of knowledge is a long and slow process; skill in presenting it to others may be rapidly attained.

Education a Process of Cancellation. — The relation of teacher to pupil necessitates taking for granted that there is an inequality between them. The teacher knows the subject to be presented, the pupil is ignorant of it. In the words of Rosenkranz,¹ "All instruction starts from the inequality between those who possess knowledge and ability and those who have not yet obtained them. The former are qualified to teach, the latter to learn. Instruc-

¹ "Philosophy of Education," p. 106.

tion is the act which gradually cancels the original inequality of teacher and pupil, in that it converts what was at first the property of the former into the property of the latter by means of his own activity." It follows that where there is much to give, where the teacher possesses a large fund of knowledge and experience, the learner may enjoy the greater advantages, has more to expect, because there is greater inequality to cancel. Hence those who would employ as teacher the untrained and insufficiently educated young girl on the ground that her pupils are young, urging that "she knows enough to teach these little children," are laboring under a fundamental error. Where the difference between the teacher and the pupil is but little, the latter can receive but little. Thus, instead of employing inexperienced teachers at small cost as a matter of economy, the expenditure becomes really waste. It is not enough that those placed in charge of a school should know only the subjects they are to teach, they must possess a reserve upon which they can draw so that out of the fulness and richness of their knowledge they may present "things new and old." It must be taken for granted, however, that the instructor has pedagogical insight and mastery of method which will enable him so to present his subject-matter as to bring it within the comprehension of his pupils. Without this power to impart, it will be difficult to bridge the difference between the two. The well-equipped teacher, therefore, will possess the necessary knowledge, and also the professional skill in the art of presenting it. The culture work of the high school and college must be supplemented by training in the technique of teaching as truly as the medical student, the lawyer, or the dentist, must be trained in the technique of his profession.

Instruction the Principal Work of the School. — The chief work of the teacher is to instruct, and the management of the school, the maintenance of discipline, and the preservation of order, which are absolutely essential, are only means to an end, that end being the instruction of the children. Order is maintained only because teaching cannot go on without it, and therefore it should never be given prominence. This thought should be emphasized, and it will be found that if the instruction is interesting and suitable, disorder is unlikely to appear and the true function of the school can be fulfilled.

Rosenkranz indicates three stages of development through instruction, namely, apprenticeship, journeyman-ship, and mastership, following the distinctions employed in trades, which indicate degrees of efficiency. The apprentice is under the direction of a master. He must learn to be self-directive, and this is an essential result to be sought in intellectual education as well. The child is an apprentice, a learner, and he must be taught to be independent, so that he can continue his education when he is separated from his school and his teacher. When it is borne in mind that the average time that an American child spends in school, according to Dr. Harris, is about five years, and that more than eighty per cent of the children leave school before the completion of their twelfth year, the necessity of securing this essential power of self-direction at the earliest possible age becomes evident. Without this power, education has failed to fulfil its greatest function, for it does not equip the man to continue his development even after he is thrown upon his own resources. The work of the elementary school, which alone reaches four-fifths of the

children, is thus demonstrated to be the most important of all educational work. Every teacher, therefore, should seek to bring his pupils as early as possible from the state of educational apprenticeship into the larger life of independent beings, capable of self-direction.

The method of instruction is important in securing this result. The imparting method (*Erziehende-Unterricht*), as practiced in the German Volksschule fails to do it, for but few children who leave school at fourteen years of age, however thorough their mastery of the subject-matter, however comprehensive their general knowledge, have either the desire or the ability to pursue their education further. Give the child the *ability* to direct his own culture, and the *desire* to continue to advance, and the greatest office of the school has been accomplished. His educational apprenticeship, if not completed, is so far along that he will know how to complete it and will be likely to do so. If he must forego further educational advantages, the whole field of knowledge is still before him. Having learned to discover things for himself, having been taught where to go for information and how to study, books, and nature, and the whole world will be at his command. The difficulties of knowledge will disappear before his perseverance, his industry, and his intelligent mastery of himself. He is now capable, like the journeyman in the trades, of doing independent work. Although he may still be under a master, he may be assigned tasks which he can perform alone without supervision or direction.

The final stage — final in a relative sense only — is that of mastership. In this stage the individual not only knows how to direct his own efforts with perfect freedom, but he is

also able to direct and instruct others. As Rosenkranz remarks, "The master is complete only in relation to the journeyman and apprentice; to them he is superior. But, on the other hand, in relation to the infinity of the problems of his art or science, he is by no means complete; to himself he must appear as one who begins ever anew, one who is ever striving, one to whom a new problem ever rises from every achieved result. He cannot discharge himself from work, he must never rest on his laurels. He is the truest master whose finished performances only force him on to never-resting progress." Like Sir Isaac Newton, he regards himself as "A child gathering pebbles on the seashore."

"Who shall pupil be?"

"Every one."

"Who shall craftsman be?"

"Who good work has done."

"Who shall master be?"

"He who thought has won."

Thus the process of instruction will vary under the different stages of development, ever aiming to bring the learner into the largest possible ability to direct his own education. How far this may be carried depends upon the capacity of the individual, as we have already remarked (p. 159). With the mass of humanity the greatest skill in instruction is required. To uncover hidden powers, and make the most of them, to distinguish the presence of capacity and its absence, to stimulate the backward and arouse the dull, to give courage to the timid and lead them to attack difficulties, to awaken the interest of the indolent, is the teacher's most difficult task — a measure of his skill

and power. Herbert Spencer well remarks, "Mankind, like a group of men selected haphazard, is made up of a few clever individuals, many ordinary ones, and some decidedly stupid." It is with the "ordinary ones" that the teacher is chiefly concerned. Where there is total incapacity, the school can do nothing. But one must not be too ready to accept apparent incapacity in some particular field. It often occurs that a child really possesses powers that are dormant and that need arousing. Possibly it is a case of arrested development — happily not so common as formerly since child-study has made so many discoveries in the development of children; it may be that because of some physical condition the child is temporarily under a cloud; or it may be that the subject-matter offered belongs to a later period of the child's life. Whatever the cause, patience, watchfulness, and careful solicitude on the part of the teacher should safeguard the child and intelligent effort be made to lead it into the light, or at least, bring to it the very best it is capable of receiving.

With bright and talented pupils, there is less difficulty so far as bringing them to grasp the material of instruction is concerned; but there is danger that they, accustomed to gain knowledge with little effort, may lack perseverance, may appreciate too little the value of education, and may therefore be satisfied with superficial knowledge. It is as true in education as in life, that which costs little is valued little. Hence the slow, mediocre, perhaps dull pupil, who must work for what he gets, is apt to learn patience, perseverance, fidelity, and that dogged persistence which never recognizes defeat. His knowledge costs him great effort, and when it is gained, it is not only appreciated, but eternally fixed.

Many children are precocious in certain directions. Such children need to be carefully guarded in order to prevent egotism on the one hand, and premature development on the other. "Youthful precocity," says George Eliot, "is like too early rising, apt to be followed by a long and wearisome afternoon." Too much notice of specially bright children, either in the home or in the school, has a tendency to make them self-conscious and vain, and to destroy that innocence and naïveté which are the charm of childhood.

The Professionally Taught and the Self-Taught. — After a child has passed through his educational apprenticeship his further development may be obtained in general by two means, (1) through professional channels, and (2) through self-teaching. In either case his progress may be continuous, being limited only by his capacity, and by the amount of time and effort he may devote to it. Of course there are decided advantages possessed by the first of these means, that is, through the discipline of organized education as represented in schools. As Dr. Harris puts it, "The professionally educated masters thoroughly what the experience of the race has transmitted to his own specialty, and hence increases his own stature by standing on the shoulders of the human race." He begins at the point that the world's development has reached and goes forward to a higher level. The school, with its course of study — the result of the experience and wisdom of centuries — with its systematic teaching and its thoroughness, with its educated teachers, and with its equipment, stands for professional education. In it the pupil accepts what the world

has learned and what is established, and presses forward into new fields of discovery and investigation. Thus further progress in civilization becomes possible.

The person who must depend upon teaching himself, although he possesses the two requisites heretofore pointed out, namely, desire for further improvement and knowledge of how to attain it, such person will always be handicapped by lack of material equipment, the tools with which to work, by uncertainty as to selection of material, by the uneconomical methods employed, and by the want of guidance by more experienced and wiser men. Quoting from Rosenkranz,¹ "The self-taught man has often true talent, or even genius, to whose development, nevertheless, the inherited culture has been denied, and who by good fortune has through his own strength worked his way into the field of effort. The self-taught man is distinguished from the amateur by the thoroughness and industry with which he acts; he is not only equally unfortunate with him in the absence of school training, but is much less assisted by the advice of the competent. Even if the self-taught man has for years studied and practiced much, he is still haunted by the feeling of uncertainty as to whether he has yet reached the standpoint at which a science, an art, or a trade, will receive him publicly. It is of great consequence that man should be comprehended and recognized by man. The self-taught man, therefore, remains embarrassed, and does not free himself from the apprehension that he may expose some weak point to a professional, or he falls into the other extreme — he becomes presumptuous, steps forth a reformer, and, if he accomplishes nothing, or earns only

¹ "Philosophy of Education," p. 111.

ridicule, he sets himself down as a martyr unrecognized by an unappreciative and unjust world."

The Course of Study. — The material of instruction is indicated in the course of study. For centuries the formation of a school curriculum has been the center of educational thought and experiment. Sturm's course of study, which appeared in 1538, is the oldest attempt of Protestant educators to systematize the material of instruction into an organic unity. Indeed, Williams says,¹ "With regard to Sturm's plan of organization, it should be borne in mind that it is the very earliest scheme that we have, looking to an *extended, systematic, and well-articulated* course of studies for a school of several teachers, in which is assigned to each class such portions of the subject-matter of the course of instruction as is suited to the age and stage of advancement of its pupils." This plan had the merit of definiteness, thoroughness, and unity, though even Sturm found trouble in carrying out its full requirements.

Later the Jesuits produced the *Ratio Studiorum*, a scheme of work that lays principal stress upon the humanities and religious instruction. In his "Great Didactic," Comenius presents a complete plan of school organization covering the whole period of education from birth till the completion of the university. Modern educators have not been wanting in zeal for the improvement of school courses, and some notable documents treating this subject have appeared, among which may be mentioned the "Report of the Committee of Ten," of the "Committee of Fifteen," and of other

¹ "History of Modern Education," p. 91.

committees of the National Educational Association; "A Suggestive Course of Study for Primary, Grammar, and High School Grades," known as Document No. 21, of the New Jersey Council of Education; "A New Course of Study," by Edward R. Shaw.¹

Dr. Balliet remarks, "There is a nascent period for each physical and mental power, a period of rapid growth when new aptitudes and interests are developing. It is our dense ignorance of most of these nascent periods that makes it impossible for us as yet to prepare a proper course of study. Hence our courses of study are little more than conscientious guesses. When we shall know more about these nascent periods, we shall be able to arrange a course in which the various phases of every study will be presented at the proper nascent period when they will appeal most strongly to the child. Such a course must take into account three types of children — the observer, the thinker, and the doer. The last type has but recently been recognized in education."²

It may be said that every course of study must include all the subjects necessary to accomplish the purpose it sets out to attain, which subjects must be so arranged as to be sequential in their order, harmonious in their relation to each other, economical in the presentation of material, at the same time offering a complete unity from beginning to end. There must be no undue repetition of subjects, and yet, there must

¹ This is an "Analytical Outline of a Course of Study for Elementary Schools," in which the work for the first eight years is marked out according to the three centers that De Garmo advocates, namely, Humanistic, Scientific, and Economic. The scheme is elaborately developed and is well worth a careful study.

² See De Garmo, "A Working Basis for the Correlation of Studies," *Educational Review*, Vol. V, p. 451; also "Report of the Committee of Ten."

be enough repetition to fix the material in the pupil's mind. It may be remarked that the same subject presented at different stages of the child's development, under varied conditions, by different methods and different teachers, not only affords new view-points and broader conception of the lesson, but is absolutely essential in securing thorough apperceptive results. Thus repetition instead of being a waste may prove the truest educational economy.

The problem has been to decide upon the essential studies and to arrange them in proper order. So long as civilization progresses no permanent curriculum can be perfected. New discoveries and inventions, increased demands of life, better teachers and more complete equipment, extended period of schooling for the child, more correct knowledge of the laws of human development, better methods of teaching — all these, make improvement and extension of the curriculum both imperative and possible. Higher institutions of learning are the first to feel the need of advance, and they endeavor to keep pace with progress by increasing their entrance requirements and broadening their courses. Secondary schools are obliged in turn to change and raise their standards to meet the demands of the higher institutions which their students desire to enter, and finally the elementary school must make its work fit the new exactions of the high school. Thus, commencing at the top and reaching downward the whole course has been changed. President Butler has shown that the graduate of Columbia before the Civil War was not so well equipped as the sophomore of the present, while it has been claimed that a graduate of Yale of fifty years ago had not as much preparation as is required of the candidate for entrance now. A constant for-

ward movement with regard to the curriculum is both natural and necessary.

This increased demand upon the student must not be too exacting, nor must the higher institutions require more of the schools below them than they are able to accomplish.

While no ideal course of study has yet been made, and it may never be possible to construct one, owing to the new demands of life, and to advancing civilization, every corps of teachers must seek to bring to their pupils the very best that their concentrated wisdom can attain.

Nature of the Course of Study. — We design here to outline certain mental principles that must control in any course of study, leaving to each faculty the duty of constructing such a curriculum as their school demands.¹ Among the principles that must govern this work are the following:

1. *The subject of the course of study must be properly correlated.* — The Committee of Fifteen very forcibly urged the necessity of a proper correlation of studies and suggested the branches of study that are necessary to a complete development. Dr. Harris in a later discussion of that report says,² “The studies of the school fall naturally into five coördinate groups, thus permitting a choice within each group as to the arrangement of its several

¹ I call attention to two solutions that have lately been offered as follows: “A New Course of Study,” by the late Dr. Edward R. Shaw. Document No. 21, Council of Education of New Jersey, entitled, “A Suggestive Course of Study for Primary, Grammar, and High School Grades.”

² Dept. of Superintendence, National Educational Association, at Jacksonville, Fla., Feb. 1896.

topics, some finding a place early in the curriculum and others later. These five coördinate groups were first, mathematics and physics; second, biology, including chiefly the plant and the animal; third, literature and art, including the study of literary works of art; fourth, grammar and the technical and scientific study of language, leading to such branches as logic and psychology; fifth, history and the study of sociological, political, and social institutions. Each of these groups, as it was assumed, should be represented in the curriculum at all times by some topic suited to the age and previous training of the pupil."

A few years ago the subject of correlation received a great deal of attention among educational thinkers and, as a result, a more careful, systematic, and mutual relation has been established between the subjects of the school course. Geography and history, reading, spelling, grammar, and literature, mathematics and science, language and composition, possess a mutual relation to each other, which, if observed in the course and in the instruction, advances rather than retards the progress in each individual subject, at the same time it produces a well-balanced development.

2. *In the elementary course chief stress must be laid upon the essentials of culture.* — Every child must know how to read, write, and cipher. These are the first essentials demanded of the schools and they must not be neglected. But they are not the only essentials nor by any means the most important. They are the means to an end, they open the door to the fields of knowledge, they are the implements of work. Being the key that unlocks the storehouse of knowledge, perfect mastery of them should be gained and no excuse for less than this can be tolerated.

To quote again from Dr. Harris, "The first stage of school education is education for culture, and education for the purpose of gaining command of the conventionalities of intelligence. These conventionalities are such arts as reading and writing, and the use of figures, technicalities of maps, dictionaries, the art of drawing, and all of those semi-mechanical facilities which enable the child to get access to the intellectual conquests of the race. Later on in the school course, when the pupil passes out of the elementary studies, which partake more of the nature of practice than of theory, he comes to the secondary school and the college, to the study of science and the technique necessary for its preservation and communication. All these things belong to the first stage of school instruction whose aim is culture."

Opinions may differ as to exactly what subjects are necessary for culture, and as to how early mastery of these should be expected. At least all the work of the elementary school is embraced, and possibly that of the high school and much of the college course. This point has received treatment in a former chapter.

3. *The course must be well-balanced and symmetrical.* — It must take the child into all of the different fields of human knowledge. "From the primary school on through the academic course of the college, there should be symmetry, and five coördinate groups represented at each part of the course—at least in each year, although perhaps not throughout each part of the year." Dr. Harris as we have seen, marks out five branches to be included. (See also Chapter II.) President Butler indicates these departments of knowledge to be *science, literature, the æsthetic, the institutional, and*

the *religious*. Dr. De Garmo outlines the field into *human* sciences, such as languages, literature, art, and history; *natural* sciences, such as physics, chemistry, astronomy, biology, geography, mathematics, etc.; *economic* sciences, such as economics proper, technology, and commercial knowledge.

Whatever scheme may be accepted, the teacher in formulating a course of study, should see to it that every child receives instruction in each of the branches of knowledge during every year of the elementary course.

4. *The course must take into account the stages in the child's development.*—In the intellectual development of the child there is a period when the sense perceptions are best appealed to, another period when memory is especially tenacious, another when reason predominates, and so on. The material offered him should be selected with reference to these periods. Thus, the course should appeal largely to the senses in the first three years, should furnish material to employ the memory at say eight to twelve, and place subjects that require much reasoning later. The development of the physical body should also be taken into account. Control of the motor activities should be sought and there should be such systematic and natural training of the body as will not only foster its growth and maintain its health, but also bring it to its highest physical perfection. The course should also have in mind the development of sound and intelligent moral habits and ethical life.

5. *The course must meet the aim for which it is intended.*—The foregoing principles are general and they should be applied to all courses for elementary schools and

for all who are beginning to acquire an education. In more advanced work, there will be courses for technical students — commercial courses, engineering, medical, legal, theological, pedagogical, etc. These courses should be adapted to the purpose for which the school stands.

What the Elementary School Should Accomplish. — We have said that every course must meet the aim of the school for which it is intended. For example, the course of the elementary school must first of all equip the child for his life work. It may well be asked, What has the parent a right to expect the school to do for his child? It would seem a just requirement that the child who has completed the grammar school course at the age of fourteen or fifteen should possess the following qualifications:

1. He should be able to speak and write the English language accurately, not only from habit, which, of course, is of chief importance, but also with a knowledge of the underlying rules of grammar.

2. He must be able to spell correctly such words as he will use in letter-writing and composition, as well as to write legibly.

3. He should be able to read from a newspaper or ordinary book with clear enunciation, correct pronunciation, and such understanding as not only to gain the thought himself, but also to convey it to others when reading aloud.

4. He must possess sufficient mastery of arithmetical processes to meet the ordinary affairs of life.

5. He must be familiar with the history of our own

country and also have some acquaintance with the most important events of the world's history.

6. He must know the elementary processes of our scheme of government so that he may later discharge the duties of intelligent and patriotic citizenship.

7. He should have a good knowledge of geography.

8. He should understand to a degree the structure, support, nourishment, and care of the human body.

9. He should know something of elementary science so as to comprehend the ordinary phenomena of the world about him.

10. In addition, he will know many things that cannot well be formulated; such as, music, handiwork, drawing, and, in its broadest sense, the principles of ethical living.

If the school fails to reach approximately these results with the normal child who is regular in attendance, the parent has a right to complain, and the course of study should be planned to accomplish these ends. With this foundation to build upon, the higher schools can direct his activities into commercial, scientific, classical, or technical channels to meet the purpose designed. The Herbartian school of pedagogy has rendered the cause of education great service by calling attention to the importance of a proper correlation of the subjects of the school course, even though its scheme of correlation may be considered too formal.

Arrangement of the Daily Program. — The success of instruction depends in a measure, upon the time of its presentation. Investigations have proven that increased

efficiency on the part of the pupils is attained through a proper arrangement of the program of work. Not only this, but great economy is effected thereby.¹ "The program," says Rosenkranz,² "must assign the exact amount of time which can be appropriated to each study. It must prescribe the order in which they shall follow each other, it must, as far as possible, unite kindred subjects, so as to avoid the useless repetition which dulls the charm of study; it must, in determining the order, bear in mind at the same time the necessity imposed upon the subject itself and the psychological progression of intelligence from perception, through conception, to the thinking activity which grasps all."

The powers of the child are most active in the early part of the day, and these powers diminish with each succeeding period. A period of rest or recess recuperates the strength in part, dependent upon its nature and length. While all subjects will necessarily lose something by being placed at the later period when the intellectual vitality is weakened, some will suffer more than others. Thus mathematics, if placed at the end of the day after four or five hours of work, would suffer more than a subject requiring less concentration, like drawing, penmanship, nature study, or laboratory experiments.

As the program should be arranged to secure the least waste and the greatest efficiency in the presentation of all the subjects, the following conclusions seem inevitable: (1) The subjects requiring closest attention, greatest use of the memory, and strictest accuracy should be placed in

¹ See "Foundations of Education," chapter on "The Daily Program."

² "Philosophy of Education," p. 133.

the early part of the day. This would mean reading for little children, this being their most important work, and mathematics for those more advanced. (2) Subjects next in difficulty, such as, history, science, geography, and formal grammar should follow. (3) Subjects requiring the least application should be placed toward the end of the session. (4) Inasmuch as the intellectual force diminishes with increasing ratio, it follows that with young children long sessions should be discouraged, and that there should be frequent recesses during the day. (5) Alternation and variety in the program will add to the efficiency of the work and serve to keep up the interest of the pupils. (6) For these reasons, the work of the elementary school should be assigned to grade rather than departmental teachers.

Means of Learning. — There are three ways by which we learn, namely, (1) experience, (2) the written or printed page, and (3) oral instruction. Some of the most important lessons of life are learned through experience and can be learned in no other way. Indeed, in the early years this is the chief means of learning. Through the senses a person gains knowledge of the things he experiences. It has been said that the child learns as much during his first seven years as he learns during the remainder of his life. This statement may well be questioned, for, although it is remarkable how much is learned during these years, it must not be forgotten that whatever knowledge is already gained opens the door, through the apperceptive process, to new knowledge. Thus the possession of one language prepares the way for the acquirement of a second, and the

possession of two or three languages makes the learning of another still more easy. It is an illustration of the truth, "To him that hath, shall be given." It is difficult to measure all that a child of seven possesses. He is acquainted with perhaps a thousand words of his mother tongue, and knows the names of common objects and many of their qualities; is familiar with his environment and knows how to adjust himself to it; his eye has learned to see, his ear to hear, his hand to weigh and handle; he has learned to control his body, direct its movements, and perform acts of skill and agility; in a word, a child of seven has met and removed many estrangements, is well on the way toward a mastery of the world's mysteries. But in each of the years that follow, if there be no cessation of effort, the progress may continue with accelerated speed as long as life lasts. His vocabulary of one thousand words has been multiplied many times; literature, art, science, history, have brought their riches to him. A trade or profession may have been mastered by him. In the first case, the child begins with nothing but the capacity to learn; in the second case, he still possesses that capacity, and has the impetus which the experience, the training, the knowledge already gained give him. He has added to experience, as a means of learning, the power to read, and facility in learning from others.

It is not suggested that experience ceases with the early years. As long as we live it will continue to be a means of learning. "We learn to do by doing," says Comenius, and much of the work of the school requires that pupils shall personally experiment. The trade or profession that one selects cannot be mastered by reading books, or

listening to lectures; it is necessary that the novice shall have actual experience before he attains the full measure of proficiency.

Text-Books. — The second means by which we learn is through printed or written characters. In the words of Rosenkranz,¹ "What we learn through books forms a contrast to that which we learn through living. Life *forces* upon us its wisdom; the book, on the contrary, is entirely passive. It is locked up in itself; it cannot be altered; but it waits by us till we wish to use it. We can read it rapidly or slowly; we can simply turn over its leaves — what in modern times one calls reading — we can read it from beginning to end or from end to beginning; we can stop, begin again, skip over passages, or cut them short, as we like. To this extent the book is the most convenient means for instruction." The hieroglyphics on the Egyptian monuments, or the tablets found in the library of Nippur are utterly meaningless unless some one possesses the key of interpretation, unless they can be read. The same is true of the characters in a reading book to the child when he first sees them. They must be interpreted to him, that is, he must be taught to read as his first and most important work in order that he may be able to take advantage of this means of self-instruction. It prepares him to use the text-book, which certainly has a place in the school. While it is true that the old-time servile adherence to the text-book on the part of the teacher is not to be countenanced, it is equally true that it cannot be abandoned. It would seem folly to expect the average teacher to be capable of

¹ "Philosophy of Education," p. 121.

planning consecutive work, arranging its details, and providing suitable material such as an author could do who has devoted many years to this work, and who perhaps has himself taught the subject many times and is therefore giving the results of rich experience. And if teachers were capable of doing this, how many could devote the necessary time to such work in addition to the burden of daily tasks? And that, too, for each of the many subjects they are called upon to teach.

While the use of text-books by the teacher is advocated, it hardly need be said that he should have such a mastery of the subject-matter and the method as to be free from dependence upon the book during the process of instruction. The text-book should be a guide both to teacher and pupils, indicating the proper subjects to be treated, inviting to steady and systematic progress, and leading to perfect unity and completeness.

Text-books should be clear in the presentation of material, accurate in statement, attractive in their mechanical construction, possess suitable and artistic illustrations, be full enough to meet the end for which they are intended, but not too full, and be clothed in language that is easily comprehended by the pupil. It is no credit to an author to present his material in obscure and unnecessarily technical terms under the mistaken notion of profundity.

Oral Instruction. — The third means of instruction is the oral or lecture method. This is the most direct and common medium of conveying knowledge. "Since speech is the natural and original form in which the mind manifests itself, no book can rival it. The living word is the

most powerful agent of instruction. . . . In two cases especially is it indispensable: one is when some knowledge is to be communicated which is in process of discovery and as yet is found in no compendium; and the other when a living language is to be taught, for in this case the printed page is entirely inadequate.”¹

With young children the catechetical method must chiefly be employed. They must be called upon to answer specific questions; they must be allowed to take part in the exercise. Only by sympathetic and mutual participation in the work by teacher and pupil can the best results be obtained. With adult students the lecture method may be adopted. The progress is more rapid and the students possess the power of continued concentration which enables them to listen with profit for an extended period.

Agencies of Instruction. — The three agencies employed in the work of instruction are the family, the tutor, and the school. The family, which has the child exclusively during the earliest years, begins his educational career and prepares the way for later progress. We have seen (Chapter XII) that owing to the complexity of modern life it is practically impossible for the family to continue and complete the formal education of the child, hence the necessity for other agencies.

In general, two courses are open to parents when the time arrives for them to choose the manner of continuing the education of their children, namely, the tutor and the school. The advantages of the tutorial plan may be stated as follows: (1) the direct and personal influence of

¹ “Rosenkranz,” p. 124.

the teacher may be most powerful; (2) the teaching is individual and therefore the progress may be measured entirely by the ability of the pupil; (3) personal characteristics of the pupil may be considered and met; (4) the method employed may be suited to the individual. The disadvantages, on the other hand, may be noted as follows: (1) there is danger of cultivating a spirit of selfishness and egotism on the part of the pupil inasmuch as he is the center of thought and effort; (2) there is lack of the inspiration which comes from measuring his strength with others of the same age and ability — it is a good thing for a boy to meet others in both physical and intellectual contests, even if he sometimes suffers defeat, for that is what he must do later in life; (3) there is danger that the pupil may depend too much upon his teacher and therefore fail to gain the self-reliance which comes from exercising one's powers to the full limit; (4) pupils in a class learn from each other in reciting — frequent repetition, struggle of the others to overcome difficulties, hearing the different presentations of the teacher in order to make the lesson clear to all, variety of discussions both by teacher and pupils, use of language suitable to the intellectual advancement of the whole class — all these tend to fix the material in a way that is impossible when the pupil is taught alone.

The third agency of instruction, and the one that reaches by far the largest proportion of the youth, is the school. We have already shown the office that the school is to perform (p. 180). It now remains to consider the different kinds of schools and their office. The generally accepted nomenclature of schools in this country is as follows:

1. *The elementary school* — which takes the children at five or six and continues their education for about eight years. The work that should be demanded of this school has already been outlined in this chapter.

2. *The secondary school* — which receives children who have completed the elementary school and in a four years' course prepares them for college, or some other institution of learning, or for business. There is a decided movement towards shortening the elementary course to six years and making the secondary course two years longer, that is, six years. The argument for this change may be briefly stated as follows: (1) A very large proportion of the pupils remain in school only till about their twelfth year; therefore a course should be arranged that would be approximately complete at that time. (2) This is the beginning of the adolescent period when great physical changes take place in the child, and therefore a decided change in the method of instruction and the material offered is essential. (3) Many of the subjects that belong peculiarly to the secondary school require more than four years for their completion. Some of them should be begun earlier than is now common, especially languages, which require a great deal of memoriter work in learning vocabularies, accidents, and rules. The memory is more retentive before than after the fourteenth year, (See p. 250.) (4) If started in the high school course at twelve, the child is more likely to continue longer in school than under present conditions. At fourteen he is restless, eager for change, desirous of earning money. Hence if the elementary course closes at that time, and a new epoch confronts him, the chances are that he will choose to leave school, if allowed

free choice. If, however, he has already had two years of high school work and has become interested in it, and not being confronted with the question of choice at the more critical period, it is probable that he will continue his course. These reasons seem strong and forcible enough to warrant a consideration of this change, a scheme that corresponds with that outlined by Comenius in his "Great Didactic," and that is in vogue in European schools, as well as in many preparatory schools in this country.

3. *The undergraduate school or college* — which admits students from the preparatory school and offers them a course usually four years in extent, culminating in a Bachelor's degree. Some institutions make it possible to shorten this course to three years, or even two, thereby enabling the student to begin his professional study earlier.

4. *The graduate school, or university* — which offers courses in law, medicine, philosophy, etc., and prepares the student for the learned professions. The term university is lacking in well-defined meaning in this country, many institutions having assumed the title without sufficient grounds. President Butler offers some valuable suggestions on this point as follows:¹ "The distinction between the function of the college and that of the university which becomes clearer day by day to the student of education, has thus far proved too subtle to reach the understanding and too commonplace to satisfy the pride of the American people; for the existing terminology inextricably confuses colleges and universities, and sometimes even institutions that are little more than secondary schools, and it taxes

¹ "The Meaning of Education," p. 125.

the patience and skill of the expert to disentangle them. If we cut the Gordian knot by allowing every institution founded for any form or phase of higher education to classify itself by the name that it assumes, then there are no fewer than one hundred and thirty-four universities in the United States" (1890). Dr. Butler defines a university as an "institution where students, *adequately trained by previous study of the liberal arts and sciences*, are led into special fields of learning and research by teachers of high excellence and originality; and where, by the agency of libraries, museums, laboratories, and publications, knowledge is conserved, advanced, and disseminated."

5. *Special schools* would include all those that fall outside of the foregoing traditional scheme. The variety of these schools, together with those already described, affords opportunity for youth to pursue almost any educational aim desired.

Management of the School. — The external management of the school is vested in the board of education, and the internal management belongs to the professional expert, the teacher. It is the office of the school board to furnish the necessary equipment and supplies, to appoint teachers and provide for their support, to make necessary regulations for the control of the school, and to sustain the teachers in the enforcement of discipline and in carrying out the work of the school. To the teachers belong the formulation of the course of study and its successful enforcement, the maintenance of discipline, the duty of instruction, and the direct furtherance of the educational purpose. **This belongs to them** because of their professional training

and their expert knowledge. The function of the school will best be subserved when these relations between school boards and teachers are understood, and when they respectively fulfil the duties devolving upon them. The chief purpose of the establishment and maintenance of the school, and of the preparation and consecration of teachers, is that the children may be properly instructed. Around this thought should center all the effort and all the zeal of the school.

Summary

I. The principal work of the school is instruction. The idea of instruction presupposes a difference between teacher and pupil. The purpose of instruction is to cancel that difference. The formal education of a large part of the children ceases with the elementary school. Hence it is essential that the stage of educational apprenticeship shall be successfully passed during this period. That is, the child should have learned how to direct his further culture in case he can no longer attend school.

II. The skill of the teacher is put to test in his treatment of children of different capacities — the dull, the mediocre, and the talented. Patience, wisdom, and pedagogical knowledge are necessary in order that he may bring out the best there is in each.

III. The course of study is an expression of the accumulated wisdom and experience of educators of all ages. It is a systematic plan of work, which must include such subjects as are necessary to accomplish the purpose it sets out to attain. These subjects must be so arranged as to be sequen-

tial, and harmonious in their relation to each other. There should be a perfect unity from the beginning to the end of the course.

IV. The daily program should be so arranged as to place the subjects requiring closest attention, strictest accuracy, and greatest use of the memory early in the day. Subjects next in difficulty should follow, and those requiring least application should be placed near the close of the session.

V. We learn by experience, by the printed page, and through oral instruction. Each of these agencies must be utilized in the work of education, as each has a separate office to fulfil.

CHAPTER XVII

WILL TRAINING

References. — *Morgan*, Studies in Pedagogy ; *Dutton*, Social Phases of Education ; *Wiggin*, Children's Rights ; *Shearer*, Morals and Manners ; *White*, Elements of Pedagogy ; also, School Management ; *Adler*, Moral Instruction of Children ; *Coler*, Character Building ; *Forbush*, The Boy Problem ; *Griggs*, Moral Education ; *Mark*, Individuality and the Moral Aim in Education ; *Baker*, Education and Life ; *Smith*, Systematic Methodology ; *Ogden*, Science of Education.

The Will. — The discussion of the nature of the will belongs to the field of ethics on the one hand and psychology on the other, — ethics as the science of human duty and psychology as the science of the activities of the mind. We have already seen that the science of education is based upon both ethics and psychology. This fact must be accepted without entering into consideration of the principles of ethics or the laws of mental development. As pedagogy seeks to make application of ethical and psychological laws to education, a discussion of the training of the will is peculiarly fitting in a treatise on pedagogy. (See p. 3.)

Will may be defined as that faculty or power of the soul which enables it to choose, determine, and direct its own actions. The child does not possess this power at the beginning, and it is the office of education to train his will so that he may control his appetites, direct his activities, make wise choice of opportunity, and hold himself under

constant self-command. "In childhood," says Smith,¹ "this power (of the will) is relatively small and should be exercised for only a brief period at a time; most of the actions are then impulsive, or at least non-voluntary. It is well that this is so, for a strong will should be coupled with a strong judgment. This latter the child does not possess, and he must therefore submit to the guidance of the maturer judgments of others. Having the faculty of self-direction in but a small degree, he is more easily diverted, and thus managed in accordance with reason at a time when it would be useless to attempt to reason with him. But as reason develops we should gradually withdraw from him the interference of outside authority."

Speaking of the will, Bittenger says,² "It is the monarch of the mind, ruling with despotic, and at times with tyrannical powers. It is the rudder of the mind, giving direction to its movements. It is the engineer giving course and point, speed and force, to the mental machinery. It acts like a tonic among the soul's languid powers. It is the bond that ties into a strong bundle the separate faculties of the soul. It is the man's momentum; in a word, it is that power by which the energy or energies of the soul are concentrated on a given point or in a particular direction; it fuses the faculties into one mass, so that instead of scattering all over like grape and canister, they spend their united force on one point."

The will is susceptible of discipline, and educators should give far more attention to its training than is common. We see, hear, taste, feel, imagine, think, remember, act, largely

¹ "Systematic Methodology," p. 72.

² Quoted from Ogden, "Science of Education," p. 228.

because we will to do these things. "In short," says Coler, "it is the will that has, or may be made to have the controlling influence over body, over intellect, over sensibility, and over conduct." We may then turn our attention to the means of securing proper will-training.

1. *The first step in training the will is to teach absolute and unquestioning obedience to authority.* — This should begin very early, as soon as the child consciously resists authority, which is long before he enters school, and therefore is a duty devolving upon the parents. While no specific age can be given as to when the child first understands a command, no intelligent person having charge of a child is long in doubt as to when it is consciously disobedient. (See p. 149.) It may be remarked that the American parent is averse to the idea of "breaking the will" of the child, having the false notion that to require him to submit to a stronger will is to make him cowering and weak, — in a word, that it robs him of spirit, of courage, of that independence which should characterize the citizen of a republic. Nothing is farther from the truth, either in theory or practice. Breaking a colt to harness, if properly done, does not spoil him, it makes him of value; it certainly does not destroy his ambition or take away his spirit. The child must be taught to submit his will to the guidance of others who possess judgment and wisdom, until he is capable of self-direction. And when that power is gained he will be able to control appetite, govern his temper, make the right choice, and act up to his convictions when a choice has been made. Therefore the bringing of the child to submit to the will of one of ripe judgment and wise discretion is an act of wisdom of great

pedagogical and ethical significance. The parent that fails to teach this lesson fails in a God-given duty, and the earlier it is taught the easier it will be, and the better for all concerned. As we have said, the lesson of obedience should be taught as soon as the child consciously resists authority, and if so taught, the first step towards a proper conception of the child's relation to parents, to teachers, and to the community at large has been taken. It will do much towards preparing the individual for that respect for law and authority which is essential to good citizenship and to a maintenance of a proper relation to his fellow-men.

In learning to obey the child yields his will to superior wisdom and authority, but through this act he does not surrender his freedom. Freedom has been defined as, "*That condition which is brought about by an implicit obedience to all just law.*" Whether the law is moral, natural, or civil, the individual is free within each domain, only in proportion to his obedience within that domain. He may be a free man in the civil sense and be in moral bondage."¹ Thus in teaching the child early to obey, he is prepared for freedom in its widest, truest, and best sense.

2. *In the second place, the child's will is trained by teaching him to conform to social usages and customs.* — "The pupil must become civilized; *i.e.*, he must learn to govern, as a thing external to him, his natural egotism, and to make the forms which civilized society has adopted his own." Man by nature is a social being. The child is born into family life, and he must learn to conform to the requirements of the home, — respect for and obedience to

¹ Smith, "Systematic Methodology," p. 75.

his parents, acknowledgment of the rights of brothers and sisters, proper treatment of other members of the household. The training in social usages is best carried out in large families where the occasion to share benefits is frequent and where unselfishness is engendered. Where there is but a single child he is apt to be egotistical and self-centered. His opportunities to learn the requirements of society are fewer because of the limited number of occasions to practice the ordinary virtues of social contact. We have seen that the family first of all must inculcate implicit obedience. Although this duty rests upon the family, its influence extends out into life, — to the school, to the State, to contact with men. So, too, the social usages, which are adopted first for the maintenance of right relations among the members of the family, should be those that society in general requires in order that the child may be prepared to act his part among men with intelligence and urbanity. Rosenkranz says,¹ "The family, however, educates the children, not for itself but for civil society. In the latter a system of manners and customs is formed which furnishes a social formula or fixed code of etiquette to determine the behavior of the individual in society. This social code endeavors to subdue the natural roughness of man, at least as far as it manifests itself externally."

The family must therefore not limit its instruction in social forms to its own requirements, it must also prepare the child to conform to the usages of the world. Only when these usages are consistently and systematically practiced in the home may we expect the child unconsciously and habitually to practice them in society. And this

¹ "Philosophy of Education," p. 145.

politeness must exist in *spirit* as well as in *form*. The spirit of politeness is unselfishness; the form consists in those usages or acts of conduct common to any particular people or age. The spirit of politeness is a universal principle which cannot be circumscribed by artificial boundaries or confined to any age. It is best exemplified by conformity to the Golden Rule of the Great Teacher. The forms of politeness may vary in different ages or in different lands. Thus the formal etiquette of the days of chivalry is different from that of the present; and many of the forms of politeness required in Japan or China or Germany vary materially from those of America. Although the spirit of politeness is the more essential, the child must learn to conform to the usages in practice in the country in which he lives; he should also learn that in visiting other countries good breeding requires a certain conformity to their usages. In this sense, "when one is in Rome one must do as the Romans do." To ignore such established customs and follow one's own peculiar ideas of etiquette is likely to bring odium upon the individual and to arouse unfriendly criticism. Henry James illustrates this in his story, "Daisy Miller."

Dr. Harris says: "The object of the social code is to subdue the natural rudeness that belongs to man as a mere animal, and thus clothe the brutal with garb of unselfish forms. The essence of politeness consists in treating others as if they were perfectly ideal people. The polite person utterly ignores all rudeness shown him, and treats others as if they intended the same politeness toward him. He prefers others before himself, and adopts as a second nature the form of divine charity or 'altruism,' which

devotes itself to the good of others. Politeness is only the *form* of this altruism; morality and religion are the *substance* of it. Since the form of politeness is the same for all, — the same for the king as for the beggar — it follows that politeness is the ceremonial form by which we celebrate the equality of all men in the substance of their humanity. ‘All are equal before God,’ and also before the ideal of politeness.”

This training in social usages, then, becomes one of the most essential duties of the home. The child must recognize that he owes certain duties to others and to society. In this connection a caution is to be observed. The child must be taught to be on his guard against the insincerity of the world. “We must teach the youth that he may be imposed upon by cunning dissimulation and hypocrisy, and therefore he must not give his confidence lightly and credulously. He must learn how he can, without using deceit, gain his own ends in the midst of the throng of opposing interests.” The child that is brought up in a home where there is mutual confidence between its members, where there is an atmosphere of truth and genuineness, where love controls and where selfishness has no place, is likely to believe in all the rest of the world. Such confidence is beautiful, but unfortunately the child must be prepared to find that society in general does not measure up to this ideal. “This duty is painful, because the child naturally feels an unlimited confidence in all men. This confidence must be modified and restricted but not destroyed.” On the other hand, while the individual must be sufficiently guarded against the insincerity of the world, he must not be made unduly suspicious. It is unfortunate to become

imbued with the belief that most men are dishonest and that in every transaction there is danger of an attempt to cheat on the part of some one. A certain amount of confidence in the integrity of mankind is necessary for business, for social intercourse, and for peace of mind. Therefore the child must be taught that although he may not expect the same generosity and disinterestedness in the world that he has been accustomed to in the home, yet there is a great deal of goodness in the world, and a great many places where confidence may well be bestowed.

There is a certain amount of danger that every child must encounter when he goes out from his home. No parent will voluntarily thrust a child into temptation; and yet there are temptations that must be met, and the wise parent will allow his children to mingle with other children, watching over and safeguarding them in every possible way until they become strong and self-reliant. The public school should possess so high a moral tone that it will be perfectly safe to send any child to it. When this is the case there is no more wholesome or more suitable place for a child to obtain the will-training secured through acquaintance with and participation in social usages and customs.

3. *The child's will is trained through the formation of habits.* — Among the habits that have a direct bearing upon the will may be mentioned the habit of self-mastery, self-control, politeness, obedience to duty, respect for the right of others, industry, temperance. Habit is formed by the repetition of an act until it becomes unconscious and almost automatic. We have shown (p. 12) that the chief end of education is to form good character. Character has been defined as "a bundle of habits"; therefore in training

the will to form right habits the highest aim of education is sought. "It is the voluntary or will element in human action that gives it moral quality. Moral training involves the right training of the will," says White. Parents should therefore lead their children to repeat voluntarily such acts as will tend to form good habits, and this work should be definitely and systematically continued by the teacher. The child should not only be taught the difference between right and wrong, but he should be encouraged to choose the right repeatedly until the principle is established in him. Through his own voluntary choice, through an exercise of the will, he thus builds character.

Obedience to Duty is one of the most essential habits to be acquired. Concerning the idea of duty, Rosenkranz remarks,¹ "We must accustom the pupil to unconditional obedience to it, so that he shall perform it for no other reason than that it is duty. The performance of a duty may bring with it externally a result agreeable or disagreeable, useful or harmful; but the consideration of such consequences ought never to determine us. This moral demand, though it may appear excessive severity, is the absolute foundation of all genuine ethical practice."

It may be remarked that the practice of hiring a child to do his duty is pernicious in the extreme. It teaches him to expect a reward for the mere doing of duty. The virtue of the performance of an act lies in the willingness to do it as a pure act of duty. To pay a child for every errand run, to secure obedience through some compensation, establishes a low and selfish motive. There are many

¹ "Philosophy of Education," p. 150.

duties in life that must be performed without hope of direct reward. To reduce church, temperance, hospital, and other benevolent work to the basis of financial reward is to rob these activities of their altruistic motive and minimize the blessings that come from such endeavor. Therefore the child should early learn to perform many acts freely and without expectation of pay; and by proper training he will learn to perform them willingly and cheerfully. This training will be a good preparation for activity in the many fields of benevolent and gratuitous service which are always open to zealous and consecrated men, and which make the world better. And such altruistic spirit will harmonize with the teaching of the Holy Word, "It is more blessed to give than to receive."

A keen sense of duty will also have a great influence in solving the labor problem. It will require employers equitably to share the profits of their business with their employees in wages, perquisites, or other emoluments, after a fair return on their investment is assured. On the other hand, it will require the employees to further the interests of their employers by diligent service, by zeal and industry, and by honestly, faithfully, and intelligently doing their best work. There should be greater stress laid upon the assumption and discharge of duty, and the school must take its share of this responsibility.

Emphasis has been given to the cultivation of a sense of duty; it is not to be inferred, however, that other virtues are to be neglected. Industry, self-control, temperance, honesty, truthfulness, and all the other virtues must be taught. Dr. Harris well remarks, "No virtue may be neglected for another. The worst results follow from the habit of pro-

crastinating the performance of a duty or the indulgence of a weakness until a fixed day. The person who 'turns over a new leaf' on an important epoch is apt to turn it back again soon after. The will must not be trifled with. Duty must be obeyed now. To permit a temporary lapse from virtue occasionally is as inadmissible as allowing one's self now and then a misstep in ascending a flight of stairs. Such missteps undo the whole work."

Each of the virtues should receive definite attention in early childhood, so that conformity to them becomes a habit. The will is the most important agency in the formation of habit and in the establishment of character. Hence attention given to will-training is directly in harmony with the purpose of education as pointed out in Chapter II, on the Aim of Education.

4. *The ultimate end of will-training is reached when the individual is capable of governing himself.* — The child must be guided in his earlier years by a will stronger than his own; but the end to be sought is to bring him to be able safely to direct his own life. He must be exercised in the art of self-government until he is capable of acting wisely and independently. This training should accustom him to freedom in its truest sense. He will learn that in the society of men, absolute freedom is impossible, that the rights of others must be considered. To illustrate this point: A family were in the habit of drumming on the piano at all times of the day and night, much to the annoyance of their neighbors on the other side of the thin partition wall. On one occasion when their neighbor was ill, and after the noise had continued till midnight, a request came politely asking for a cessation of the nuisance. The

reply was, "This is a free country and we will do as we please," and they continued to play. They forgot that it is a free country for the people on the other side of the wall also, and that they had no right to trespass on their rights. This false conception of freedom is much too common, and our schools should teach that true freedom takes into account the rights of other men. "Education," says Rosenkranz, "aims at accustoming the youth to freedom, so that he shall always measure his deed by the idea of the good. . . . The pedagogical maxim is, then: Be independent, but be so through doing good."

This conception of freedom is doubly essential in a country that boasts of its liberty, a country in which the people are rulers. As an outgrowth of the false idea that every man is free to do as he pleases regardless of others, we have bosses, ring government, and grafting in politics; heartless corporations that stifle competition and drive to the wall small concerns that stand in their way; greed and selfishness on the part of capitalists on the one hand, and arrogance and tyranny on the part of the unions, which compel men to join their ranks or starve, on the other hand. As a result we have increase in peculation and crime that is already appalling. Perhaps the gravest of these tendencies is the attitude of trade unions which do not permit a man to dispose of his labor to whom he will and under such terms as he pleases. A very vital principle of freedom is attacked if this claim of the unions is allowed. A man should be free to join a labor organization if he will, and he has a right to decline to work under conditions that are unacceptable to him; but his neighbor is equally free to withhold his alliance

with the union and to work if the terms satisfy him. In a word, I may work or not as I please, but I am not free to prevent my neighbor from working even if he chooses to do so upon terms unacceptable to me. The government that cannot protect me in that right, that cannot enforce this idea of freedom, is weak and incapable of protecting its citizens, and therefore does not deserve to exist. A free government must guarantee to all its citizens equal rights and privileges before the law.

Under a free government this high conception of education, namely, that which "accustoms the youth to freedom," can best be reached. Absolute forms of government must necessarily restrict the individual and give him false ideas of freedom, for it must be remembered that the State also as a protecting, controlling, and governing body is a factor in education. (See p. 191.) Under absolute forms of government education in the highest sense, that is, education that sets free, that makes the individual capable of governing himself, can never be attained.

The home, as it offers wider opportunities to the child to control his own actions, should train him to freedom. The school, which seeks through its discipline to lead the child to act, not under the watchful eye of the teacher to follow mere rules and commands, but from inner impulse and from high personal ideals and from a sense of individual responsibility, — such a school is in the highest sense training the will, and preparing the child to be self-governing. Placing the child on his honor¹ in school prepares him to exercise freedom of choice, to act from his own

¹ See p. 74 of my "School Management" for a full discussion of the principle.

sense of right rather than blindly to follow a rule that the teacher has promulgated for his observance. In every case he decides his action upon the principle of right and wrong rather than upon that of keeping a rule in order to escape its penalties. He is constantly exercising his own will instead of subordinating himself to the will of another. He thus, guided by his teacher to a discriminating sense of ethical action, becomes a law unto himself, establishing a principle which he must follow later in life when no longer under the guidance of a teacher. This should lead to good citizenship in a country where he is called upon to exercise his freedom as a patriot, as a member of the body politic, and of society. Hence the right kind of discipline in school becomes as truly an essential element in preparing the child for self-government as the material of the curriculum does.

5. *The result attained will be manifest in good character.*

It has been pointed out in former pages of this book that the supreme purpose of education is the formation of character. This is no new proposition, character-building having always been the end sought by educators, even though this doctrine had not been specifically formulated, and was not definitely fixed in the consciousness of the instructor. The Herbartian School of pedagogy lays great stress upon character-building as the central thought of school work; they also teach that character is nothing less than a rightly trained will. We have seen that the formation of habits is a will process. If most of the habits are good we say the character is good, and if most of the habits are bad the character is bad. Hence the great work of education is to lead the pupil volun-

tarily to adopt good habits and to establish them through repeated virtuous acts and right living. If education fails to form good habits it increases the power to do evil because it equips the individual to be the more acute in roguery. Education that fails in fixing a moral basis thus makes the man the more dangerous to society.

Finally, "the consideration of the culture of character leads to the subject of conscience," says Rosenkranz. Dr. Harris defines conscience as "*the criticism which the ideal self makes on the realized self.*" This definition will stand the test of scrutiny. Every man possesses certain ideals. These ideals may be high or low according to the teaching he has received and the environment in which he lives. His conscience will trouble him only when he fails to reach his own ideals. A boy is brought up in the slums, surrounded by thieves, accustomed to profanity and intemperance, being perhaps himself sent out to steal, and punished or rewarded according to the success he has met with. His conscience will trouble him but little when he perpetrates a crime, because he has not violated his ideals. Another boy, brought up in a pure home, acquainted with the laws of God and man, nurtured in an atmosphere of ethical and Christian practice, will surely have higher ideals and therefore his conscience will hold him to a strict account concerning acts in which the other boy would not be disturbed in the least. A Hindu mother performs a religious act when she casts her child into the Ganges and satisfies her conscience by a deed which to a Christian mother would be murder and which could not fail to cause terrible remorse. The one loves her baby as truly as the other, but the difference in their feelings lies in the ideals which

each possesses. It therefore is incumbent upon education to implant correct ideals as well as to train the pupil to live up to the ideals he has.

Moral Training in the School. — Inasmuch as the moral side of education has so direct a bearing upon will-training, as well as upon the practical things of life, we may well inquire what is the office of the school in this work? Most American educators seem to be averse to formal lessons in morals, although Germany, France, England, and other countries have adopted such courses with excellent results. In a few schools in this country such instruction has been introduced also with satisfactory results. White very truly remarks,¹ “Effective moral training involves the discipline of the will to act habitually in view of those motives which release the soul from bondage to low and selfish desires, and make the conscience regal in life.” Superintendent Carr, who has had a definite course in morals in his schools for some years, says: “The moral instruction of children is the highest duty imposed upon teachers. Many children receive little moral training at home; they attend neither church nor Sunday school; therefore, if they receive moral instruction at all, it must be in the public schools. So whatever other work of this course is slighted, the part pertaining to moral instruction should be carried out.

“The aim of moral instruction is to teach the child to know, to love, and to do right. It therefore appeals to the intellect, the sensibilities, and the will. While all children have a moral conscience, yet what is right and what is wrong must be taught to them the same as other

¹ “Elements of Pedagogy,” p. 314.

facts. The moral judgment must be developed. This culture of the moral understanding should be accompanied by a heart culture that causes the child to love the good. The moral sensibilities need cultivation as well as the moral intellect. But the final outgrowth of the moral training is upright conduct, and unless this result is attained the training goes for naught. The child should be taught to *be* industrious, honest, truthful, obedient, patriotic, and reverential. His moral acts should be repeated until they become habits."

The teaching of morals in the school should be systematic even though no fixed place be given to it in the daily program. The teacher should have a plan in mind that will insure methodical instruction in each of the virtues.¹ In carrying out such a plan he will utilize daily incidents gathered in the school and out of it and will take into account the home life and environment of his pupils. He will not neglect the physical condition of the children, which may have an important bearing upon their moral conduct. He will remember that suitable employment is an excellent safeguard against mischief. By suitable and artistic schoolroom decorations, and by attractive environments, not only æsthetic but also ethical feelings will be inspired. From the lives of great men and from the pages of history abundant illustrative examples of noble living will be found. Literature, especially the Bible, will contribute suitable material for illustration and instruction concerning each of the virtues. Besides these things the teacher will be able to inculcate moral ideals and habits by

For treatment of the teaching of school morals, see Chapter XI in my "School Management."

means of the school discipline, by the intermingling of pupils, by the maintenance of the rights of the respective children, by supervision of the recreation hours, as well as through the formal studies of the curriculum.

Above all and most essential of all is the personal character of the teacher, which is the most potent and effective moral influence in connection with the lives of school children.

Summary

I. Will is the faculty or power of the soul which enables it to choose, determine, and direct its own actions. It is the office of education so to train the will of the child that he will be able to maintain self-command. The will should have the controlling influence over body, intellect, sensibility, and conduct.

II. Obedience to authority is the first step to be learned in will-training. In appropriating this lesson the child does not surrender his true freedom, which may be defined as the state or condition acquired through obedience to just and wholesome laws.

III. The second step in will-training involves a conformity to social usages and customs. Man is a social being and he must acquiesce in the laws of social order. The earlier he begins to comprehend this fact the better. The essence of politeness is unselfishness. Not only must there be the spirit of politeness but also a conformity to its forms.

IV. Again, the will is trained through the exercise of choice. Frequent exercise of the will in the same way re-

sults in habit. Obedience to duty should be inculcated as a principle of life.

V. The end to be sought in will-training is the power of self-government. This requires consideration of the rights of others as well as assertion of one's own rights. Education must "accustom the youth to freedom." That education which emancipates man should be attained best under a free government.

VI. The right training of the will should result in good character, the culture of which leads to the subject of conscience. Conscience may be defined as "the criticism which the ideal self makes on the realized self."

CHAPTER XVIII

RELIGIOUS EDUCATION

References. — *Coe*, Education in Religion and Morals; *Durell*, A New Life in Education; *Crooker*, Religious Freedom in American Education; *White*, Elements of Pedagogy; *Forbush*, The Boy Problem; *Payne*, Education of Teachers; Century Magazine, May, 1900; Educational Review, February, 1897; also October, 1903; N. E. A. Minutes of 1902 and 1903; Proceedings of the Religious Education Association; *King*, Personal and Ideal Elements in Education; *Griggs*, Moral Education; *Tompkins*, The Philosophy of Teaching; *Spalding*, Thought and Theories of Life and Education; *Sterrett*, The Freedom of Authority; *Wishart*, Primary Facts in Religious Thought.

Religion a Universal Principle. — The religious instinct is innate with every human being. No race or tribe of people has been discovered that does not possess in the development of this inborn capacity some form of belief and worship. It may be the crudest fetich, the most debasing form of idolatry, the subtlest philosophy of paganism, or the highest and noblest form of Christianity. It is the cry of the soul to some power or some influence believed to possess the ability to aid in the hour of distress, to comfort in sorrow, or to avert evil. "Man has a religious nature," says Coe.¹ "The definite establishment of this proposition is perhaps the greatest service that the history and psychology of religion have performed. Not very long ago men were still asking whether religion might not have

¹ "Education in Religion and Morals," p. 57.

arisen through priestcraft or statecraft, or at least through some incidental feature of human experience. Religion was looked upon as a theory or belief which men had formed for themselves somewhat as we form our hypotheses of inhabitants in other planets. Some tribes were said to be entirely without religion, and hence it was inferred that religion does not belong to humanity as such. But the 'tribe destitute of religion' is found to be purely imaginary, and the history of religion begins its recital with the affirmation that man as such has a religious impulse out of which have sprung all the religions of the world."

Recognizing the truth set forth in the foregoing statements, the educational systems of many countries provide religious instruction as a part of the regular school work, and outline a complete course in religion. This is possible in countries where there is a state religion or where there is a limited number of religious confessions. It would be impossible in this country where Church and State are separate and where there are so many religious sects, — at least it would be impossible to enter into the discussion of religious dogmas in the public school. But it may be mentioned again, that the duty of education is not limited to the public school, — the school being only one factor in this work. (See Chap. XII.) It must also be remembered that the term education has a broader significance than the term instruction. American educators with considerable unanimity recognize the need of religious education. This is evidenced by the numerous articles on the subject that have appeared in educational journals, popular magazines, and other periodicals; in discussions that have taken place in teachers' gatherings; in the organ-

ization of the Religious Education Association, and by the growing interest in the question everywhere felt.

Dissatisfaction Manifest. — In an address before the National Educational Association at Minneapolis, in 1902, Dr. Nicholas Murray Butler remarked as follows: "I want to call attention to a phenomenon which is so universal that we do not notice it, — paradoxical though that sounds — but which, if it is permitted to continue, will one day produce startling results in our life and civilization. I refer to the facts that owing to a series of causes, operating over a considerable period of years, knowledge of the English Bible is passing out of the life of the rising generation, and that with the knowledge of the Bible there is fast disappearing any acquaintance with the religious element which has shaped our civilization from the beginning."

This sentiment voiced the opinion of that great body of educators as shown later by the adoption of the following from the report of the committee on resolutions: "It is apparent that familiarity with the English Bible as a masterpiece of literature is rapidly decreasing among the pupils of our schools. This is the direct result of a conception which regards the Bible as a theological book merely, and thereby leads to its exclusion from the schools of some States as a subject of reading and study. We hope for such a change of public sentiment in this regard as will permit and encourage the reading and study of the English Bible, as a literary work of the highest and purest type, side by side with the poetry and prose which it has inspired and in a large measure formed. We do not urge this in the interest of sectarian instruction of any kind, but that

this great book may ever be the teacher's aid in the interpretation of history and literature, law and life — an unrivaled agency in the development of true citizenship as well as in the formation of pure literary style." This was adopted "without dissent" as one of the declarations of principles of the Association. While this expression may not be interpreted as a demand for positive religious instruction in the schools, it indicates a dissatisfaction with what is being done at present, and it will have a tendency to arouse further interest in this important matter.

Education that Omits Religion is Incomplete. — Rosenkranz summarizes this thought in the words,¹ "Education must, therefore, accustom the youth to the idea that, in doing the good, he unites himself with God as with the absolute Person, but that in doing evil he separates himself from Him. The consciousness that through his deed he comes into relation with God himself, affirmatively or negatively, deepens the moral standpoint with its formal obedience to the commands of virtue, to the standpoint of the heart that finds its all-sufficient principle in love." The philosophy of education as worked out by Rosenkranz reaches its logical conclusion and completeness in the religious ideal.

Arnold Tompkins says,² "Education and religion must have some common, vital principle, in spite of the fact that they have been set over against each other as if they belonged to different categories, if not antagonistic. This sharp line of distinction often blinds to the best truth in both, leaving education without purity, holiness, faith, noble

¹ "Philosophy of Education," p. 159. ² "Philosophy of Teaching," p. 271.

purpose, a striving for perfect knowledge and harmony with God — with nothing but the sharp intellect either with or without character; and religion without beauty, fullness and vigor of life, large-mindedness, generous manhood — with nothing but dogma and creed and formal piety. We hear that education is a doubtful factor, having to do with the intellect, and giving reckless power unless restrained by the religious heart; that it is an affair of this world to satisfy hunger and pride, while religion is for eternity, satisfying and saving the soul.

“Religion is not a branch, a department, or anything that can be added to education; but rather vitalized, purified, and quickened blood. It is the attachment and devotion of every faculty of the soul to truth, beauty, and virtue. It includes man’s whole being, — his tone and temper of life, purity of heart; his striving to know and feel the true, the permanent, the external source of all things; his tendency of life upward toward truth and God. Whatever else you may desire to include, so much are essential elements. Neither is education a branch, a department, or anything that can be added to religion. Education is to fix the tendency of life upward; to stimulate a striving for perfection of character; to enlighten and strengthen the native tendencies of the soul; to intensify and purify, broaden and deepen, refine and enrich life by all things true, beautiful, and good; and to establish the current of being in the safe channel of spiritual activity. Education is not power unqualified, but power regulated and directed to righteous ends. The work of education is fatally defective which gives faculties power without the power of right direction, strength of life without right tendency of life.”

What Religious Education Embraces. — It may be difficult to outline the religious knowledge that is essential to a well-developed educational equipment. In discussing this question it must be reiterated that we are not thinking of the work of the school, or the teacher, or the home, or any other single agency. We have shown that the religious impulse is universal, affecting all mankind; that it is a part of the education of every intelligent, self-conscious being, and that no life is complete without it. The consideration of it, then, logically follows as a part of educational philosophy. No theory of education is adequate that ignores it. That religion is a factor of civilization is too self-evident to require discussion. That it wonderfully affects all human action and influences individuals is also unquestioned. We may then ask, What religious knowledge is essential to a harmonious development, and what are the lessons in the sphere of religious thought and activity that every individual should learn? The following are the most essential of these lessons:

1. *Reverence.* — Every child should learn to be reverent. Respect for the name of God, His house, His consecrated servants, His Word, and His works should be implanted in every life. There is far too much flippancy with regard to sacred things. In the home, in the school, everywhere, a spirit of reverence for those things that pertain to religion should always be inculcated. Surely no parent, whatever his creed, would object to this spirit being implanted and fostered in his children, even in the secular school. The rather, would not parents justly condemn the school that fails in this particular or that neglects this essential?

Good breeding requires that one shall be reverent and

respectful towards all things of a truly religious character, and the teaching of reverence need in no sense partake of the nature of a theological creed. Every intelligent, self-respecting, cultured person respects true religion, even if he makes no pretension to personal faith. It is a part of his education and every man owes it to himself to possess and maintain a reverent attitude.

It cannot be too often repeated that the character of the teacher is the most vital and powerful agency in molding the lives of his pupils. The teacher therefore must be reverent in spirit as well as consistent in life.

2. *Knowledge of the Bible.* — Familiarity with the Scriptures is essential in every walk in life in order to grasp the meaning of literature, art, science, and all the other evidences of civilization. "To appreciate the literature, sculpture, painting, action, and indeed, all expressions of life during these Christian centuries, a knowledge of the basal sources of the Christian religion is essential. Consider, for instance, how necessary a knowledge of the Bible is to the appreciation of half the paintings in any European gallery. As the Bible is the great text-book of Christianity, so it is a source from which much of our civilization can be explained. The study of the history and sources of religion, prevalent in the society about the individual should have, therefore, an important place in the work we do in the history of culture."¹

There should be freedom, therefore, to use the Bible in the school, not only for the devotional exercises, but also for a study of its historical data, its literature, and its moral

¹ Griggs, "Moral Education," p. 281.

teachings, as demanded by the great body of teachers of the National Educational Association in their declaration of principles cited earlier in this chapter. Many of its stories, especially of the Old Testament, are peculiarly suited to the needs of young children.

This can be done without arousing sectarian prejudice, or awakening religious animosity. It is being done all over the land by thousands of teachers and to the universal satisfaction of parents of all shades of belief. Unfortunately it is being neglected in the very place where most attention should be given to it, namely, the home. Numerous investigations recently made prove that there is a woful ignorance of the Bible among all classes of people, not excepting even people of culture and members of Christian churches. This is certainly retrogression from an educational, to say nothing of religious standpoint. The teaching of the truths and precepts of God's Word is essential as a safeguard to citizenship and as a means of preserving our institutions, which as we shall see later are founded upon religion.

This age is characterized by zeal to know about the Bible rather than to know the Bible itself. Hence the many commentaries, "lesson helps," "lesson leaves," etc., which are employed in Sunday-school work. The use of these is not condemned if they are properly employed in connection with the Bible itself; but they are often employed as a substitute for the Bible, and utilized in learning *about* the Word, rather than leading to a direct acquaintance with it. Higher criticism has occupied the attention of scholars in recent years. While good may ultimately come from this, it must be said that the principal effect thus far mani-

fest has been to lessen among the masses the reverence for God's Word as a statement of His eternal truth and purpose. We endorse Professor Coe when he says, "Happy the man whose memory is stored with truth in the forms of Biblical phraseology, for he has constant means of self-expression, and therefore of self-understanding."

Instruction concerning reverence and the Bible, in a measure, at least, falls within the province of the school. The other lessons indicated as essential, namely, prayer, conception of religion, and initiation to the forms and ceremonies of religion, must be wholly relegated to other agencies. Therefore only brief reference will be made to them, although they constitute an important part in a complete education.

3. *Prayer.* — As religion is a universal instinct, so prayer, which is the expression of the needs and desires of the soul, which by its very nature implies faith — belief in the Being addressed — and which embraces adoration, supplication, confession, and thanksgiving, should be taught to every child as a part of his education, his duty, and his privilege; almost as soon as the child begins to talk it learns to lisp its simple prayer. Hence to the home belongs the supreme duty of teaching this religious exercise.

4. *A Conception of Religion.* — "Religion," asserts Rosenkranz, "in common with every spiritual activity, must pass through three stages — feeling, conception, and comprehension. Whatever the special character of any religion may be, it cannot avoid the psychological necessity, either in its general history or in the history of the individual." Conception of religion must not stop with

feeling, though this may be the earliest form of its experience and expression. It must go forward to such knowledge and such trust in God as will enable the individual not only to consecrate himself to God's service, but will also lead him to be reconciled to the will of the Almighty even in the midst of adversity. Religious feeling may exalt temporarily to a high state of ecstasy, but comprehension has been reached only when the soul, whatever the trials of life, is able fully to accept the words of the Apostle when he says, "And we know that all things work together for good to them that love God."

5. *Initiation into Religious Forms.* — Lastly, education requires the child to be acquainted with the forms and ceremonies of the church and to be inducted into church membership. Modern investigation and experience have disproved Rousseau's theory, which holds that *Emile* at fifteen "will know nothing of history, nothing of humanity, nothing of art and literature, nothing of God." At this age Rousseau asserts that *Emile* does not even know that he has a soul, and he thinks that perhaps the eighteenth year even is too early for him to learn this fact. The great Italian priest, Rosmini, had a truer conception of the child and its ability to enter into the thought and experience of religious life. He writes as follows:¹ "Truly it is in vain that Rousseau pretends that worship of God is beyond the lisping of the infant tongue. On the contrary, the little child, as if nearer to its origin, seems to turn towards it with delight, to seek it with eagerness, and to find it more easily even than the adult; and it belongs to God rather

¹ "Method in Education," p. 161.

than to man to impart himself to the simple soul that knows nothing, yet understands its Maker."

This part of the duty of education is surely as genuinely essential as to teach youth how to win their daily bread; how to seize life's opportunities; how to obtain pleasure and inspiration from literature, history, or art; how to meet the responsibilities of patriotic citizenship, even though it belongs to other agencies than the school.

Agencies of Religious Instruction. — The principal instrumentalities of religious instruction are the home, the church, and the school; or the "trinity of divinely ordained institutions, the home, the Church, and the State," the school representing the last. Under primitive conditions, when the whole duty of instruction could be undertaken by the parents, we know, concerning the Hebrews especially, that the children were taught the Ten Commandments, the laws of Moses, the prophecies and promises of the Scriptures, the history of the race, the duties of the sanctuary, the rites and ceremonies of public worship, and the traditions of their people. In modern times the school has largely relieved the home of secular education, and in far too many cases parents have also absolved themselves from the religious training of their children, a duty that belongs peculiarly to them and that cannot be entirely thrown upon any other agency. Some of the greatest of the world's benefactors — Chrysostom, Augustine, Wesley, Ruskin, Moody — have testified to the profound impression made upon them by the religious teaching of their mothers.

The tendency is to turn the religious training of children over to the Sunday school as the secular training is turned

over to the day school, and this is utterly inadequate to perform the work of proper religious instruction. There is no disposition to minimize the work of the Sunday school, which is certainly doing a noble work. But it has most serious limitations. Its sessions are held once a week for about an hour; attendance is irregular; the children rarely make a thorough study of the lesson — often none at all; the lessons themselves are not graded to suit the capacity of the children, usually the same lesson is given to immature children and adult men and women; the lessons are often scrappy and disconnected; the teachers are usually untrained, lacking pedagogical skill, and this skill, under the unfavorable circumstances, is doubly essential; and finally, it reaches less than fifty per cent of the children of our land.

On the other hand, the Sunday school is truly educational in so far as it inculcates the spirit of worship through its songs, its study of the Word of God, its various religious exercises, and its associations.

Because of its limitations even with those it reaches, and because less than half of the children are enrolled in its ranks, the Sunday school is not a sufficient or adequate means for the religious education of the young of our land.

The third instrumentality of religious instruction is the school. In private schools under denominational control such instruction may be freely given. But private schools reach only about seven per cent of the children in our elementary and secondary schools. Ninety-three per cent attend public schools where religious dogmas may not be taught. Parents are jealous of their religious beliefs and there must be no attempt in the public school, concealed

or otherwise, to teach any distinctive creed. Upon this point the American people agree with great unanimity.

The public school is supported by taxing the property of all classes of people without respect to religious belief. It has done more to unify our citizens and cement them into a strong, homogeneous, and patriotic whole, than any other institution. The introduction of creeds would disrupt our school system to its very foundation; hence the wisdom of our forefathers in excluding doctrinal instruction. The discussion of religious dogmas always stirs men to the very depths — some of the most dreadful wars of history have been religious wars — and therefore even if the law did not forbid its introduction, it would be unwise to endanger the harmony of that institution where children of all classes meet as on one common ground.

But if creeds may not be taught in the public school, does it follow that religion in the truest sense is excluded? Are these institutions "Godless," as has been charged? There are, says White, "At least three avenues open for the introduction of religious ideas and sanctions into our schools. These are sacred song, the literature of Christendom, and, best of all, faithful and fearless Christian teachers, the living epistles of the Truth. Against these there is no law." So long as the great body of teachers are righteous in their practices and true believers in God, the schools can never be "Godless" nor destitute of real religion.

The State and Religion. — There is a confusion of terms which is partly responsible for the wide differences of opinion among the masses and among thinking men, both as to the problem of religious instruction and its solution.

The terms religion and church are employed as synonyms, and the real meaning of religion is often obscure in the minds of many. Hon. William M. Lanning¹ has offered some original and valuable suggestions concerning the relation of the State to religion which tend to clarify this subject. He holds that while Church and State are separate, religion and the State are not separated. He shows that the history of the development of our national and State constitutions abounds with examples, expressed and implied, in which God is recognized, and adds, "We find, then, that the separation of Church and State in the American republic has not led to a Godless or non-religious State. The State believes that the God of the Bible is our Supreme Ruler, that He administers justice perfectly, and that He bestows upon us individual and national blessings. She believes that He punishes perjury, and therefore requires her officials to bind their consciences by calling upon Him to hear and witness, and help them to perform, their promises of faithful performance of official duty. She appoints ordained servants of that God to lead her legislators to the throne of grace to ask for national and State favors. There are principles and practices in every department of our federal and State governments that publish to the world that the God of Abraham, Isaac, and Jacob is the God of our government."

In the application of these facts and these principles to the educational problem, Judge Lanning further says, "It is not the function of the State to teach the peculiar doctrines of any religious sect. That is left to the Church. What the State cannot do directly it should not attempt to do

¹ Judge of the United States District Court for New Jersey.

by indirection. The free public school is an institution of the State and not of the Church. It is wholly supported by taxes and other rates gathered from a people of a great variety of religious creeds. Each religious sect is free to teach its peculiar doctrines, but it cannot use the free public school as an instrument in such teaching, nor should it be permitted to use any portion of the public taxes for such purpose. As, however, the State recognizes in her affairs the overruling hand of God, so the children in the free public school, it being an institution of the State, should be taught to revere God. When they take the name of God in vain they should be told that it is wrong because God has forbidden it. When they steal they should be told that God has commanded us not to steal. When they lie they should be told that God has commanded us to speak the truth. They should be taught that the Ten Commandments are in force because they came from God. While teachers in our public schools are not permitted to teach sectarian religion, they have no right to permit their schools to become Godless, for as the State is not Godless, and as it acknowledges God's justice and avenging power, the children of the State should not be left in ignorance of these great facts."

In addition to the teaching that the Commandments must be kept because they are God's laws, Judge Lanning concludes, "The State has no part in teaching the doctrines which form the basis of classification into religious sects. But both the State and the public school have a very important part in the work of teaching that men have rights that are God-given and duties that are God-imposed, and that the measure of their enjoyment of these rights and the

manner of their performance of these duties will be determined by the nature of their faith in God's sovereignty, justice, and providence. These three religious doctrines pervade our whole governmental history, and they have a vital place in the State, and in the public school, and in every other agency of the State."

Thus far it would seem that the public school might go; and, instead of stirring up sectarian jealousy, it is believed that parents would welcome such instruction as necessary and fundamental in the complete education of their children. With wise and God-fearing teachers; with the inculcation of proper respect and reverence for sacred things; with an insight into the very nature of the subjects of the curriculum, all of which may easily be found to point to an All-wise and beneficent Creator, the religious instinct of every child may receive its natural development. "There is no subject in the curriculum, there is no relation in the life of the school, which is not packed with potential divinity, and which may not make for morality," says Dr. Hervey.

In the foregoing discussion we have attempted to show the universality of the principle of religion; that it is an essential part of the education of every man; what lessons it includes; the agencies to whom is committed the work of teaching it; and the relation of the State to religion. We have shown that the results attained under present conditions are not satisfactory, and that thinkers are studying the problem and seeking a plan whereby better results may be secured.

Religion Defined. — Perhaps a wrong conception of what is meant by religion is partly responsible for the confusion

that exists in this field of thought. There are doubtless many views of religion, owing to the different standpoints from which it is considered. I offer the following view as presented by Dr. Alfred Wesley Wishart:¹ "But suppose we deal with what we have assumed to be a fact, irrespective of the knowledge or consciousness of that fact. Suppose man is related to God, whether he knows and feels it or not; that the laws of the moral and physical world are God's laws; that every fact of nature tells us something about God, and that, when we deal with these laws of nature and obey them, we deal with and obey God; that all moral ideals proceed from God, so we cannot try to realize any moral ideal without trying in some degree to do what God wants us to do, whether we know it to be God's will or not. Then a man's religion is his attitude toward all things — toward God, nature, humanity. What he thinks, feels, and wills is his religion, because, from the very nature of the case, in view of the supposition taken, a man cannot think, feel, and act without displaying his attitude toward God."

What the Public School May Do. — If the public school will teach religion according to this conception, if teachers will point out the fact that every good deed, every truth, every pure thought emanates from God; if the whole impulse of life and action is directed to a search after truth; if the symmetrical and perfect laws of nature are shown to be the expression of an intelligent Creator; if the relationship of human beings to each other is founded upon love and fosters the human brotherhood that Christ preached

¹ "Primary Facts in Religious Thought," p. 10.

and exemplified: if instructors will teach by theory and practice, consciously and perpetually, line upon line and precept upon precept, these great truths, then our children will gain a true and abiding conception of religion. This will prepare them to be good citizens, good parents, good neighbors, good men and women. It should also make easy the work of the home and the church in leading them to confession of faith and admission into church membership. This work can be done without friction or without stirring up religious strife; indeed, it is the natural function of the school to perform this work and it cannot reach its highest and truest aim unless it does perform it.

That such teaching, in a measure, is already given in the American public school is evident — it could not be otherwise with the great body of Christian men and women who are consecrated to this vocation. But the fear of arousing religious controversy — a fear that has been greatly exaggerated — has deterred the mass of teachers from such conscious, definite, and thorough instruction as has been suggested in the foregoing treatment.

If, with Dr. Wishart, we take religion to mean “man’s actual inner life, viewed in its relationship to God, in which experience, thoughts, feelings, and will are indissolubly united,” surely no school in the land may be debarred from teaching it. Formal creeds and peculiar doctrines may be promulgated by other agencies; but the essence of religion which is love, charity, benevolence, brotherly kindness, honesty, loving service, unselfishness, faith in God, and trust in an all-wise Providence, may surely characterize all instruction, and permeate all the activities of the school.

Summary

I. Religion is a universal characteristic of mankind. As education includes the development of the whole man, it must necessarily include religious culture, which embraces a spirit of reverence, knowledge of the Bible, prayer, a conception of religion, and initiation into the ceremonies of worship. The agencies of religious instruction are the home, the church, and the school.

II. While the public school may not teach creeds, in the truest sense, it must teach religion, which is recognized by the State. Although Church and State are separate, religion and the State are not separate, and therefore the public school, the representative of the State, must prepare the children for intelligent citizenship by training the conscience and by instructing them as to the sovereignty, justice, and providence of God.

III. It is incumbent upon the teachers consciously and daily, through every act of discipline and instruction, in every subject of the curriculum to stimulate that inner life of the pupils "viewed in its relationship to God, in which experience, thoughts, feelings, and will are indissolubly united."

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