MENTAL TRAINING
A REMEDY FOR "EDUCATION"

BY

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HERE are two great things that education should do for the individual—It should train his senses, and teach him to think. Education, as we know it today, does not truly do either; it gives the individual only a vast accumulation of facts, unclassified, undigested, and seen in no true relations. Like seeds kept in a box, they may be retained, but they do not grow. For years the mind is filled with facts that the mind is not trained to digest. To the physical body food is of value only when it is digested, so it is in the mind, with mental food; but if digestion were made continuous, perfect, and ever equal to the supply of food, overfeeding either in mind or body would be impossible. But in the education of today the digestion is not equal to the feeding.

The greatest educational need of the individual is a trained mind—a mind that is ready on the instant—not the next day. With most persons the intellectual brilliancy, the proper thing to say, comes as an after-thought. An after-thought is but a beautiful possibility designed to fit a lost opportunity. It is no more helpful to a man than a flattering epitaph on his tombstone. With most persons this wit is like a night telegram,—it is not delivered until the next morning. Man expects his hand to be instantly ready to perform any motion of which it is capable; but he is resigned if his mind does not act quickly. He says that readiness is born with people; it cannot be acquired. If man's heart, lungs, or stomach are weak, he consults specialists, and never gives up until he obtains relief. But if he cannot remember names or faces; if he is subject to that intellectual remorse known as after-thought; if he has no eye for color, or taste for music; if he has no command of language; if there is lack of power in any respect in his mind, he is perfectly resigned, and says, "I am as God made me, and so I must remain." When man fails he always does this. He says, "I am as God made me;" but when he succeeds, he proudly proclaims himself a "self-made man." It is not necessary to submit to anv mental weakness. Training will do even more for the mind than for the body.

The system of mental training by analysis, law, and analogy briefly outlined in this paper, seeks to educate the mind, to quicken, intensify, and develop its working, as a physician does with the body, toning, and exercising all weak parts. By a system of exercises it would train every sense, every faculty, every memory, every power, part, and phase of mind, every mental muscle, making it supple and instantly responsive,—as a massage stimulates the body. It would reveal to man his power and his weakness, teach him to know himself. Man, whatever be his line in life, needs a trained mind—one quickened, and in best health and condition, to be used in whatever be his activity.

Education should give all men this general ground-work of-power, even if it give nothing more. An untrained mind is like a torch,—flickering, uncertain, scattering, wasting, and losing its light. The trained mind is like a search-light, that instantly can turn every ray of its energy in perfect concentration upon any one point. It is not the energy it takes to do a thing that tires men, it is the energy they waste. Most men every day waste enough energy to run a genius. The fault with persons is, not that they have not good minds, that they are not naturally bright, but merely that their minds are not trained, not systematized, not reduced to order. This power "education" does not give; but it should give it as the fulfillment of its first duty. In aught that may seem sweeping in this article, I wish it understood as relating to the "system," and in no wise a criticism of the splendid work of individual teachers, professors, and other educators who have been successful. Whatever success they may have had has been in revolt against conventional machine-methods.

Medical science today tells us that a single fundamental weakness in one organ in the physical body may assert itself successively in the course of years under perhaps a dozen distinct phases in as many parts of the body. All may be traceable, if our diagnosis be sufficiently analytic to discover the unity masquerading beneath these disguises, to one disorder. To this "root "we must direct all our energies. So it is with the many weaknesses and failures in the education of today. The root-weakness is *constant impression without a corresponding expression*. Under a hundred phases is this constant basic failure shown. Before pressing this point further, let us seek for a moment to simplify the workings of the mind.

The mind may be divided roughly into three parts, or faculties—Impression, Repression, and Expression. The first, Impression, receives all raw material through the senses—seeing, hearing, touching, smelling, tasting, and the muscular sense. The second is Repression, or memory, which by cerebration analyzes all this raw material, combines, recombines, deepens, and classifies it ready for expression. The third, or Expression, uses the material the senses have received and memory has classified,—in writing, speaking, clear formulation in words, drawing, or some other form of outward activity. Any thought expressed becomes modified by meeting new thought, re-enters the mind, is again retained in memory again expressed; and this trifold process is endlessly repeated. In the perfect mind this process is constant and continuous; in all minds the *tendency* to this is as natural as the circulation of the blood. Our modern education forces material into the mind (and even this through untrained senses) and, without a corresponding expression, the mental food becomes congested, clogged, and unavailable. Impressions, instead of being classified for instant readiness, are buried under succeeding layers of impressions, as geologic strata overlie and conceal each other.

Does not all the inability of an ordinary college graduate lie in this matter of *expression*? Is his mind quick to analyze a new subject and to see it in its relations ? To ask a good question? To give a quick illustration? To make a fair description? To be ready in conversation? To sum up, to epitomize, to formulate his own views? To make a generalization ? lie has information, but so has a library; he has a vocabulary, but so has a dictionary. To be of service to him in the battle of life his information and his vocabulary must be held in immediate readiness. Mental training recognizes these three divisions; gives each careful exercises to keep each in its best condition as a part of the instrument, and then trains the mind to pass every impression through the trifold process—a training that soon results in automatic action. Perfect education in any line is but conscious training of mind or body to act unconsciously.

This system of training by analysis, law, and analogy is seen in perfect working in the mind of a child before it has been perverted by false education. The mind of the child is constantly analyzing. It is constantly seeking to trace effects back to causes; to predict effects from causes: it then seeks constantly to know the how, the why, the reason, the law governing what it sees. Then the child, wiser than it knows, grasps the great truth that all law is universal, and seeks to project the law discovered in the single instance into other fields by analogy, saying, "Well, if that's so, then this must be so." A short time in public school tends to weaken and almost stifle this process forever. The mind of the greatest philosopher cannot rise above this trifold process of analysis, law, and analogy; his discoveries become great only as he dares to use this process to its perfection; dares to project it far into the hidden mysteries, reach the revelation, and then verify the revelation by slow, careful presentation of attesting facts. Newton's discovery of the law of gravitation and Darwin's law of the survival of the fittest were but supreme manifestations of this process. And a process, too, so wonderful as to be seen on close, careful study, in a minified form, in every instance wherein the mind has done its duty. This bird's-eye view of the subject forbids fuller amplification of the possibilities of these three words, analysis, law, and analogy. But when taught in this spirit, with growing reverence for law, from its most simple phase of mere "why" in a trivial instance, to the grandeur of some majestic law that binds a million of these "whys" into a simple formula,—like a great cable of countless strands,—mental training becomes more than mere mental education. The recognition of the inevitability of consequent that comes from the growing belief in law—law, natural, mental, physical, moral, spiritual—soon enters into the very fibers of man's character, and becomes an ethical training that puts him into harmony with all that is best, all that is highest, noblest, and exalted. It shows him that his true mental training must be based on the harmonious quickening, perfecting, and unifying of his mental, his physical, and his moral nature.

Returning to the training of impression, the beginning of all true education should be the direct training of the senses of the individual. It is of vital importance that they, the instruments that bring to him all the raw material of thought, should be trained to bring clear, vivid impressions to the mind. Man may need his Latin, his Greek, or his calculus occasionally in daily life, but his trained senses he needs every moment. He needs to remember a face; to recall a date; to have some one's name ready on the tongue in an instant. Hundreds of instances might be cited to show the constant call upon the senses, and man may blame his mind as weak and unreliable when it is merely his senses that have been shamefully slighted and perverted. A piece of wood that a man with a dull knife spends an hour in shaping into a rude, clumsy boat, represents but the easy pleasure of a few moments if that knife were sharp, sure, and quickly responsive To his directing. "Education" is long, hard, tedious, and a comparative failure in the end, even from the standpoint of mere memorizing, partly because of this fundamental neglect of the senses. The child at its geography lesson, in so simple a thing as bounding the States, wastes a terrific amount of energy with but little real permanent gain. With hard study he goes over the boundary by rote, rehearsing the combination of descriptive words until he has them "fixed in mind," so that they may be glibly presented to the teacher on demand. This gives the child but the sequence of words, not a distinct idea of the situation of the State that is desired. This is the hard, tiresome method of most children. Were the child trained by exercises in the sense of sight, he would take a clear, vivid, and permanent mental picture of the map of the United States which he would never forget, and which he could revive at will.

Many men fail in spelling, hopelessly surrendering to the belief that they "never can learn to spell," because the power of visualizing words has never been developed. The study of language, and the power of the sounds of words and of their correct pronunciation, must come through an appeal to the ear. There are few, relatively speaking, even among our best educated men and women, who give the true, pure pronunciation of words in our own tongue. Often they cannot detect any difference between two distinctly different sounds of a vowel, showing that the ear has not been trained to delicate discrimination. This training is too vital, too far-reaching in its possibilities, to be passed by with incidental, occasional exercises in color, form, and size. It should be the slow, careful, systematic training of all the senses—sight, hearing, touch, taste, smell, and the muscular sense. Beginning in the very lowest classes with simple, easy, and interesting exercises and environment, this training should never be lost sight of during the whole school and college course of the individual. If modern education does nothing more than this, if it would do nothing more than give the individual command of his senses, and teach him to *think*—this alone would be great, infinitely better than making him a mere weak solution of a hundred text-books.

The kindergarten does excellent work in the earlier training of children; but even here is grave danger of merely exercising impressions, and of falling in with the one-sided development of the age, in making the exercises almost exclusively an appeal to the eye, with but little definite and specific call upon the other senses. But each of the senses is of vital importance. Each has its limited range of impression, and no one can perceive what any other perceives. The eye sees color; but we cannot smell, hear, taste, or touch color. To perceive any phenomenon perfectly, we must test it by all the senses, and no development of any one can compensate for the lack of training of another. Our concept of anything is formed from the union of impressions received through all the senses. With any one sense weak, our impression of the whole is weakened in proportion. An illusion is something that deceives one or two of the senses; but this is usually corrected through one of the others. No illusion is clever enough to deceive all the senses. The six senses are placed as six separate sentries to the mind; they separately challenge every phenomenon, making it name not one pass-word, but six, before admitting it to the mind. Therefore, each of the senses should be trained. But in our lack of training we have permitted this beautiful cooperation, this exquisitely perfect system of nature for the testing, classification, and mastery of each fact, to fall into disuse.

Training the senses should exercise them constantly and progressively (1) in taking clear, distinct images; (2) in vivid reproductions; (3) in increasing the grasp of each sense, and (4) in widening its range. These four phases are vital parts of all training. The importance of clear, mental images in the mind cannot he overestimated, and as this imaging is developed more and more, the mind grows from vividness in appreciation of concrete images to strong power in imaging the abstract; of thinking in phenomena. By constant exercise in taking clear mental images, the mind is soon able, with a single glance of the eye at a statuette, a print, a face, a name, a date, a scene, to retain it in all its completeness in the mind. Then the process of analysis, a constant accompaniment of every observation, a vital part of mental training, classifies it in the mind in a certain relation, illustrative of a certain thing, or connected with something else. This analysis fixes the impression as an acid makes permanent the tracings of an etching on a sheet of copper. The methods and exercises by which these senses should all be trained for long years, cannot here be even suggested, nor can the plea for proper consideration of the so-called "lower senses" be more than noted in passing. Memory in all its completeness is but the memories of the separate senses. Whenever, then, we train a sense to perfect working, with analysis, we train the memory of that one sense. No complicated system of mnemonics or chain-words is necessary. Many of the memory-systems now in vogue, those based on artificial associations, are clumsy expedients, like taking a steam-engine to run a watch.

Constant training in *words* is a vital part of mental training. Words are but symbols for mental images. As we quicken the mind to analyze and to note delicate differences and

shades of meaning, we are intensifying its powers of expression to greater care and accuracy. This at once reacts upon the impression, making the mind keener and clearer in its classification, and more quickly responsive in action. This is but one phase in which this constant analysis in the mind is trained to higher and more accurate thinking. This one great need in education today is passed by with a trivial recognition that is a disgrace to education. There can be no clear expression if there is not clear thinking. One great failure in our education is that there is too much memorizing of mere words, instead of memorizing of mental images or pictures that these words call forth. Words should he looked upon as living things; to be studied in themselves, in all their forms and phases, rather than merely studied about. We should have laboratory work in words. Mere study of synonyms from books will do but little real good; the words must he studied in life. I have found classes intensely interested and quickened for an hour or more in the study of a few lines of newspaper writing; perhaps but a criticism of some famous man of the day. It was studied word for word. If any word was adjudged strong or fitting, the reason why it was fitting in that situation was discovered; if it was weak, in what respect it was weak. If it meant more or less than the thought required; if it suggested an association or an element not in harmony, another word was substituted. In this was something higher than mere dogmatic individual criticism; for be the word good or bad the choice must be justified. The critical and the imaginative faculties of mind were here trained together; for every substitution of a new word was an appeal to the imagination sustained by the judgment. Thus, the ear became wondrously quick to perceive the force of a word, its music, its fitness. “Words of color were studied; words of size, and number, and form; words expressing the extremes of ideas; words expressing differing degrees of intensity of the same quality; the power of short words; onomatopes; words of every class, looked at from every point of view.

In the beginning of these exercises in words there were many students who “felt a difference between the words, but could not express it.” A few questions, however; a few tests; or the stimulation from the general discussion, soon showed that the power of expression needed only to be developed. We have many teachers in our schools, and professors in our colleges, who value words, and seek to teach in this spirit, so far as the rigidity of the system will permit; but this is not enough. This study of words is so vital an element in the training of the mind, that it should be begun in the very earliest classes, and never be lost sight of in the whole school and college training of the individual. Compositions are written by the pupils, and returned to them with a few red ink interlineations and corrections of misspelled words, mispunctuation, wrong capitalization, or errors in syntax, and but the occasional substitution of a better word. One hour’s study of words before a class, from any one of these compositions, would be worth more than a whole term of the usual work.

Questioning is a vital element in this training. Few men can ask a good, direct question, that pierces the very heart of an issue. This ability to question must be ready on the instant; the next morning the man and the golden opportunity have gone. When a man's mind is trained, he not only has his knowledge classified, but his ignorance formulated as well. He knows what are the points of which he is in doubt. On the subject of faith-cure, for instance, a trained mind would have perhaps a few clearly-defined questions, doubts, possible misconceptions, as they have been accumulating for years, all ready to be delivered in systematic sequence at the opportunity. These represent what the mind has left over on the subject after it has classified his knowledge of it. These remnants, shreds, and rough edges of ignorance the mind carefully assorts and piles neatly by the side of knowledge. The ignorance is ever ready to move into knowledge. The goats may become lambs, in the miraculous mystery of mental processes, at any moment.

Conversation—one of the great educational needs in the life of an individual—is passed by without notice, yet few powers are of greater value to man's success and pleasure in life, than quickness and readiness in conversation. The ability to give an apt illustration, exactly paralleling a thought in more familiar lines, is a rare power, but there is no reason why it should be so if men were trained instead of being merely "educated." The ability to define, to describe, to formulate, to systematically approach and study a new subject or idea, to make individual deductions, should be the subject of daily exercise. Reading, in all its phases; the power to absorb, to select, to condense, to epitomize; the ability to know how to study reference books; to use what one has read, not as he has read it, but as that reading has become absorbed and permeated by his individuality, should mean daily exercise for years. This mental training seeks to give man a full, rounded development; building up his mind and strengthening it wherever it is weak. It must not be thought that mental training would be a great cost to the State, for with a decreased list of studies, and a diminution in the years of service required for the course, it would really cost much less than the elaborate menu now provided.

A single illustrative case from memories of mental clinics will make my meaning clearer as to the practical use of analysis, law, and analogy in observation. To a gentleman taking a course in mental training, I was speaking of the importance, in observation, of constant preparation for instant use, and of the value of passing every impression through this trifold process. We were just leaving the Museum of Art, when I asked him what he had observed, what he had classified and stored in his mind from what we had seen; for we had gone to the gallery with the idea of training rather than for the mere aesthetic pleasure of the pictures. He said he could not recall anything special, but he gave a good list of statues and pictures as we had seen them, showing that his eye-memory was well developed. "This," I said, "is good so far as it goes. But in itself it is not observation. The mere use of the senses is not observation. They are but the instruments of observation, as the telescope is the instrument of the astronomer. Observation is

impression *plus* deduction; impression *plus* individual interpretation; it is what we see, *plus* what we think of it. A photographic camera can retain what passes before it, but it cannot *observe*; the phonograph, that marvelous new ear of science, can hear and repeat what it has heard, but it cannot *observe*. In every observation there should be a deduction, a judgment, a classification, the beginning of an attempt at generalization.

"Let us now test the gallery by our trifold process of analysis, law, and analogy. First, what picture in the whole gallery did you like best?" This forced him to pass every picture that he remembered in the gallery through a process of analysis, more or less perfect, qualitative and quantitative. After a few moments he decided on "Thesnulda before the German Court." You remember the painting, a tall, regal woman leading a child by the hand. She stands a captive in queenly contempt before a barbaric Teuton court, lying at ease on skins of animals. "What is the focus of the picture ?" was the first question. "Thesnulda." "Wherein is the great power of Thesnulda?" "Her face." "Now we have roughly analyzed it, let us seek the secret of the face, its force, its law. What does the face mean, what does it show?" In a few moments we decided that "it was the noble superiority of a great nature that, in the moment of its abasement, rises above its persecutors." "And now for the analogy. Where in all your reading, conversation, or observation can you recall a situation wherein such an expression would have risen on the face of any individual?" "Galileo, when he said, 'but the earth does move.'" "Another?" After a little hesitation he said, "John Huss at the stake, when they lighted the fagots." "Another?" "Eegulus before the Carthaginians." "Another?" "The same expression, softened, purified, and sanctified, would appear on the face of Christ on Calvary." "That is enough. You have passed this picture through the process of analysis, law, and analogy, and have formulated a clear expression for your impression. It may be that years from now you will again see such a face, or hear of it, or read of it. Your prepared formulation will spring forth of itself; you will not have to halt and stammer, and then build up a weak, tentative expression of it. At the same time, the instances of Thesnulda before the German Court, Galileo before his persecutors, John Huss at the stake, Regulus before the Carthaginians, and Christ on Calvary, will be revived together. You have trained them to answer to a given call. You have made an appointment with them. You have started a new centre of localization in the brain, at which all similar instances later will be automatically classified. They are grouped, not by any accidental resemblance, but by the highest psychological basis of classification—law, the oneness of relation between cause and effect shown in all."

A few other pictures were then studied, with a remark able increase noted in quickness and grasp. In these exercises it was all individual work; he was not repeating what he had heard, he was thinking for himself. Someone else might have given only one, weak analogy, but the process would have been the same. It may be said that this would be an exceedingly tiresome process if one had to go through it every moment, with each new

impression. It *would* be tedious were it always conscious; but it is only a matter of effort for a few times, then, at the mere glance of the eye, the mind carries out the process. It would be hard if we always had the same difficulty in writing our names as we did at our first trial; if bicycle riding were always accompanied by the early "headers" and the delicate studies in equilibrium; but these efforts soon sink as processes below the horizon of consciousness, and become almost automatic. We are in this exercise, and in all others, only intensifying and quickening a process all go through. It may be in a very vague way, so misty as to seem only an emotion of pleasure, or a feeling of interest without thought of process, or so almost simultaneous with the impression as to seem instant and indescribable. This process would not blunt the aesthetic pleasure in the pictures, any more than a man's enjoyment of a banquet would be lessened because the food were being perfectly digested.

One of the new type-setting machines has an ingenious mechanism for distributing the type after it is used. The ninety different pieces of type used have as many different kinds of nicking, all types of the same letter being nicked identically. A large cylinder, with longitudinal ribs extending from top to bottom, holds the type. These ninety ribs are bent to correspond to the nickings of the type, and these pieces of type fall in a continuous string as the key-board is manipulated. In distributing the type after using, the "matter" is placed, just as it is taken from the press, on a revolving drum over the stationary cylinder, of the same diameter. As the upper drum revolves, each piece of type falls when it reaches the ridge to which it corresponds. In the same way with a trained mind, the illustration, thought, word, or comment, drops down automatically at the pressure of need. This is not an artificial system of mental training to teach one never to forget." It is not *memory* training, but *mental* training. It is training the mind so that each new impression calls out the classified activities of the mind on the instant. If you put a package on the pan of a grocer's scale, the index figure moves round on the dial and stops at the number indicating the weight. If you press in succession a number of buttons in an adding machine, instantly the sum of those numbers is flashed before you. So it should be with the mind; there should be instant decision, not because the decision is given without thought, but because that decision represents years and years of thought and deep analysis of the principles and relations making up the decision. An impromptu is but the lightning revelation of stored memories instantly and perfectly combined to fit a need.

This process of mental training by analysis, law, and analogy, is not a machine system to take in an ordinary man and to turn him out a genius. It fully recognizes the differences in mental equipment; it does not believe that men are born equal; it does not attempt to make them equal. It aims only to give man power over the mental capital he has,—no matter how little it may be,—to make it instantly available; and it shows him how to ever

increase this capital. It teaches man to have all his powers in mental cash; not in checks, notes, or other forms of futures.

This training no "education" gives. If man were to have the most complete education of our schools and colleges, with the additional polish of the best European universities; if he never forgot one single thing he had ever learned: with all this he would not have a trained mind. What, then, of the millions who have less than this? Man, at the end of this period of study, should have either the facts he has studied, or the mental quickness from these facts, to apply to any subject in life. I cannot see how education can escape this dilemma. As the mere product of education, merely looking at man from the standpoint of what education has done for him rather than his natural abilities, he has neither. Few men, two or three years after graduating, can give a good, fair ten-minute outline, or resume, of any subject they have studied—not ten minutes mere talking here and there on the subject, but a clearly formulated grasp of its essentials. They have neither the facts nor the mental strength and quickness to coordinate those facts. Is mere culture and refinement, in itself, a sufficient return for these years of study? The amount of facts necessary to be studied and learned by man is far less than is commonly supposed. The trained mind will absorb and assimilate so much by its mere activity.

The cry comes from Germany, England, and other European countries that the masses are overeducated and unfitted for anything but the professional life. If education were mental training, this condition could never occur. They could not have the mind in "too perfect" a condition, just as it is impossible to have the body "too healthy." A man able to show he had spent these years in mental training, would be valuable in any line of life, and no matter what his duties,—be they humble or great,—he would do them better because of his training. For the future of education there are many hopeful signs in the first rays of dawn of mental training, that already warm and color the horizon. The kindergarten teachings and methods of Froebel, with his wondrous insight into the child mind, and the splendid work of the past few years, is already bearing rich fruit. It seems almost impossible to conceive of any higher educational method for the youngest children than the pure educational theory of Froebel. Occasional failures come from an incomplete grasp of his theory, and from the danger of making the exercises merely arbitrary and mechanical, but these are only slight and incidental, not essential. Color-work, according to the Prang system, in the primary classes, is another step in the right direction; the extension of drawing is another; manual training another; the growing scientific spirit of education, the passing away of examinations, the broadening of options in studies in our colleges, and the growing, live, liberal spirit of education are all hopeful, and great steps in advance. Many others might be noted if space permitted. Wonderful progress is made in the first year of the child at school, but the progress weakens thereafter, and is not proportionate. Our psychologic discovery, as shown in

recent experimental psychology, is far in advance of our educational methods; but every psychologic truth should be translated into the vernacular of educational activity.

Mental training should step in where kindergarten ends. It is not intended to substitute mental training altogether for education, but the modification it would make in the list of studies, and the methods and the term of service, would so materially change our education, that it would be practically a revolution in a very few years. Copernicus said of the system of astronomy in vogue in his time, that its very complexity proved its falsity. So we can say of our system of education. A radical reform must work slowly, and cannot always begin at the bottom, but it should have recognition of its need there. One thing I would suggest is, that we have a Chair of Mental Training in our colleges, entirely distinct from the Chair of Psychology, so well and ably filled in our universities. The duty of such a professor would be to take charge of some such course as here suggested; a course to take, say, four years, and to cover constant conversations and exercises on training the senses, memory, reading, observation, conversation, the study of nature, illustration, imagination, questioning, words, analysis, law, analogy, etc., etc.

The Professor of Mental Training should also be Consulting Physician on the Mind to the students of that college. A student could go to him and say, "I have studied my mathematics faithfully for five weeks, and make no headway. What is the matter with me?" The professor would examine into his methods of study, his standing in other branches; study his mind as a physician would the body, and discover the reason for the inability. It might be a failure to master the first problem, and all that followed was impact, not progress; it maybe that the student had an excellent eye-memory and studied all his mathematics aloud, taking it in through his weaker sense; in fact, any of a dozen other elements may be the one at fault. This discovered, the individual diagnosis would result in an individual treatment. And so hours and mouths and years of wasted energy might be spared to students, who force their way through many studies as a gimlet cuts into wood. No matter what be the trouble the student might have in his studies, or in using them, he would receive some practical advice, because the infinite instances can be reduced to a few general phases merely with individual modification.

This training should be part of the normal training of all teachers; and gradually its effect would be felt in a wonderful simplifying and lessening of the list of studies; the leaven of reform would then begin to work in the lower grades, and gradually make itself felt throughout the system. But education claims, "I do not expect students to remember all they have learned; much is given only for mental discipline and training." Then education must face the issue of results; its belief and theory are not followed out. It is in the position of the man of whom his young son said: "Yes, father is a Christian, but he is not working at it much now." When man has given the best hours of his early life,—from five to twenty or twenty-five years of age,—to education, he should surely have the

mental quickness and control of his mind for those years. If education cannot justify herself on an accounting for that time; cannot show an equivalent in mental muscle for those years of study, then she is to that degree weak—unequal to her duty, her opportunity. As a mere business matter, man should be able to demand of education a settlement. He should dare to say: "Education, I have given you fifteen years of faithful service to the course of study you have established—what have you given to me?" And education, if she cannot prove she has been equal to her trust, must accept man's criticism; must listen in simple justice to his plea for special training in all that develops him as an individual.

In this series of brief views of the possibilities of mental training by Analysis, Law, and Analogy, I have been forced to reduce panoramas to thumb-nail sketches. It has made a presentation, with everything crowded into the foreground, like the pictures on the Japanese fans, with no proper perspective. Much that may seem visionary and experimental, I have tested and found true in my lectures and individual instances. I have not left the main thought of this subject, to question or to discuss the values of any particular studies or branches. I have not ventured any criticism on the value of lower or higher education in itself, but only sought to show that the training of the mind itself is of supreme, primary importance, and that all true education must give the individual, *at least*, a trained mind. If education gives this, then education can erect upon that trained mind as elaborate a superstructure of as many studies and branches as the human mind will stand. But any system which does not train man's mind, make him an individual, and teach him to think, whether it be in the village school-house on the plains, or in the university with its endowments of many millions, is not equal to its possibilities—is unjust to the individual.